

MOBILIZING RESOURCES THROUGH MUNICIPAL BONDS

EXPERIENCES FROM DEVELOPED
AND DEVELOPING COUNTRIES

Manoj Sharma, Junkyu Lee, and William Streeter

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Notes:

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ADB recognizes “America” and “USA” as the United States, “China” as the People’s Republic of China, “Vietnam” as Viet Nam, “Bangalore” as Bengaluru, “Bombay” as Mumbai, and “Hanoi” as Ha Noi.

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FOREWORD

Asian cities require considerable resources to provide services for growing urban populations, address existing infrastructure deficits, and mitigate external shocks such as the coronavirus disease (COVID-19). The Asian Development Bank (ADB) estimates that developing Asia and the Pacific requires \$26.2 trillion between 2016 and 2030—\$1.7 trillion annually—to meet its infrastructure needs to maintain growth, eradicate poverty, and respond to the changing climate. While cities and subnational governments need to maximize their own revenues, it is also important to catalyze additional finances from external sources.

Municipal bonds are considered as one of the innovative external sources of financing to strengthen the financial sustainability of cities, which is one of the main objectives of ADB's Strategy 2030, specifically Operational Priority 4—Making Cities More Livable. As ADB ramps up its support to combat climate change, this publication provides timely information to both ADB and its developing member countries (DMCs) on how to leverage municipal bonds as an important instrument to finance climate-resilient infrastructure and making cities more livable.

The bond market at the subnational or local government level has matured in advanced economies like the United States where almost 2/3 of the cities' infrastructure and urban development is financed by municipal bonds. There are approximately 50,000 issuers of municipal bonds, including states, in the United States. As of June 2022, \$4 trillion of municipal bonds are outstanding, much of which are owned by retail investors. Countries in Asia and the Pacific are now increasingly using municipal bonds for financing infrastructure and making cities more livable. However, Asian cities often lack an adequate ecosystem and enabling environment at the national level, which adversely affect the capacity of subnational entities to issue bonds at reasonable cost of capital while assuring adequate returns to potential investors. Asian cities are willing to increase their capacities to potentially utilize bonds, particularly with climate and social impacts, for which global investors' appetite is rapidly growing. Local governments need to make concerted efforts to improve their creditworthiness—through for instance improving governance across municipal institutions and strengthening financial management—while national governments can help develop the appropriate ecosystem and enabling environment to help local governments.

The report documents valuable experiences and lessons learned from a few advanced and emerging economies such as India, the Philippines, Viet Nam, Indonesia, Mexico, Argentina, Brazil, the United States, the People's Republic of China, and Japan. This report recommends strategies on how to promote greater issuance and acceptance of municipal bonds in four target DMCs: India, Viet Nam, the Philippines, and Indonesia. The governments and stakeholders in these countries can use the findings under this publication to help craft the reforms that can enhance both internal and external enabling environments for municipal bond market development.

I commend the authors for their efforts and am confident that this publication will provide critical insights to help policymakers advance the financial sustainability of cities in Asia and the Pacific.

Bruno Carrasco

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This working paper aims to analyze the ecosystems of municipal bond issuance in developed countries (including the United States, Japan, and the People's Republic of China), advanced Latin American countries (including Mexico, Argentina, Brazil), and a few Asian Development Bank developing member countries (DMCs), including India, Viet Nam, the Philippines, and Indonesia), and then provide recommendations to all DMCs to improve the ecosystem of municipal bonds, including the creditworthiness and capacity of municipalities as well as external agencies associated with bond issuance. The research and analysis in this paper attest to the multiple benefits innovative financing can support to strengthen the financial sustainability of cities.

Manoj Sharma, Chief of the Urban Sector Group, Hong Soo Lee, Senior Urban Specialist, and Sarah Hui Li, Urban Development Specialist (Consultant) led the overall preparation of this publication and provided technical guidance with a close collaboration with Junkyu Lee, Chief of the Financial Sector Group and Sung Su Kim, Senior Financial Sector Specialist's in the Climate Change and Sustainable Development Department (SDCC) of the Asian Development Bank. Consultant William Streeter, Municipal Finance Specialist, led and conducted extensive research and analysis, drafted the report in consultation with the project officers. Lindy Lois Gamolo, Senior Operations Assistant, in the Urban Sector Group of SDCC, provided valuable administrative and technical support to the team.

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EXECUTIVE SUMMARY

This report recommends some strategies to promote greater issuance and acceptance of municipal bonds in four Developing Member Countries across Asia: India, Viet Nam, the Philippines, and Indonesia. All four countries have a significant number of large population centers with sizable infrastructure needs, an adequate legal and regulatory framework for issuing and servicing municipal bonds (referred to herein as the internal ecosystem for municipal bonds), and a developing bond market infrastructure, including regulatory frameworks for bond issuance, financial disclosure, public debt ratings, as well as stock exchanges for the listing and trading of bonds (referred to herein as the external ecosystem for municipal bonds). The recommendations in this report:

- (i) are tailored for each country, according to the unique conditions and precedents of its internal and external ecosystems as described above;
- (ii) derive from an analysis of ADB's technical and financial assistance projects in each country, including assistance to bolster frameworks for decentralization of government responsibility, development of infrastructure projects, expansion of funding sources for infrastructure, and the promotion of administrative capabilities at the local government level;
- (iii) incorporate lessons learned from municipal bond issuance in select Latin American countries (Mexico, Argentina, and Brazil), and from developed municipal markets (the United States [US], the People's Republic of China [PRC], and Japan); and
- (iv) complement ADB's Strategy 2030 policy focus to Make Cities More Livable, including a pillar for strengthening urban planning and financial sustainability of cities.

The municipal bond recommendations for India, Viet Nam, the Philippines, and Indonesia fall under four broad categories, as summarized in the table below:

Recommendation Categories		India	Philippines	Viet Nam	Indonesia
(i)	Debt Structuring				
	Broadening of municipal debt security	X	X	X	X
	Diversified tenors	X			
	Pooled finance	X			X
(ii)	Redirection of Gov.-owned Financial Institution Lending to Municipalities				
	Limit project participation		X		
	Securitization	X			X
(iii)	Redirection of ADB Local Government Sector Assistance				
	Subject to local gov. funding share				
	Public equity	X			
	Credit enhancement	X	X		X
(iv)	Institutional Capacity Building				
	Municipal ratings, audit exercises		X	X	X
	Municipal benchmark exercises		X	X	X
	Seeding financial advisory services	X	X	X	X

ADB = Asian Development Bank.

Source: William Streeter

- (i) **Debt structuring exercises to lower default risk and obtain higher credit ratings:** This includes recommendations drawn from lessons learned in Mexico and Argentina about broadening the stream of available revenues to secure municipal bonds by pledging shared revenues and transfer payments from higher levels of government to local governments, through an assignment of those revenues to a bond trustee. It also includes creating broader access to the domestic bond market for local governments with lower credit ratings, through various forms of pooled finance, as perfected in the US and Japan, and introduced into India in the early 2000s, but never expanded. Finally, it includes creating longer tenors for debt, to increase the budgetary flexibility of local governments, with staggered debt maturities that mimic the amortizing debt of municipal bonds in the US. This can be done by using ADB's power as an investor to create a secondary market for staggered and longer-term debt maturities, where they do not currently exist.
- (ii) **Redirection of government-owned financing institutions lending to municipalities:** Many Asian DMCs have government-owned financing institutions that lend to municipalities, but that also crowd out bond market and commercial bank alternatives through their lending practices. Recommendations include converting these authorities from being competitors to complementing the domestic bond market development by restricting the percentage of municipal lending that they offer, or by securitizing their loan portfolios to the local bond market.
- (iii) **Redirection of ADB's local government sector assistance:** Recommendations include redirecting a portion of ADB's local government assistance to development of bank and bond market solutions, including through viability gap financing (public equity), by requiring a local government funding share as a prerequisite for financially stronger municipalities to gain assistance, and by providing various forms of credit enhancement, such as lines of subordinated credit, intercepts of transfer payments, as were developed in the US, or partial risk guarantees.
- (iv) **Institutional capacity building exercises:** These recommendations deepen bond market activities, by increasing investor appetite for municipal bonds, and preparing local governments for bond issuance. This includes utilizing available municipal loan databases to develop benchmarks for financial performance and indebtedness, etc., which can be used to develop ratings and to price risk for future municipal bonds. It can also include recommendations to improve financial reporting and to standardize disclosure requirements between government financial institutions and the bond market, avoiding a lack of comprehensive financial disclosure, as is seen in the PRC's municipal bond market. Finally, since the pathway to issuing and listing bonds is complex, recommendations also include seeding financial advisory services to assist local governments in DMCs where there is a reasonable expectation of municipal bond issuance in the coming years.

Local government bond issuance is scarce in emerging market countries, with the notable exception of regional and municipal bonds in the PRC and state government bonds in India. Three Asian DMCs (India, Viet Nam, and the Philippines) have a limited history for municipal bond issuance; Indonesia has been promoting their issuance, but so far without result. While it is unlikely that any of the target Asian DMCs will develop an active municipal bond market, an enhanced role for municipal bonds is envisaged in all four countries. There are several key reasons why municipal bonds are likely to remain underdeveloped in these countries:

- (i) The debt investment guidelines in each of these countries favor high debt ratings, which few municipalities are expected to attain.
- (ii) The development of a municipal bond market correlates with the level of a country's sovereign credit rating, the depth of its own domestic bond market, and the extent of its decentralization efforts. This is true for the US, the PRC, and Japan, which have developed

municipal bond markets. Few Asian DMCs have either above average or high sovereign credit ratings or deep and liquid domestic bond markets. Where they have had more relative success is in ongoing efforts of decentralization. Even in target DMCs where government lending institutions provide attractive loan provisions (lending amounts relative to capital investment need, lending rates, debt tenors, etc.), overall outstanding municipal debt as a percentage of public sector debt remains miniscule.

Where municipal debt has evolved in target DMCs, it has followed one of two paths:

- (i) municipal debt is either explicitly guaranteed or the market believes it to be guaranteed because of heavy government regulation and control (Viet Nam and the Philippines until recently among target DMCs, and the PRC among developed municipal bond markets); or
- (ii) municipal debt uses structured finance techniques, such as pledged revenues secured by a trust and managed by a trustee, with a funded debt service reserve account (India in target DMCs, Mexico in Latin America, and the US for municipal revenue bonds).

In many Asian markets, bond investments are restricted to the higher or highest rating categories in the national scale. This is either because of the investment criteria of domestic institutional funds (such as pension or insurance funds), or because of market preferences (investing behavior) of institutional investors. The number of municipal credits that can achieve these desired rating levels in most Asian DMCs is limited, which indicates that there is ample opportunity for ADB to promote methods to credit enhance municipal bonds to elevate their ratings. This report provides several examples of how to credit enhance bonds internally through structuring the bond issue, and externally through agreements with market-based credit enhancement providers. ADB can play a significant role in both forms of credit enhancement.

Many of the characteristics described above (nature of municipal and overall bond markets, and pathways for municipal debt security) can be seen in the table below, which contrasts developed vs. developing municipal bond markets. The table focuses on municipal bonds outstanding, so for Asian DMCs, and for Mexico, it excludes loans to municipalities from government-owned financial institutions (these, however, are described more fully in the individual country chapters of this report), as well as State Development Loans in India, whose issuance and debt servicing is facilitated by the Reserve Bank of India. For the developed municipal bond market countries, public sector debt includes debt issued and traded in the domestic bond market (for comparison purposes with the DMCs), but excludes debt held abroad or by central banks, etc.

	India	Philippines	Viet Nam	Indonesia	Mexico	US	PRC	Japan
Sovereign Rating	Baa3/BBB-/BBB-	Baa2/BBB+/BBB	BB	Baa2/BBB/BBB	Baa2/BBB/BBB-	AAA/AA+/AAA	A1/A+/A+	A1/A+/A
Municipal Bonds Outstanding								
USD millions	532	2.5	486	0	70	4,036,000	4,451,000	1,760,000
As a % of public sector debt	0.03%	0.002%	0.73%	NA	0.015%	13.6%	40.3%	18.2%
Debt service coverage by municipal budget	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Secured Using Structured Agreements	Yes	No	No	No	Yes	revenue, lease & conduit issuer bonds	No	joint local gov. bonds
Central Government Guarantee	No	No longer	No but tightly managed	No	No	No	No but tightly managed	No
Domestic Bond Market								
As a % of GDP	77%	50%	39%	29%	72%	219.7%	116.5%	206%
% Public Sector Bonds	75%	82%	62%	91%	71%	64.4%	64.3%	94.3%

GDP = gross domestic product, PRC = People's Republic of China, US = United States, USD = United States dollars.

Sources: Statista (US debt); Asian Bonds Online; Trading Economics; SIFMA; Japan Securities Dealers Association; William Streeter.

I. INTRODUCTION AND MUNICIPAL BOND RECOMMENDATIONS FOR TARGET DMCS

A. Introduction

The Asian Development Bank (ADB) estimates that developing Asia and the Pacific needs \$26.2 trillion in investment between 2016 and 2030—\$1.7 trillion annually—to meet their infrastructure needs to maintain economic growth, eradicate poverty, and to respond to the changing climate.¹ Asian cities require considerable resources to provide facilities and services for growing urban populations, address existing infrastructure deficits, and cope with external shocks such as the coronavirus disease (COVID-19). However, municipal, and sub-national governments in ADB’s developing member countries (DMCs) often struggle to secure adequate sources of financing, one of which is local government bonds.

ADB maintains a policy focus that is supportive of municipal bond development: ADB’s Strategy 2030 sets into motion initiatives to eradicate extreme poverty, and to achieve a prosperous, inclusive, resilient, and sustainable Asia and the Pacific. A key operational priority of this strategy is to Make Cities More Livable, including the second pillar for strengthening urban planning and financial sustainability of cities. Among the operational approaches being considered for this pillar are developing innovative external sources of financing, which can include municipal bond financing.² ADB recognizes the public policy benefits for municipal governments to access financial markets, including the immediate capture of economic and service benefits of major capital investments, rather than having to wait for the investment to be completed over a longer period of time through “pay-as-you go” financing.³ Municipal debt issuance also finances infrastructure across “multigenerational users of infrastructure services” to the extent that the debt maturities can match the useful economic life of the assets being financed.

This report recommends some strategies to promote greater issuance and acceptance of municipal bonds in four target DMCs: India, Viet Nam, the Philippines, and Indonesia. All four countries have a legal and regulatory framework for issuing and servicing municipal bonds, and are developing bond market infrastructures, including regulatory frameworks for bond issuance and financial disclosure, as well as stock exchanges for the listing and trading of bonds. Three of these DMCs (India, Viet Nam, and the Philippines) have a very limited municipal bond issuance history, and the Ministry of Finance in Indonesia has long desired to see local government bonds issued in that country, as this report will describe.

While it is unlikely that any of the target DMCs will develop an active municipal bond market, with municipal bonds as a core investment in the portfolios of domestic institutional investors, it is feasible to envisage greater issuance within all four countries. In some cases, the issuance would be by individual municipalities, based on their own credit, or as credit enhanced by intercept mechanisms, assigned government grants, or lines of credit. More prevalent, perhaps on a volume basis, could be debt issuance by a government-owned institution acting as a municipal bond bank, or by securitizing existing portfolios of municipal loans. Such individual municipal and “conduit” municipal bond issuances would incrementally increase the diversity of public sector debt available to domestic investors.

¹ ADB. 2019. *Strategy 2030 Operational Plan for Priority 4: Making Cities More Livable, 2019–2024*. Manila. p. 4.

² ADB, *Strategy 2030 Operational Plan*, p. 14.

³ L. Liu. 2022. Subnational Debt: Developing A Sustainable Market. In *The Sustainability of Asia’s Debt Problems, Policies, and Practices*. Manila: ADB. p. 167.

The municipal bond recommendations for the target DMCs are predicated upon an analysis of the internal and external ecosystems for municipal bonds in each of those countries. The internal ecosystem consists of the laws and regulations that govern the issuance of municipal bonds, their servicing through budgetary appropriations, and the presence of financial reporting requirements for local governments. The external ecosystem looks at bond market regulations, including listing and financial disclosure requirements, the presence of exchanges for primary and secondary bond market activity, and the use of ratings in those markets. It also looks at the size and diversity of domestic bond market activity, of institutional investors in those markets, and the role of municipal bonds, if any, within the broader bond market. This analysis of the internal and external ecosystems for municipal bonds and the accompanying municipal bond recommendations also references technical and financial assistance work done by ADB within the target DMCs to bolster frameworks for decentralization of government responsibility, develop infrastructure projects, expand funding sources for infrastructure, and promote administrative capabilities at the local government level.

The report is organized into the following chapters: an Introduction and Municipal Bond Recommendations for Target DMCs, and an in-depth chapter on each of the target DMCs (India, Viet Nam, the Philippines, and Indonesia), which includes the recommended municipal bond strategies for that country, its internal and external ecosystems for municipal bonds, and prior or current ADB assistance as described above. It also includes a chapter on lessons learned from municipal bond developments across DMCs of Latin America (Mexico, Argentina, and Brazil), a chapter on lessons from highly developed municipal bond markets (the United States [US], Japan, and the People's Republic of China [PRC]), and an extensive set of accompanying appendixes for all the countries included in this report.

B. The Guiding Principles for the Municipal Bond Recommendations

Before summarizing the bond market context for the municipal bond recommendations for the target DMCs, it is important to describe the guiding framework for how ADB can promote municipal bond development. The tenets are as follows:

- (i) Recommendations will be “market-based,” with a recognition of how debt is issued, monitored, regulated, and perceived within the target DMCs. Market-based recommendations will be judged by how they stimulate either primary or secondary bond market activity.
- (ii) Recommendations will be “value added,” allowing private capital to be more efficiently allocated to local governments. It is important that ADB’s participation in municipal debt initiatives allows a transaction to be completed that could not have been completed without ADB’s intervention, either because of inherent financial market constraints or because the transaction is perceived to have certain complexities. If, for instance, the domestic bond market can already transact a 5-year municipal bond on its own, then ADB adds no value by investing in one of the same maturity, but it might add value by investing in a bond with a longer maturity, if the domestic bond market is incapable of offering that longer maturity.
- (iii) Recommendations will support ADB’s Strategy 2030 and its Operational Priority: Make Cities More Livable, through both the sources and uses of debt proceeds to be generated. This includes developing innovative external sources of financing, but also helping local governments to tailor bond maturities closer to the useful life of the assets being financed when possible.
- (iv) ADB’s assistance for municipal bond issuance should be limited to supporting financing for long-term capital investments, what ADB recognizes as the “golden rule.”⁴ While the

⁴ J. Martinez-Vazquez and V. Vulovic. 2016. How Well Do Subnational Borrowing Regulations Work?. *Asian Development Bank Institute Working Paper Series*. No. 563. Tokyo: Asian Development Bank Institute, pp. 10–11.

legal authority for municipal bond issuance in the target DMC's focuses on borrowing for capital projects, in some countries, deficit financing or short-term borrowing for working capital needs is allowed. ADB's assistance, however, should be limited only to borrowing for long-term capital investments.

- (v) ADB's assistance for municipal bond issuance should also be predicated on the existence of institutional policies and regulations that safeguard the financial integrity of a local government and promote its accountability and transparency to both its constituents and its investors. ADB has summarized these regulations as setting limits on key fiscal variables (such as the primary account fiscal surplus or deficit, debt service coverage ratio [DSCR], etc.), requiring "medium-term fiscal frameworks and transparent budgetary processes," and requiring the use of independent credit ratings.⁵

C. A Bond Market Context for the Municipal Bond Recommendations

The municipal bond recommendations for India, Viet Nam, the Philippines, and Indonesia fall under four broad categories: debt structuring exercises, the redirection of government-owned financing institutions from being competitors with the bond market to complementing it, the redirection of ADB local government financial assistance to include a component for bank- or bond market-based solutions, and institutional capacity-building exercises that deepen bond market services, investor appetite for municipal bonds, and local government preparedness for bond issuance. ADB recognized in a 2019 report that municipalities operate under diverse conditions, and that "no universal solution" can expand subnational government borrowing.⁶ Instead, it promoted the idea of developing a "spectrum of development finance mechanisms appropriate to each country," so that private-sector involvement could grow over time.

This section, including Table 1, summarizes the municipal bond recommendation categories and explains how they fit within the context of bond market activity, including whether they are intended to stimulate primary and/or secondary market making. Primary market making is an activity that promotes the issuance of new bonds into the market by an issuer. In a report published this year, ADB recognized that the decisions that government debt managers make to shape the primary market influence liquidity in the debt market.⁷ Secondary market making is an activity that promotes either government financing institutions to migrate their municipal loan portfolios into the bond market in the form of securitizations or investment funds, or which promote institutional investors to trade existing municipal bonds among each other. The same report also recognized that a "liquid secondary market provides near-continuous pricing which guides the yields that issuers can use to sell bonds in the primary market."

⁵ Martinez-Vazquez and Vulovic, *Subnational Borrowing Regulations*, p. 11.

⁶ P. Smoke. 2019. Improving Subnational Government Development Finance in Emerging and Developing Economies: Toward a Strategic Approach. *Asian Development Bank Institute Working Paper Series*. No. 921. Tokyo: Asian Development Bank Institute, p. 28.

⁷ ADB, *Sustainability of Asia's Debt Problems*, p. 380.

Table 1: Summary of Municipal Bond Recommendation Categories for Target DMCs

Recommendations		ADB as Primary market maker	ADB as Secondary market maker
(i)	Debt Structuring		
	Broadening of municipal debt security	X	
	Diversified tenors	X	X
	Pooled finance	X	
(ii)	Redirection of Gov.-Owned Financial Institution Lending to Municipalities		
	Limit project participation	X	
	Securitization		X
(iii)	Redirection of ADB Local Government Sector Assistance		
	Subject to local gov. funding share	X	
	Public equity	X	
	Credit enhancement	X	X
(iv)	Institutional Capacity Building		
	Municipal ratings, audit exercises	X	X
	Municipal benchmark exercises	X	X
	Seeding financial advisory services	X	

ADB = Asian Development Bank, DMC = developing member country.

Source: William Streeter.

1. Debt Structuring

These recommendations center around how ADB can promote municipal finance by incorporating debt structuring techniques from other markets. These include finding the broadest and most reliable source of revenue for securing municipal debt, looking at how ADB can add value by investing in bonds with longer maturities than are currently available in a domestic bond market, and examining how it can bring access to a greater number of low-rated or unrated municipalities by revitalizing the concept of pooled financing in target DMCs. In a 2012 report, ADB identified a role for helping municipalities to structure their debt; a process that it described as “hand-holding” through the credit ratings and issuance process, using financial structuring to prime the local bond market with new issues.⁸

- (i) **Broadening of municipal debt security:** Municipal finance rarely starts and almost never reaches any significant scale with projects that can be self-supporting through user fees. Municipal finance starts with pledging the broadest and most reliable revenue source for debt service. In some municipalities, the broadest and most reliable pledge might pertain to taxes, such as a pledge of property taxes or general city-wide municipal taxes that can include them. Recent municipal bonds in India were secured by such pledged tax revenues, even though the projects financed were primarily for municipal water and sewer services. The user fees in most Indian municipalities are either undeveloped or underdeveloped and would currently be inadequate as a pledge for debt service. In time, user fees could grow

⁸ P. Sood, M. Mays, M. Lindfield. 2012. Subnational Finance for Infrastructure: Potential Roles and Opportunities for ADB. *ADB Sustainable Development Working Paper Series*. Manila: Asian Development Bank, p. 18.

as a municipal revenue source, but their use as a pledge for municipal bonds is likely to occur at the system or enterprise level (such as through municipal water system revenues) instead of at the project level. This is because a broad and reliable revenue pledge can always achieve a higher rating than a narrow and volatile revenue pledge.

In other municipalities, the broadest and most reliable pledge might be shared revenues that are collected and remitted by a higher level of government. Legal frameworks govern which basket of taxes are collected by a more senior level of government and then shared with local governments. The aspect of a shared allocation is legally considered as a source of local revenue. Many municipal bond issues in Mexico were secured by shared revenues. In other municipalities, if local revenues or shared revenues are insufficient, perhaps transfer payments (including grants) from a higher level of government form the broadest and most reliable revenue pledge for debt service. Some county bonds in the US are secured by transfer payments from a state, especially for services where the county's role is as a conduit for a higher level of government.

If the pledged revenues are locally generated, key considerations for securing municipal bonds include the predictability, stability, and adequacy of those revenue flows, and the status of free cash flows (operating surpluses) after those revenues have provided for necessary municipal services and existing financial obligations. If the pledged revenues are remitted from a higher level of government in the form of either shared revenues or transfer payments, key considerations for securing municipal bonds include the volatility of these revenue sources, the extent to which those revenues are already dedicated or earmarked for municipal services (and are not available for debt service), and the ability of a municipal government to assign those shared revenue or transfer payments directly to a trustee, bypassing the municipal treasury. This assignment (a structured finance technique) moves the credit quality of the bond issue closer to that of the higher level of government that is providing the transfers. It is one reason why Mexican structured municipal bonds have high ratings in the national scale.

- (ii) **Diversified tenors:** Most emerging market countries have nascent domestic bond markets with a shallow pool of active debt issuers (usually the central government, some state-owned enterprises [SOEs] and government-owned banks, for instance), and with a narrow range of bond maturities (1–5-year bonds with bullet maturities, for instance). Where longer term debt is possible, as in India, where corporates can issue 7-year and 10-year bonds under normal market conditions, bond market liquidity can be easily susceptible to externalities, such as interest rate movements in the US and from other developed markets, general concerns about the economy, or through stress events, such as the COVID-19 pandemic or the Russian invasion of Ukraine.

In circumstances where bond maturities are naturally constrained or impaired by externalities, a value-add for ADB would be to invest in municipal bonds with a longer maturity, and with staggered maturities instead of a single bullet maturity. These options would catalyze longer-term bond issuance, and would create secondary bond market opportunities for investors, allowing ADB to sell its invested bonds in segments, by maturity, as bond market appetite improves or lengthens. Staggered maturities would allow for municipalities to reduce interest payments as they come due, creating new windows for debt issuance, without necessarily increasing budgetary appropriations for debt service.

- (iii) **Pooled finance:** The domestic bond investors of target DMCs have very high ratings thresholds for bond investment—AA or higher on the national ratings scale. The vast majority of municipalities in these countries would not reach that rating level unless the bonds were guaranteed by the respective sovereign government, or unless various forms of credit enhancement (see section below) were available. An option for those sovereign governments and for ADB is to collaborate in the creation of a pooled finance vehicle that

is well capitalized with an ample reserve fund, allowing it to issue bonds on its own security, utilizing the proceeds to issue loans to downstream municipalities and towns.

The loan repayments would recapitalize the pooled finance vehicle to make a new generation of municipal loans. Pooled finance vehicles were created in two southern Indian states (Tamil Nadu and Karnataka) and their bond issues supported loans to cities and villages for infrastructure projects. This model was never scaled in either state and never replicated in any other Indian state, but it did provide access to the bond market for lower rated or unrated municipalities, and it represented a market-based option to grant funding or concessional sovereign loans.

ADB recognizes the potential for credit pooling to enable small local governments in emerging market DMCs to finance infrastructure projects, and it notes the credit pooling experience of US bond banks and state revolving funds (SRFs) as providing important lessons.⁹ These US pooled vehicles provided the architecture for the Indian pooled finance facilities.

2. Redirection of Government-Owned Financial Institution Lending to Municipalities

These recommendations pertain to redirecting the lending activities of government-owned financial institutions, which in many target DMCs dominate municipal finance because of their low cost of capital and strong relationships with the local government sector. These institutions can retain their role in municipal lending but can also promote municipal bonds in two ways: 1) by restricting their participation to a proportion of an approved municipal infrastructure financing, allowing the bank or bond market to satisfy the remaining financing requirements; and 2) by securitizing their loan portfolios to the bond market, introducing investors to a mix of municipal credits without exposing them to individual municipal credit risk.

- (i) **Project participation:** Most of the target DMCs have government-owned financing institutions that lend to municipal governments. Many of these institutions price their loans at a small spread above the government's cost of capital, which effectively blocks participation of the domestic bond market in municipal finance, where even the highest-rated corporates in that market offer bonds at a much higher spread. Where a target DMC is interested in promoting municipal finance but wants to retain a significant role for its government-owned lending institutions, it can limit the participation of those institutions to a percentage of the approved capital project financing required by municipalities. That participation can also be linked to cofinancing agreements with commercial banks or co-investment agreements with institutional funds.

Such cofinancing/co-investment agreements would require that the government-owned financing institutions share their loan underwriting criteria and harmonize the disclosure and other loan documentation requirements with other capital market participants. This includes the development of intercreditor agreements that will govern how these cofinanciers treat each other during normal and extreme repayment conditions, including default by a municipality. The presence of these agreements, which could be crafted with technical assistance from ADB, would incentivize municipal governments to seek bank loans or bond financing for the remaining portion of its capital financing needs, and would assist the bank or bond market in pricing the municipal debt.

The government-owned financing institution would benefit by retaining a preeminent role in municipal finance and would not need to change its lending requirements nor its subsidized interest rates, only harmonize its disclosure requirements with those of the bond

⁹ Y.-H. Kim, ed. 2003. *Local Government Finance and Bond Markets*. Manila: Asian Development Bank. p. 41.

market. The municipal issuer would benefit from a blended interest rate below the market bond rate since a portion of its financing would still come from the government-owned financing institution. Bond investors would benefit from a halo effect of the government-owned financing institution (including a municipality's reluctance to renege on a lender of last resort, either by direct default or by cross-default on a *pari passu* bond), as well as from diversification of the bond market.

- (ii) **Securitization:** In cases where the government-owned financing institution is offering loans to municipalities at an interest rate comparable to market interest rates, it is conceivable that the institution could explore, with ADB's assistance, the securitization of portions of its municipal loan portfolios that matched expected investor appetite for ratings, coupon rates, and maturities. In the case of target DMCs, where the bond markets are still somewhat shallow and underdeveloped, investor expectations can often be categorized through an appetite for highly rated securities in the national ratings scale, coupon rates with an acceptable spread over the government benchmark bond and maturities that are short-to-medium term; that is, typically 1–5 years. An institution could do a carve-out of its municipal loan portfolio to match these desired characteristics, which are commonly referred to as the “market sweet spots.”

The debt portfolio could be structured to meet the ratings requirement of the market by providing excess collateral of retainage loan amounts that are part of the underlying municipal loan, but not part of the securitization. Attaching a reserve fund to the pledged collateral for the securitization would also boost its credit quality. Where the loans were offered at below-market interest rates, securitization is not a viable option, since it would require the institutions to sell their loan portfolios at a discount (effectively realizing a balance sheet loss, not related to underlying loan performance).

These securitizations could be timed to offset periods of low primary market bond issuance, ensuring that the bond market has a steady stream of municipal paper for investment. They also recapitalize the institution without it having to issue debt, preserving its balance sheet, and providing fresh capital for new municipal loans.

3. Redirection of ADB Local Government Sector Assistance

ADB's infrastructure assistance programs, including to municipal governments, are traditionally geared toward financing through sovereign government loans and grants. A 2019 Asian Development Bank Institute paper posited that this assistance should be integrated with bond initiatives, by providing a form of public equity subsidy that “facilitates complementary bond market financing.”¹⁰ This represents an important direction for financing municipal infrastructure projects, and it allows for ADB, once it has reached accord with a DMC on certain municipal development goals, to differentiate municipalities according to their ability and willingness to pay—the same criteria applied by ratings agencies to differentiate municipal credit, and by investors to price risk. This differentiated approach also implies that ADB can satisfy municipal development goals through an array of financial tools, which can still include its traditional government loans and grants. The key is how its aid is disbursed in a tailored approach according to the financing needs and capabilities of a host municipal government. This also allows ADB to leverage its capital further.

These recommendations consider some options as to how ADB can make its assistance take a more market-based and value-added approach, including though requiring a local government funding share as a condition for assistance (this could be in the form of capital receipts or reserves, or through borrowing either from commercial banks or from a government financial institution [GFI] or, if its credit quality is sufficiently high, through direct bond issuance). For municipal governments that have a poorer

¹⁰ Smoke, *Improving Subnational Government Development Finance*, p. 25.

credit standing but can still afford to provide that local financing share, ADB's assistance could take the form of public equity; basically, a grant, which in municipal finance is more commonly known as viability gap financing. Finally, where an investor ratings threshold is an issue, ADB's assistance could take the form of credit enhancement, various forms of which are explored by the recommendations below.

Public ratings, such as those provided in India for the many cities participating in municipal development programs such as the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Smart Cities, government-mandated financial audits of municipal governments, and the municipal loan and other records of government financing institutions, provide rich sources of base-level information from which to begin the differentiation of ADB's assistance to municipal governments. Of course, these data sources often represent a portion of existing municipal governments, and there will inevitably be inconsistencies with the accuracy of recorded municipal finance data. Nevertheless, target DMCs and ADB are not without data resources from which to begin this differentiated financial assistance approach. The administration of financial assistance programs through ADB can build upon these informational foundations.

- (i) Where the credit fundamentals of a participating municipality are very strong, so that ADB judges the municipality to have no intermittent difficulty in paying its financial obligations and excellent ability over the long term to retire its debt, ADB can consider technical assistance to facilitate that municipality's entry into the bond market, including obtaining a public credit rating (see section below on building institutional capability). In this instance, the local government would be financially independent in terms of securing market financing for its infrastructure projects. However, if its credit rating is below the market's quality expectations, ADB can consider financial assistance to that municipality in the form of credit enhancement (see section below on credit enhancement).
- (ii) Where the credit fundamentals of a participating municipality are only moderately strong, so that ADB judges the municipality to have some limited intermittent difficulty in paying its financial obligations, but an excellent ability over the long-term to retire its debt, ADB can consider a variety of financial assistance programs to supplement the local financing effort for an infrastructure project.
 - a) One form of financial assistance could be public equity, or viability gap financing, which can reduce the amount of borrowing that a municipal government needs to accomplish for a given infrastructure project. The threshold for this assistance should be based upon an assessment of how much public equity is required to remove the risk of intermittent financial difficulty that a municipality would otherwise face without the assistance. ADB recognized in its 2019 report that the use of grant-loan linkages would help to find "a way for weaker subnational governments to begin borrowing," and which gets them on a "path to gradually building fiscal responsibility and creditworthiness."¹¹
 - b) Credit enhancement of a commercial bank loan or of a bond would be another form of financial assistance to municipalities with the credit characteristics described above. While the goal of viability gap financing is to find the level of debt that a municipality can afford, the goal of credit enhancement is to achieve the rating category for municipal debt that investors will accept. Credit enhancement can take various forms, depending upon the revenues that are available to the municipality. ADB, in its 2019 report, recognized that risk mitigation strategies could alleviate situations where investors would not otherwise extend credit to a municipality.¹² The same report, however, cautioned that such strategies should not result in creating moral hazard by shielding municipal governments from the responsibilities of their behavior. The recommended forms of credit enhancement below address this potential concern.

¹¹ Smoke, *Improving Subnational Government Development Finance*, p. 25.

¹² Smoke, *Improving Subnational Government Development Finance*, p. 16.

- (iii) Where the municipality is responsible for the payment of its debt, but where the mix of available revenues includes either shared taxes or transfers from a higher level of government, a useful credit enhancement tool is to structure an intercept of those external revenue sources on a proactive basis where a deficiency in revenue coverage is expected for an upcoming debt service payment, or on a reactive basis in response to an actual payment default. Obviously, a proactive intercept has more value to bondholders than a reactive one. In the US, such intercepts commonly secure the tax-supported bonds of school districts in several states, which rely on state aid as a supportive form of operating revenue. In an emerging market context, the intercept is a key credit enhancement feature for the municipal loans issued by the Water and Sanitation Pooled Fund (WSPF) in Tamil Nadu, India (see chapter on India for more details). To the extent that a municipality is either unable or unwilling to make a payment on its debt service, the intercept of future interventions to that municipality protects investors but also exacts a cost on the municipality in the form of forfeited revenues. Key considerations to an intercept mechanism include the extent to which future interventions provide a backstop to a debt service payment deficiency or default, and the nature of the trigger mechanism (proactive or reactive, trustee managed or not).
- (iv) Where the municipality is responsible for the payment of its debt, but where the revenue streams do not lend themselves to an intercept mechanism, the potential for intermittent debt service payment difficulty can be mitigated with a line of credit (LOC). An LOC is different from a payment guarantee, since it is a form of subordinated financing, providing credit enhancement to senior lien debt (giving it preference to “full and timely payment”), while taking a “patient capital” approach to its own “ultimate repayment.” For this reason, an LOC is appropriate only where the cash flows of a municipality may face intermittent payment difficulties of a financial obligation, but where the prospects of its ultimate payment remain strong. Where the municipality has structural cash flow difficulties that portend a weak ability for ultimate debt repayment, an LOC does not provide credit enhancement. It only postpones an event of default.
 Considerations for a standby LOC include:
 - a) The competitiveness of pricing contingent capital with existing forms of contingent bank and development bank capital in the country
 - b) The cost-efficiency of backstopping a local financial institution to provide this coverage, with additional ADB support, which could include strengthening underwriting standards and/or creating a reserve. This type of collaboration could be done with government owned financial institutions that already have wide acceptance and experience in the local market, as well as government support. Backstopping a local financial institution can provide more leverage than directly funding a line of credit to municipal obligors.
- (v) An additional form of market-based credit enhancement that ADB could promote for municipal bond issuers and potential investors is monoline insurance. Monoline insurance of municipal bonds has existed in the United States since the 1970s, although the level of credit enhancement activity by monoline insurance providers has become smaller since the Global Financial Crisis (GFC).¹³ Some important considerations for creating and participating in monoline insurance include:
 - a) Local financial laws and regulations that permit financial guarantees.
 - b) Leveraging ADB funding by supporting a domestic insurer, thereby avoiding currency mismatch from its own financial activities.

¹³ For more detail on the use of monoline insurance in the US municipal bond market, see Chapter 7: Lessons from Developed Municipal Bond Markets, section on the United States, Market-Based Credit Enhancement in the US Municipal Bond Market, p. 51.

- c) Collaborating with an established public sector entity (such as a nonbank financial or development institution), with experience in and exposure to capital markets activity and accountability.
- d) Insurer capitalization sized to attain or maintain an AAA rating in the national scale. For countries such as India or the Philippines, this is the equivalent of a BBB in the international scale, which minimizes the amount of capitalization needed.
- e) Preservation of its capital requires robust underwriting criteria, risk management policies, and leveraging limits commensurate with the expected default risk and recovery value of the municipal sector.
- f) Market confidence requires strict governance standards and separation from political influence. Options to consider include creating a Board that is arm's length from the government and potentially entering into a management contract with an existing international monoline insurance provider for an initial operating period.
- g) Full-and-timely payment certainty to the investors in the bonds, while also maximizing its potential to recover insured amounts in full.

Where the credit fundamentals of a participating municipality are considered weak, so that ADB judges the municipality to have considerable risk in paying its financial obligations on both a full and timely basis and on an ultimate basis, considerations of a local funding share may not be appropriate. In this case, traditional forms of grant financing should be considered for the provision of a needed infrastructure investment; however, ADB should also consider whether technical assistance is needed by that municipality to operate and maintain the infrastructure investment on a life cycle basis.

4. Institutional Capacity Building

So far, this report has described recommendations that pertain to ADB's assistance for financial market mechanisms. In certain cases, the more immediate need is to promote institutional capacity building exercises that will provide a smoother, eventual trajectory toward a bond market. This can include capacity building for municipal governments, for central government agencies that support municipal governments, or for private sector entities that will eventually provide financial services to municipalities if and when they decide to enter the bond market. These technical assistance recommendations can include:

- (i) the promotion of municipal ratings;
 - (ii) the creation of municipal ratings methodologies;
 - (iii) the production of independent financial audits;
 - (iv) the harmonization of audit rules and conventions between government audit authorities and the financial markets;
 - (v) municipal financial, debt and economic benchmarking exercises utilizing existing databases of municipal loans, etc.; and
 - (vi) the seeding of financial advisory firms that can help municipalities navigate through the daunting processes of capital planning, disclosure preparation, financing document negotiation, acquisition of a credit rating, investor outreach presentations, and bond listing requirements.
- (i) **Promotion of Municipal Ratings/Municipal Audits:** In countries that introduce local governments to the bond market for the first time (such as Indonesia), or reintroduce local governments back to the bond market (such as the Philippines), once the central government has selected a candidate municipality(ies) for bond issuance, ADB technical assistance sub-projects for the candidate municipality can include a contract with a local ratings agency to prepare a municipal credit rating, and a contract with an independent auditor to prepare audited financial reports. An independent credit rating and independently produced audits are critical preparatory steps for a municipality that has intentions of issuing bonds.

In some cases, the technical assistance may also include contracting with an international ratings agency to help a local ratings agency to develop the appropriate methodology for rating municipal bonds (similar to current technical assistance being done in Viet Nam with FiiRatings). In other cases, technical assistance may include contracting with a consultant to help a local accounting firm to apply accepted government accounting standards while also adhering to regulatory financial market disclosure requirements.

These exercises do not guarantee access to the bond market, but they create a set of expectations about what it takes to prepare for entry into the bond market. Therefore, a municipal ratings exercise may or may not produce a high enough rating to meet investor expectations, since in the target DMCs, investor appetite is primarily tailored toward highly rated issuers. Similarly, an audit exercise may show adequate or poor financial performance on the part of the municipality being audited or may include audit exceptions that signal that the municipality has more work to do in order to put its financial house in order so that it can eventually go to the bond market. Either way, these preparatory exercises are important for the future development of municipal finance in the target DMCs, even if they do not result in immediate bond market access.

- (ii) **Municipal Benchmark Exercises:** In some countries, the central government maintains government-owned financial institutions that provide lending to municipalities; this is true in all four of the target DMCs. These institutions have a wealth of data about the economic and financial performance of the municipalities to which they are lending. In most cases, it is passively maintained by the financial institutions and is not publicly available. In countries where the governments would like to promote municipal bond issuance, an important technical assistance project that ADB could do in conjunction with these institutions is to statistically analyze the loan portfolios of those institutions, and to produce economic, debt, and financial benchmarks at the local government level that could initially guide municipal ratings activities, and eventually guide municipal bond issuances. Comparisons against industry benchmarks are integral to the ratings methodologies of international ratings agencies, as well as to the decision-making process of institutional investors.
- (iii) **Seeding Financial Advisory Services:** Financial market regulators have a set of requirements for the issuance and listing of debt securities, which vary in stringency and comprehensiveness from country to country, but which must be met before a municipal government can issue and list its bonds. Once the bonds are listed, the regulations have continuing disclosure requirements which must be maintained until the bonds reach final maturity. Examples of these requirements can include disclosure of independently produced financial audits, including audit notes, and a listing of any debt or other financial obligations outstanding at the time of issuance, summary level disclosure of the municipal budget, disclosure of material lawsuits and other material events, a detailed project report indicating how the bond proceeds will be used, an independent credit rating, an offering memorandum, application forms for the issuance of bonds, as well as for registration with an exchange for the listing and trading of bonds, and the selecting and contracting of intermediaries to assist with the issuance and with regular debt service payments for the bond (includes an underwriter, a trustee or escrow agent, outside legal counsel, etc.). It also includes the preparation of presentations for outreach to institutional investors who might review the presentation and offering document for a possible investment. All these requirements are technical (specific to participation in the domestic bond market), and most of them are outside of the expertise and experiences of existing municipal officials. In developed markets, the municipality would hire a financial advisory firm to help it navigate through this process, but in developing countries, these financial advisors (especially for municipal finance, which is either undeveloped or underdeveloped) do not exist. If ADB is working with a DMC where there is a potential for multiple municipal bond issuers, it may want to consider seeding a financial advisory firm, as part of a technical assistance agreement.

II. INDIA

A. Snapshot

Demographic	
Population (millions)	1,393
Subnational Governments	States, union territories (including national capital territory), urban local bodies, consisting of municipal corporations, small to medium-sized municipalities and villages (Nagar Panchayats)
Legal and Regulatory Framework for Municipal Bonds	
Central government delineation of powers between levels of government	Constitution distributes legislative powers between the union and the states; requires states to adopt municipal act
Law for subnational governments	Municipal Act
authority to raise and share revenues	Yes
authority to budget for and provide services	Yes
authority to issue and service debt	Yes
responsibility to report finances, perform audit	Yes
Track Record of Municipal Bond Issuance	
trends and terms of local government debt issuance	11 municipal corporations have issued debt: \$532 million outstanding
security for local government debt	escrowed municipal taxes
incidence of local government loan or bond default?	NA
Existence and quality of central government database of local government finances and debt?	NA
Bond Market	
Issuance of central government T-bills and bonds	Yes
Issuance of state-owned enterprise (public sector) or private corporate bonds	Yes
Issuance of securitizations	Yes
Comparison of municipal bonds against benchmark government bonds and comparable corporate bonds	Yes
Depth of long-term investor base by type of funds	shallow but developing quickly
Regulatory bond issuance and listing guidelines	Yes
Secondary Market Activity	dominated by central government bonds, but also open to corporate and municipal bonds
Evidence of competent ratings agencies	Yes

Sources: Macrotrends; Reserve Bank of India; States and Union Territories, <https://knowindia.india.gov.in>; Summary Report of Urban Local Bodies Registered Statewise, Ministry of Housing and Urban Affairs, <http://swachhbharaturban.gov.in>; William Streeter.

B. Summary

India is a large emerging market country in South Asia with many state and local governments, known in India as urban local bodies (ULBs). Although India has an established history of decentralization at the state level, the Constitution (74th Amendment) Act, 1992, required each state to revise its own municipal laws to promote greater decentralization, resource mobilization, accounting reforms, and private sector partnerships at the municipal level. This contrasts with other Asian DMCs that adopted municipal laws at the central government level, such as Indonesia, the Philippines, and Viet Nam. Although these municipal laws provide an excellent legal framework for municipal governance in India, decentralization remains a work in progress, with wide variation among municipalities in their ability to generate tax revenues, manage public services, plan operating and capital budgets, and finance infrastructure improvements.

ADB noted in 2003 that the institutional capability of ULBs suffers from “their poor operation and financial management, inadequate revenue base, and inefficient collection,” and that this required significant capacity building before local governments could access the bond market.¹⁴ ADB’s current country strategy recognizes that cities will drive future economic growth, although they suffer from inefficiencies in planning, land use, property tax collections, and investment cost recovery, as well as fragmented authority between state agencies and ULBs.¹⁵ Municipal development programs sponsored by the Ministry of Housing and Urban Affairs (MoHUA), such as the Smart Cities Program and AMRUT, are gradually reshaping and modernizing the public service capabilities and governance of many municipalities. ADB’s program assistance is aligned with these government-sponsored programs (see section below, Summary of Related ADB Projects).

In terms of subnational debt, India has a developed state bond market but an underdeveloped municipal bond market. As of the first half of 2021, public sector debt comprised 75% of all fixed income securities outstanding; most of this is central government debt, although state debt comprised 31% of outstanding public sector debt, while municipal bonds comprised only 0.03%. The Securities and Exchange Board of India (SEBI), which is India’s financial markets regulator, released its municipal bond guidelines in 2015; since then, only 11 municipal corporations have issued bonds for a total issuance equivalent to \$532 million.

Institutional investor guidelines and investment conventions in India favor AA and higher rated securities on the India national scale; since very few municipalities can achieve that high of a rating, most are left out of the market. For the municipalities that are rated AA, SEBI disclosure requirements are cumbersome and are geared toward corporate credits that traditionally have a more robust disclosure regime than do most municipal governments.

Bonds issued in India’s domestic market are mostly medium term, with maturities of 1–10 years. Bonds for long-term municipal assets are currently not available, even though the Government of India and some of its SOEs have issued long-term bonds. The municipal bonds issued so far have been 5- to 10-year maturities, using structured finance techniques, which are rare in Asia outside of India, such as dedicated revenue streams that are held by a trustee in an escrow account, with sinking funds for bullet principal maturities, a small debt service reserve fund (DSRF), and other structured provisions. The bond market in India has perfected these structures for public sector corporations, project finance transactions, and now for municipal bonds. Mexico is the other emerging market country with similarly structured municipal bond issuance.

¹⁴ Y.-H. Kim. 2003. *Local Government Finance and Bond Markets*. Manila, p. 93.

¹⁵ ADB. 2017. *Country Partnership Strategy: India, 2018–2022, Accelerating Inclusive Economic Transformation*. Manila.

Banks, insurance companies and the Reserve Bank of India (RBI) are the largest holders of central government bonds. Prominent investors in state government bonds are banks, insurance companies, and provident funds (pensions). While municipal bonds could be expected to serve as an alternative investment for investors in state bonds, to date, municipal bond issuances have been too infrequent to make such a determination. RBI maintains a comparative database of the Indian states, but no such database exists for municipal entities. This makes a comparative analysis of municipalities difficult, beyond information supplied in individual rating agency reports, including benchmarks of economic strength, debt position, and financial performance.

This chapter summarizes the internal and external ecosystems for municipal bonds in India. The internal ecosystem consists of key laws that support the issuance of local government bonds and that promote financial disclosure to prospective lenders and investors. The external ecosystem consists of the key characteristics, customs, regulations, and oversight of the domestic bond market into which local governments issue bonds. Based upon the internal and external ecosystem analysis, recommendations are provided to ADB for channeling technical and financial assistance to the development of municipal bonds in India.

C. Recommendations for Future ADB Activity in India

- (i) For the small group of municipal corporations that are issue-rated AA or higher, using the now-commonplace structured finance techniques, ADB can broaden the municipal bond market by offering to invest in longer-term bonds and bonds with staggered maturities. The current market offers bonds with 5-year and 10-year bullet maturities; the shorter-term maturities become prevalent when externalities lead to uncertainty, such as the current situation which is punctuated by global increases in interest rates, high oil prices and the Russian invasion of Ukraine. Longer-term bonds with 15- and 20-year maturities, which are currently not available to municipal governments, but are available to some government SOEs, would allow for debt to better match the useful economic life of the infrastructure assets being financed. ADB, by investing in these longer-dated maturities, could catalytically induce demand for such securities.
- (ii) Secondly, by offering to invest in staggered maturities, instead of a single bullet maturity, ADB could catalytically induce demand for amortizing debt structures. A 20-year bond, with staggered maturities every 2 years or so, would act as an amortizing mortgage, which better fits the revenue profile of municipal governments; once a maturity is retired, it creates a window for financing additional infrastructure without increasing the overall budgetary allocation for debt service.
- (iii) After a period of years, ADB could opportunistically sell some of its staggered or longer-dated bullet maturities in the secondary market, freeing up capital to invest in new municipal bonds. Opportunistic selling, for instance, would be tailored for sweet spots in bond market demand, such as for 5- or 10-year bonds, etc., and would represent a synthetic increase in the supply of bonds since new ones are issued so infrequently.
- (iv) For municipal corporations with issue-level ratings in the A category, ADB may want to investigate the possibility of developing a credit enhancement mechanism that would take a “patient capital” approach in support of a senior lien bond issued to the market. In such a scheme, the senior bond would get paid on a full-and-timely basis and would be supported by a subordinated LOC, which would be repaid on an ultimate repayment basis, extending beyond the life of the senior lien bond and providing a longer time frame for this debt to amortize or recover. This type of credit enhancement would increase the number municipal bond issues rated AA.
- (v) For the vast majority of ULBs that are rated in the BBB category and below, credit enhancement would not be an economic alternative due to the expected severity of losses.

For these municipalities, ADB could help MoHUA to revive and update its pooled finance guidelines, which have been in place for years, but are unutilized except in Tamil Nadu and Karnataka. SEBI's municipal bond guidelines were recently revised to recognize that a trust can also issue municipal bonds. This was an accommodative gesture to pooled finance issuers. A well-capitalized pooled finance facility, with robust underwriting guidelines, loan monitoring processes, and state aid intercept authority, could provide bond market access to a much wider population of ULBs than is possible with issuances by individual municipal corporations.

- (vi) The Housing and Urban Development Corporation Limited (HUDCO) now has a sizable portfolio of municipal loans, which could potentially be explored for a series of securitizations that would greatly add to the quantum of available municipal debt in the bond market. These securitizations could be timed to offset periods of low primary municipal bond issuance, thereby ensuring that the bond market has a steady stream of municipal bonds either from primary or secondary market activity. The securitizations would also recapitalize HUDCO without adding to its balance sheet liabilities. ADB could play a role in structuring the securitizations and in providing credit enhancement as described above, but on a portfolio basis, so that the securitized bonds are issued with an AAA rating. Target cities could be the lower-rated cities that are undertaking capacity-building exercises under the AMRUT and Smart Cities programs.
- (vii) Once the volume of municipal bonds increases, either through primary market issuance by highly rated municipalities, credit enhancement, pooling, or securitizations, then other enticements, such as the tax status on such bonds, can be used to target the demand for municipal bonds to the type of investor that would benefit most from tax exemption.
- (viii) ADB's infrastructure assistance programs that are geared toward the financing of municipal infrastructure through government grants, should be integrated with the above bond initiatives, by providing a form of public equity subsidy that also facilitates complementary bond market financing. This link is currently missing given that the pool of eligible municipal borrowers is so small. The above recommendations, however, would rectify this.

D. Internal Ecosystem for Municipal Bonds

The legal framework for ULBs and their municipal bonds consists of the reforms mandated by the Constitution (74th Amendment) Act, 1992, and the Municipal Law, which has become entrenched in the legal framework of each state. The act required each state to revise its own municipal law to promote greater decentralization, resource mobilization, accounting reforms, and entry of private sector partnerships. The Municipal Law establishes the core municipal functions, encourages ULBs to generate internal sources of revenue, authorizes the municipal governments to issue debentures or raise loans, and requires that annual financial reports be prepared according to the national municipal accounting manual (NMAM). The NMAM prescribes an audit process and requirements but does not prescribe a timetable for the production and release of an audit,¹⁶ leaving these details to the individual Municipal Acts of each state, and to SEBI's disclosure requirements under the Municipal Bond Guidelines.

On paper, the legal authority provided for ULBs is comprehensive. Nevertheless, MoHUA claims that the decentralization of government responsibility from the states to the municipalities has lagged. According to the MoHUA, "Many states have not transferred functions, funds, or functionaries to ULBs. Revenue

¹⁶ Institute of Chartered Accountants of India (ICAI). 2004. *Committee on Public Finance and Accounting Standards for Local Bodies Announcement*. New Delhi.

powers are often not in consonance with the assigned responsibilities... Implementation of 74th CAA (Constitution Amendment Act) needs strengthening.”¹⁷

Accordingly, MoHUA is implementing two municipal reform programs, the Smart Cities Mission and the AMRUT program. Both initiatives have municipal capacity building and experience sharing at their core. Municipal corporations now have a forum to share capital plans and detailed project studies, to understand how debt capacities are calculated, to see their issuer level ratings, and to participate in exercises that increase their reliance on building municipal services around big data and improved revenue collections. Of the municipal corporations that have issued bonds since the SEBI municipal bond guidelines were published, all participate in these transformative initiatives. For more details on the internal ecosystem for municipal bonds, see Appendix: India Part 1.

1. Pooled Finance Experiments in India

The WSPF is a state-level pooled finance trust created by the State of Tamil Nadu in 2002 to mobilize bond funds to make infrastructure project loans to ULBs across the state.¹⁸ Since 2002, WSPF has raised funds from five separate bond issuances; one of which benefitted from a partial credit risk guarantee from United States Agency for International Development (USAID), and all of which were rated in the AA category on the national ratings scale. The bonds issued by WSPF benefit from the following levels of credit enhancements:¹⁹

- (i) Escrow of Revenues of ULBs: Each ULB established a no-lien escrow on its current account through which its tax collections and other revenues (including state devolutions) are routed.
- (ii) A tripartite agreement was executed between WSPF, the ULB, and its bank, which requires that revenues be transferred monthly on a “no prior lien” basis to an escrow account on behalf of bondholders.
- (iii) Any shortfall in monthly payments to the escrowed account prior to a debt service payment date will be mitigated by an intercept of future state finance commission devolutions to the ULBs.
- (v) Bond Service Fund (BSF): The BSF is a fully funded debt service reserve fund (DSRF), which is invested in liquid securities rated AAA. Amounts drawn from the reserve fund can be used to mitigate any expected shortfall on debt service. The same ULB cash flow and state intercept mechanisms are used to replenish the reserve fund. An earlier bond issue has a USAID partial risk guarantee to replenish the debt service reserve.

In 2006, the Government of India approved the Pooled Finance Development Fund scheme to encourage more states to create state-level pooled finance vehicles like the one in Tamil Nadu (Karnataka also established a pooled finance vehicle).²⁰ The scheme allowed that a state could either be set up as a trust or as a special purpose company to house the pooled finance vehicle. Central government contributions to the pooled finance vehicles were mainly to be used to establish the debt service reserve fund (DSRF), which would allow debt issued by the trust to obtain a higher rating. Some funds could also be used for project development. As part of the scheme, the Ministry of Urban Development (now MoHUA) posted a set of guidelines and an application form for the issuance of tax-exempt pooled finance development bonds and a toolkit for the scheme.

¹⁷ Government of India, Ministry of Urban Development. 2011. *Strategic Plan of Ministry of Urban Development for 2011-2016*. <https://www.niua.org/pearl/content/strategic-plan-ministry-urban-development>.

¹⁸ India Ratings. 2018. *India Ratings Affirms Water and Sanitation Pooled Fund's Bonds at 'IND AA(SO)'/Stable*. www.indiaratings.co.in.

¹⁹ Fitch Ratings. 2003. *Water And Sanitation Pooled Fund (WSPF)*. www.fitchratings.com.

²⁰ R. Goel. *Pooled Finance Development Fund*. www.academia.edu/31539244.

The scheme never took off outside of the two states of Tamil Nadu and Karnataka. According to an RBI report in 2013, the pooled finance scheme “could be the cutting edge of municipal finance in the coming years,” but faced issues such as a need to streamline the project approval process, data gaps to implement the program appropriately, and there were no Urban Infrastructure Funds to provide a ready investor base for pooled bond issues.²¹ The bond issues, however, did not require separate investment funds to invest in them. The issues from Karnataka and Tamil Nadu were sold successfully in the corporate bond market with high national-scale ratings; according to a report by the International Growth Centre, London School of Economics and Political Science, their coupon rates compared favorably with the lending rates offered by banks at the time.²² The structures set up to protect the bonds worked well, and there have been no incidents of default and no ratings downgrades. Dr. Krishnaswamy Rajivan, who was the CEO of the Tamil Nadu Urban Development Fund from 1996–2003, and also of the Water and Sanitation Project Fund, gave four reasons why he thought the scheme never expanded to other states:²³

- (i) larger cities were able to obtain ample capital grants through Jawaharlal Nehru National Urban Renewal Mission, and later through the Smart Cities program, so there was no incentive to set up a pooled finance structure;
- (ii) most states do not have an agreed fiscal transfer system, so it would be hard to create certainty around transfer payments as security for a lender or investor;
- (iii) the process of decentralization “has been choppy” with limited power given to many mayors; and
- (iv) The Government of India focus shifted from developing a borrowing framework for municipalities to promoting public-private partnerships (PPPs) at the local government level.

2. Sources of Competition with the Bond Market for Municipal Finance

HUDCO is an established alternative to the domestic bond market for financing urban infrastructure. It was incorporated in 1974 as a public financial institution and is currently managed under MoHUA. Although well known for its financing of housing, HUDCO began to finance urban infrastructure in FY 1989–90, including core sectors such as water, sewerage, drainage, solid waste management, roads, and electricity.²⁴ It funds projects under the Smart Cities and AMRUT programs, and, as of 31 March 2021, its outstanding loan portfolio for urban infrastructure was reportedly ₹273.13 billion (almost \$4 billion).²⁵ This does not include loans for housing.

HUDCO’s lending rates are not competitive with the bond interest rates for municipal corporations rated AA, but in FY2020–21, its lending to municipalities dwarfed the issuance of municipal bonds. HUDCO’s published interest rates in FY2020–21 were 9.1% for a loan with a fixed interest rate for 1 year, and 10.6% for a loan with a fixed rate for 3 years.²⁶ During the same period, municipal bond issuers were able to achieve interest rates of 8.5% and 8.1% for their 10-year bonds; a considerable interest savings over HUDCO’s published lending rates. Nevertheless, only two municipal corporations issued a total of ₹2.5 billion (about \$35 million) of bonds that year, while HUDCO sanctioned 32 urban infrastructure project loans

²¹ H. Khan. 2013. *Financing Strategies for Urban Infrastructure: Trends and Challenges*. Reserve Bank of India. <https://rbidocs.rbi.org.in>.

²² S. Banerji, K. Gangopadhyay, A. Thampy, Z. Wong. 2013. *Constraints and Prospects of Financing via Municipal Bonds in India, An Analysis with Case Studies*. www.theigc.org.

²³ Email exchange with Dr. Rajivan on 11 September 2022.

²⁴ HUDCO. *Our Role*. <https://hudco.org.in>.

²⁵ HUDCO, *Our Role*, p. 130.

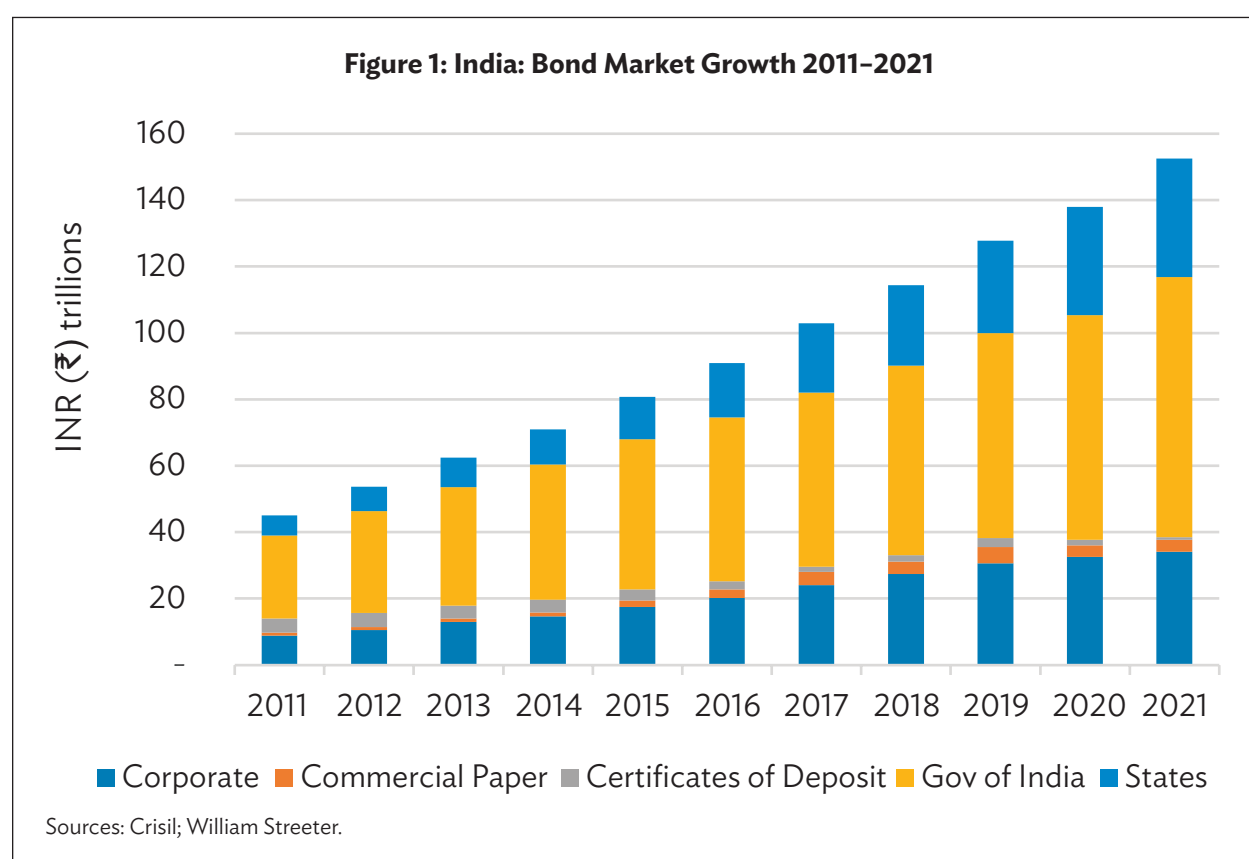
²⁶ HUDCO. 2021. *Revised Master Circular – Amendment No. 154/DF/2021*. <https://hudco.org.in>.

for ₹82.65 billion (about \$1.1 billion); disbursing ₹46.22 billion (\$642 million) of that amount.²⁷ Three contributing factors to this disparity of activity include the established relationships that HUDCO has developed in the municipal sector, the high rating requirement for the bond market, and the rigorous and time-consuming disclosure requirements of SEBI.

E. External Ecosystem for Municipal Bonds

1. India Bond Market Activity:

The Indian debt market has become sizable in terms of market capitalization, growing from an amount equal to 59% of gross domestic product (GDP) in 2011 to an amount equal to 77% of GDP by 2021. Its annual growth over this period ranged from 8% to 19% per year, and it is currently capitalized at ₹197 trillion (approximately \$2.6 trillion). Despite its sizable capitalization, the debt market remains dominated by public sector bonds by both the central and state governments. Public sector bonds were 69% of the debt market in 2011, but grew to 75% of the market by 2021, with additional central and state borrowing during the COVID-19 pandemic; state debt represents one-third of public sector debt. Figure 1 below shows the growth in India's bond market from 2011 to 2021, including the dominant central and state government bonds, as well as corporate bonds, commercial paper, and certificates of deposit that form the other and smaller components of the debt market.²⁸



²⁷ HUDCO. 2021. *51st Annual Report*. www.hudco.org.in. p. 25.

²⁸ CRISIL. 2021. *Outstanding Amount for Various Fixed-Income Securities, Crisil Yearbook on the Indian Debt Market 2021*. www.crisilratings.com.

Corporate bonds outstanding grew over this period, but only represent 22% of outstanding debt in 2021. This part of the bond market is smaller and less liquid. On a relative scale, corporate bonds in India are equal to 17% of GDP, whereas they are equal to 99% of GDP in Brazil, and 44% of GDP in Malaysia, according to a recent report by RBI.²⁹

Secondary bond market activity is also dominated by central government bonds. From 2009–10 to 2019–20, for instance, central and state government secondary market trades grew from an average daily volume of \$2.7 billion to \$5.6 billion.³⁰ Average daily trades of corporate bonds by comparison, grew from \$0.4 billion to \$0.7 billion over the same period.

The first municipal bond issuance in India was in 1997; since then, there have been only 37 bond issues, including taxable and tax-exempt bond issues by municipal corporations, regional development authorities (such as the National Capital Regional Planning Board) and pooled finance bonds issued by state owned infrastructure funds (such as the WSPF). Municipal debt is underdeveloped and remains a tiny portion of outstanding public sector debt. A full listing of municipal bonds issued and either outstanding or matured can be found in Appendix 11: A Survey of Municipal Bonds in India, the Philippines and Viet Nam.

India's bond market is well regulated by SEBI, which protects the interests of investors. SEBI maintains comprehensive regulations over all types of securities, including for municipal bonds. The bond market is also well served by the stock exchanges that list both bonds, stocks, mutual funds, and derivatives. Government of India bonds are issued with a wide range of maturities, but their value as benchmarks is limited by the prevalence of 3-to-10-year maturities for corporate bonds. Municipal bonds typically have 5-to-10-year maturities. Investor regulations and market conventions favor investment in bonds rated AAA and AA. In 2018–19, for instance, 56.4% of the corporate bond volume was rated AAA, while 18.3% was rated AA. Some mutual funds invest in lower-rated corporate bonds, but this investment appetite is limited.

The market's threshold for highly rated bonds is an impediment to the development of India's municipal bond market. Although tax-exempt bonds are available, tax status is of little value if the bonds do not have a high enough rating. For more details concerning the external ecosystem for municipal bonds in India see APPENDIX: India, Part 2.

2. Ratings Agencies:

SEBI authorizes the following credit rating agencies:³¹

- (i) Credit Rating Information Services of India Limited (CRISIL), an affiliate of S&P Global
- (ii) India Ratings and Research Pvt Ltd: India Ratings and Research, a wholly owned subsidiary of Fitch Group
- (iii) Investment Information and Credit Rating Agency (ICRA), a joint venture of Moody's and Indian Financial and Banking Service Organisation.
- (iv) Credit Analysis and Research Limited (CARE)
- (v) Brickwork Ratings India Pvt Ltd.
- (vi) SMERA Ratings Limited
- (vii) Infometrics Valuation and Rating Pvt Ltd.

²⁹ RBI. 2019. *India's Corporate Bond Market: Issues in Market Microstructure*. www.rbi.org.in. p. 21.

³⁰ RBI, *India's Corporate Bond Market*, p. 15.

³¹ Clear Tax India. 2022. *Know More About Credit Rating Agencies in India*. <https://cleartax.in>.

India Ratings, CRISIL, and ICRA rate most of the outstanding municipal bonds, which usually sell in the domestic market with two ratings. SEBI requires that municipal bonds have two ratings. The municipal ratings criteria of India Ratings, CRISIL, and ICRA largely mirror those of their respective international ratings agency partners.

In addition to the ratings for municipal bond issues, MoHUA, through the AMRUT program, commissioned issuer-level ratings for 485 cities that participate in its municipal reform programs.³² To date, 255 municipalities have received ratings under the program, although these were point-in-time ratings and few of the assigned ratings remain outstanding. This was the largest group of municipal ratings among developing countries of Asia, excluding the PRC. Among this population of rated municipalities, MoHUA reports that 44 % are investment grade in the India national scale, of which none are rated AAA, 12 are rated in the AA category, 20 are rated in the A category, and 80 are rated in the BBB category. Since investors in the Indian domestic bond market prefer bonds with ratings of AA or higher, only a small number of municipalities would be able to issue bonds on their own credit, even with the current structure finance bond structures. For more detail on the AMRUT ratings exercise, please see the external ecosystem for municipal bonds in India see Appendix 1: India, Part 2.

F. Summary of Related ADB Projects

Municipal Accounting Reforms in India, An Implementation Guide (October 2013): This report recognized that urban bodies lacked the internal capacity, knowledge, and experience to undertake municipal auditing reforms.³³ It also recognized that urban bodies would require external expertise to design, implement and sustain this reform process. It envisaged a phased program, establishing a double entry accrual-based accounting system that would be improved upon in a second phase through development of a financial management improvement program. The last phase would include developing an e-governance system.

The report saw a role for development institutions to partner with government to implement these reforms, including standardized computer software modules and the implementation processes. It also saw the need to develop capacity-building programs in municipal accounting reform between municipal staff and private sector accounting firms. As the report emphasized, “An urban body with a strong accounting base would be able to provide better governance for its citizens.”

Country Partnership Strategy (CPS): India, 2018–2022, Accelerating Inclusive Economic Transformation (September 2017): The report recognizes that India has made significant gains in economic growth, cutting its poverty rate, and in achieving many of its Millennium Development Goals.³⁴ Nevertheless, it sees the need for the CPS to focus on three strategic pillars: 1) boosting economic competitiveness; 2) providing inclusive access to infrastructure networks and services; and 3) addressing climate change and increasing climate resilience. The strategy recognizes that cities will drive future economic growth, but that they suffer from inefficiencies in urban planning, land use, property tax collections, and investment cost recovery, as well as fragmented authority between state agencies and ULBs.

ADB’s urban sector program will contribute to inclusive growth by assisting low-income states and supporting investments in municipal infrastructure, including water supply, sanitation, solid waste management, urban transport and traffic management, tourism infrastructure, and urban health services.

³² Atal Mission for Rejuvenation and Urban Transformation (AMRUT). 2018. *Credit Rating and Issuance of Municipal Bonds*. <https://mohua.gov.in>.

³³ ADB. 2013. *Municipal Accounting Reforms in India—An Implementation Guide*. Manila.

³⁴ ADB. 2017. *Country Partnership Strategy: India, 2018–2022, Accelerating Inclusive Economic Transformation*. Manila.

ADB's programs will align with the government's three flagship urban programs: Smart Cities Mission, AMRUT, and Swachh Bharat Mission. The Smart Cities Mission has identified 100 priority cities, and AMRUT has identified 500 priority cities in which to invigorate urban transformation. ADB's support will also be used to promote municipal reforms and improve governance, build ULB capacity in project implementation and utility service delivery, and develop financial intermediaries in states.

India: Rajasthan Urban Sector Development Investment Program (Tranche 2) (June 2019):

The Rajasthan Urban Sector Development Investment Program (RUSDIP) was designed to improve the urban environment and promote ongoing reforms for sustainable, efficient, and responsive urban service delivery.³⁵ RUSDIP sought to close the development gap in the state with increased economic growth, reduced poverty, and sustained improvements in the urban environment for 15 ULBs across the state. ADB approved RUSDIP as a multi-tranche financing facility. Tranche 2 included a \$150 million loan, which was approved in January 2009, and had a closing date that extended from June 2014 to June 2017. Investments included urban infrastructure improvements in water supply, wastewater management, solid waste management, urban drainage, urban transport and roads, social infrastructure, and infrastructure for cultural heritage. Capacity development and investment program management were also included in the project.

The project was appraised as having achieved many of the planned infrastructure projects. General recommendations for future projects included a deliverable-based payment structure for designs, reports, and documents, and an input-based payment structure for supervision to improve the accountability and effectiveness of consultants' performance. The report also recognized that complex contracts with multiple stakeholders and implementation complexities required more realistic contract periods. Procurement and contract management processes need to be more robust. Finally, future projects should strengthen the public financial management at the state and ULB level.

India, ADB Sign \$350 Million Loan for Sustainable Urban Services in India (December 2021):

The Government of India and ADB signed a \$350 million policy-based loan on 20 December 2021 to improve access to urban services in India.³⁶ The program is aligned with the Government of India's national flagship programs, such as the AMRUT program, that "promote cities as engines of economic growth" by creating high-quality urban infrastructure, assured service provisions, and efficient governance. Basic urban services that will be supported include water supply, sanitation, and affordable rental housing.

ADB will also provide knowledge and advisory support to the MoHUA in program implementation, monitoring, and evaluation, and include issues such as climate change, environmental and social safeguards, gender equality, and social inclusion. The program aims to enhance service delivery and promote performance-based central fiscal transfers to ULBs by supporting recommendations of the 15th Finance Commission that link fiscal transfers to improved urban service delivery and local tax collections.

Strengthening Institutional Capacities and Training Infrastructure in India (March 2022):

India's National Program for Civil Services Capacity Building aims to strengthen the institutional capacity in the country, by standardizing "role-based competency frameworks for select ministries and departments," strengthening outcome-oriented capacity building, and devising training frameworks.³⁷ The technical assistance is part of ADB's indicative country pipeline and monitoring report for India, 2022–24. It

³⁵ ADB. 2019. *India: Rajasthan Urban Sector Development Investment Program (Tranche 2). Completion Report*. Manila. (Project Number: 40031-033, Loan Number: 2506).

³⁶ India Education Diary. 2021. *India, ADB Sign \$350 Million Loan for Sustainable Urban Services In India*. indiaeducationdiary.com.

³⁷ ADB. 2003. *India: Support to Capacity Building Commission for Strengthening Institutional Capacities and Training Infrastructure in India*. Manila. (Project Number 56014-001 concept clearance 24 March 2022).

aligns with the operational priorities of ADB's Strategy 2030 and the country partnership strategy (CPS) for India 2018–22, by focusing on capacity development as for improving public service delivery and development outcomes. ADB has been offering a range of institutional support and knowledge management services over the past decades to strengthen India's institutional capacities, knowledge sharing, innovative solutions, and institutional assessments. Recent work includes capacity building for frontline COVID-19 workers.

ADB Financing to Support Urban Development Project in Nagaland (April 2022): The Government of India and ADB signed a \$2 million loan to establish a Project Readiness Financing for designing climate-resilient urban infrastructure, strengthening institutional capacity, and improving municipal resource mobilization in 16 district headquarter towns in Nagaland.³⁸ The facility will support the preparation of an urban sector strategy, feasibility studies, detailed engineering designs for infrastructure projects, and state-level capacity building for project implementation. This is part of the Government of India's efforts to improve infrastructure and services in Nagaland and develop the northeast region.

III. PHILIPPINES

A. Snapshot

Demographic	
Population (millions)	112
Subnational Governments	79 provinces, 1,495 municipalities, 115 cities, 41,943 barangays
Legal and Regulatory Framework for Municipal Bonds	
Central government delineation of powers between levels of government	Constitution
Law for subnational governments	Local Government Code (LGC) of 1991
authority to raise and share revenues	Yes
authority to budget for and provide services	Yes
authority to issue and service debt	Yes
responsibility to report finances, perform audit	Yes
Track Record of Municipal Bond Issuance	
trends and terms of local government debt issuance	History of municipal bonds and loans; loan market is active
security for local government debt	debt service to be provided for in local government budget
incidence of local government loan or bond default?	NA; some arrears in municipal loan payments to public & private sector banks
Existence and quality of central government database of local government finances and debt?	Yes; actively maintained

Continued on next page

³⁸ ADB. 2022. *ADB Financing to Support Urban Development Project in Nagaland*. Manila.

continued

Bond Market	
Issuance of central government T-bills and bonds	Yes
Issuance of state-owned enterprise (public sector) or private corporate bonds	Yes
Issuance of securitizations	A few mortgage securitizations, but not active
Comparison of municipal bonds against benchmark government bonds and comparable corporate bonds	NA
Depth of long-term investor base by type of funds	shallow
Regulatory bond issuance and listing guidelines	Yes
Secondary Market Activity	mostly limited to central government bonds
Evidence of competent ratings agencies	Yes, but municipal credit knowledge not developed

Sources: Worldometers (population), www.worldometers.info; Regions of the Philippines, PhilAtlas, www.philatlas.com; William Streeter.

B. Summary

Decentralization in the Philippines remains a work in progress. The Local Government Code (LGC) provides an adequate legal framework for the activities of local government units (LGUs), including for the issuance and servicing of debt for infrastructure projects. Some regulatory issues, such as the possibility of annual appropriations risk for the payment of debt service, and the possibility under certain circumstances for an LGU to assign an intercept of shared tax revenues for the repayment of debt, require further clarification. Nevertheless, the legal and regulatory framework is tested, especially with the growing book of LGU loans with GFIs, which provide low-cost lending referenced upon the central government's cost of capital. These below-market loans render the domestic bond market uncompetitive; as a result, municipal bonds, which were sporadically issued in the past with government guarantees, have largely been supplanted by GFI loans.

While the book of LGU loans has grown in recent years, LGU debt still represents only 1.3% of public sector debt outstanding, which shows their low relative participation compared with the central government in the financing of infrastructure projects. ADB has recognized these trends in a number of reports, citing the “traditional mindset of LGUs not to borrow or to be risk-averse at the expense of poor service delivery and a lack of quality basic services,”³⁹ and the lack of technical and financial resources at the LGU level for infrastructure project preparation, monitoring, and implementation.⁴⁰ Nevertheless, ADB, in its country operations business plan, remains committed to supporting local government capacity development, and infrastructure investment in the Philippines.⁴¹ Tying these initiatives, which have been significant in recent years, to a broadening of the domestic debt market could be an important next step. The Government has also expressed interest in revitalizing municipal bonds, but without guarantees.⁴²

³⁹ ADBI. 2019. Credit Financing for Local Development: The Subnational Debt in the Philippines. *ADB Working Paper Series* No. 966. Tokyo: Asian Development Bank Institute.

⁴⁰ ADB. 2016. *Philippines: Public-Private Partnerships by Local Government Units*. Manila. p. 103.

⁴¹ ADB. 2020. *Country Operations Business Plan, Philippines 2021–2023*. Manila.

⁴² ADB and Treasury, Republic of the Philippines. 2021. *LGU Bond Webinar*. Manila.

The Philippine domestic bond market is relatively small and shallow, but it is growing. At ₱10.427 trillion in capitalization (equal to \$201 billion, or on a relative scale, equal to 50% of GDP), the bond market is dominated by government bonds that constitute 82% of all bonds outstanding. The institutional investor base for government and corporate bonds includes banks and investment houses, contractual savings institutions, brokers, custodians and depositories, and the Bureau of Treasury Managed Funds. Market appetite is generally limited to securities rated AAA, although the domestic ratings agency is underdeveloped, and does not have a methodology to rate LGU debt.

Should municipalities return to the bond market, the Securities and Exchange Commission (SEC Philippines) provides a robust regulatory framework for bonds, although this does not include guidelines for the issuance and listing of municipal bonds, as are present in some Asian DMCs, such as India and Indonesia. The Philippine Dealing System Holdings Company (PDS Group) manages an efficient electronic trading and settlement platform for debt securities, which could also be available to municipal bonds in the future. Missing pieces for the reintroduction of municipal bonds include the sharing of government-generated data on LGUs with the bond market, standing budgetary authority to support revenue pledges for debt service without appropriations risk, a strengthening of municipal ratings capabilities, and the probable introduction of credit enhancement to achieve the market's investment expectations.

C. Recommendations for Future ADB Activity in the Philippines

- (i) Municipal data and internal municipal ratings are kept by the Bureau of Local Government Finance (BLGF) at the Department of Finance and were also kept under the old Local Government Unit Guarantee Corporation (LGUGC) program, which is no longer active. These databases include key LGU metrics, many of which mirror local government variables followed by the international ratings agencies. The BLGF currently publishes a list of LGUs that have been approved for infrastructure project loans, including the amount of loans that they require and their borrowing capacity. If the Government is interested in promoting municipal bonds, then the LGU database, including key local government metrics and internal ratings, should become available online to bond market participants. This would socialize the bond market to municipal finance issues and debt issuance plans, providing a forward calendar of potential project borrowing.
- (ii) As part of the local government socialization initiative, ADB could work with the BLGF and with PhilRatings to convert the internal LGU ratings system into an independent, market-based ratings system. This would provide an independent view on LGU credit to the bond market and develop the integrity and depth of the local ratings industry.
- (iii) ADB could also work with the SEC Philippines and the Commission on Audit (COA) to harmonize the local government auditing framework to include some financial disclosure elements required of corporate bond issuers, while still comporting with government accounting standards. ADB could also work with these parties and with local accounting firms to promote independently produced audits for LGUs that want to go to the bond market, separate from the Central Government audit process.
- (iv) ADB could also work to harmonize LGU disclosure requirements between GFIs and the bond market. This way, the Philippines could avoid a disparity among LGUs between the disclosure requirements for bank loans versus those for bond issuances.
- (v) Under the current environment, there is no reason for an LGU to go to the bond market when it can borrow from a GFI at a rate that is close to the government's cost of capital. ADB could work with the Department of Finance and with GFIs to limit the percentage of the debt that GFIs can provide relative to the approved borrowing authority of an LGU. If,

for instance, GFI lending was programmatically limited to 30% of a total borrowing, then the LGUs would be incentivized to go to the bond market or to private sector commercial banks for the remainder. This would allow for LGUs to benefit from a lower blended average cost of capital (a blend of bond market rates and GFI rates), while also diversifying the domestic bond market.

- (vi) While the Government reportedly no longer wants to provide LGU debt guarantees, bond investors in the Philippines expect AAA credit quality for their fixed income securities. In the past, the Government provided “full faith and credit” guarantees directly, or indirectly through the LGUGC. It is reasonable to expect that once the ratings (internal or external) of LGUs are made public, that few would achieve a national scale rating of AAA. For this reason, ADB could explore with the Government the creation of a credit enhancement facility (LOC) for LGU bonds, with the following conditions:
 - a) That the cost recovery of such a facility is possible based upon the differential spread between AAA government bonds and AAA corporate bonds.
 - b) That its underwriting criteria would favor credit enhancement for LGU debt where the cash flows suggest a small-to-moderate probability of intermittent payment delays, but a strong probability of ultimate recovery. LGU debt where the cash flows suggest structural difficulties to ultimately repay debt would not be eligible. In this way, the line of credit plays the role of a patient investor, protecting the senior lien bonds held by investors, but also getting repaid in the end.
 - c) Senior lien bonds protected by the LOC would have to achieve a ratings uplift to AAA on the domestic scale. This would be important for the domestic bond market but a small lift for ADB, since a domestic national scale rating of AAA is equivalent to an international scale rating of BBB.

A few pilot-project municipal bonds using willing and creditworthy LGUs and trusted market intermediaries will be necessary to develop and activate the recommendations above.

D. Internal Ecosystem for Municipal Bonds

The legal and regulatory framework for municipal bonds in the Philippines is adequate. The Constitution established the country’s territorial and political subdivisions, including provinces, cities, municipalities, and *barangays* (can be used to refer to a village, district, ward, or metropolitan suburb). It also mandates that the Congress enact a LGC that decentralizes powers, responsibilities, and resources of the LGUs, as they are known in the Philippines. This was done in 1991 with enactment of the LGC, which includes the allocation of revenues across levels of the government, and the authority of LGUs to enter into financial transactions, including the issuance of bonds, as long as they have approved the financial transaction in an ordinance, and the project being financed is part of its adopted local development plan. Administrative Order No. 270 contains the implementing regulations for this code.

The LGC recognizes that the repayment of loans from the central government can be secured from a broad range of local government revenues, including income from the projects being financed, or from general income. Security for the loans is maintained as long as debt service is appropriated in an LGU’s annual budget until the loan is repaid. This recognition of appropriation risk, or the failure to appropriate for debt service, would render the budget “inoperative,” according to the regulations. For a bondholder, appropriation risk would result in an event leading to default, which would trigger an immediate downgrade of the LGU’s public rating. An LGU may authorize the Central Government to deduct or withhold a portion of its internal revenue allotments (IRA) (which, since a Supreme Court ruling in 2019, is based on the collections of all national taxes) for the payment of a contractual obligation. This is a

discretionary and optional intercept mechanism, and although its provisions are currently undeveloped, if properly structured, it could provide a significant ratings uplift to a LGU borrower.

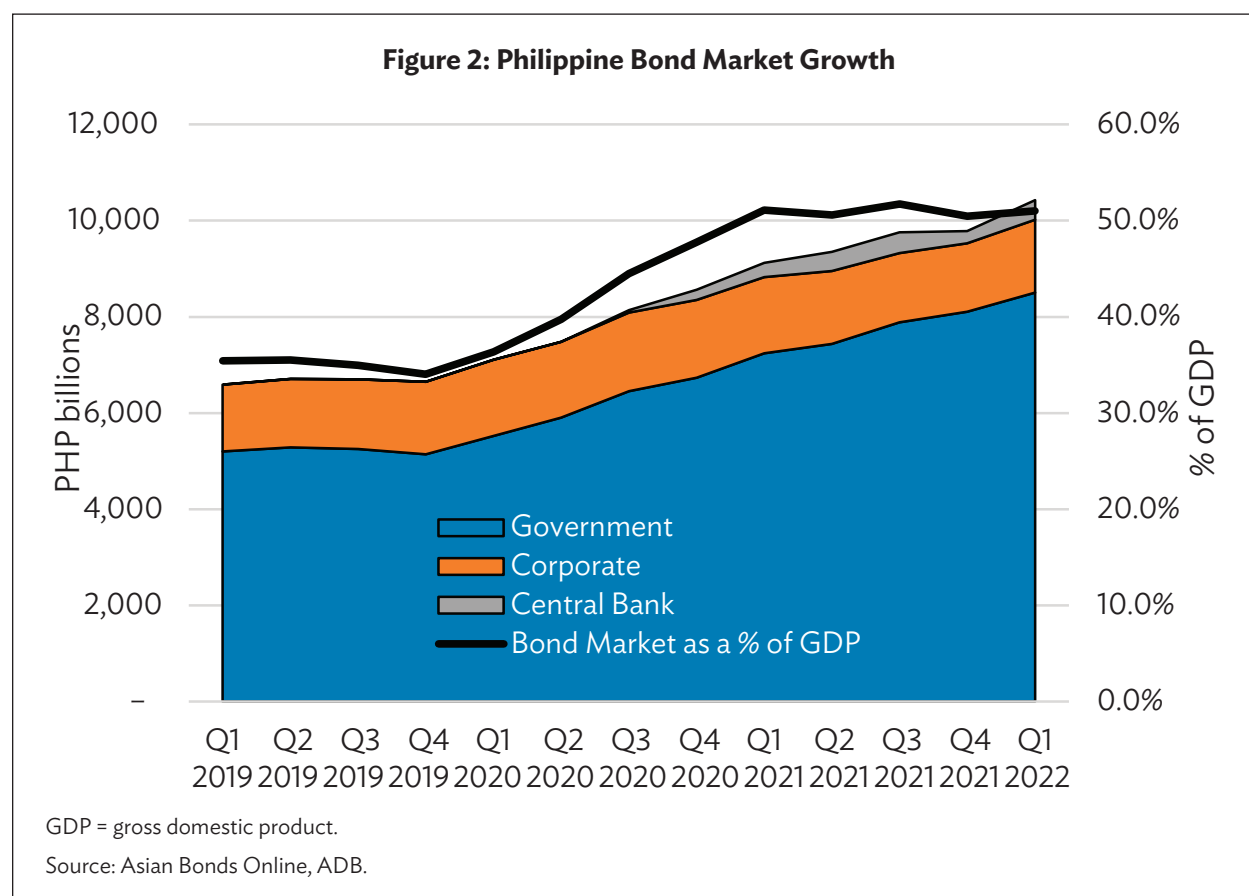
The Bureau of Local Government Finance (BLGF) (in the Department of Finance) certifies LGUs applying for permission to enter into a loan or bond debt obligation. This process certifies the net debt service ceiling (NDSC) and borrowing capacity of the applicant LGU, and it results in the creation and maintenance of a database on LGUs, as well as an internal ratings system for them. This information could be used to socialize LGUs to the bond market if the government wants to promote municipal bond issuance by the LGU sector.

Should LGUs wish to re-enter the bond market, however, they may need to seek permission from the COA to produce a separate and more timely financial statement from an independent auditor. This is the same process that occurred in India, when some of the municipal corporations, as a requirement for entering the bond market, obtained independent audits for investor disclosure purposes, while simultaneously proceeding with the more cumbersome government sponsored financial audit process.

For additional details about the internal ecosystem for municipal bonds see Appendix 2: Philippines, Part 1: Details Internal Ecosystem for Municipal Bonds.

E. External Ecosystem for Municipal Bonds

1. Philippine Bond Market:



The Philippine bond market is relatively small. The total market is ₱10.43 billion (roughly \$201 billion). It is also dominated by government bonds, which comprise 82% of the total bond market.⁴³ Nevertheless, the market is growing. At the beginning of 2019, it was equal to about 35% of GDP, but now it is equal to about 50% of GDP (see Figure 2 above for composition and growth of the Philippines bond market). Average annual growth of government bonds during this period was 15.85%, whereas average annual growth for corporate bonds was only 2.35%. Peso-denominated bonds are primarily purchased by four investor groups: banks and investment houses (37.9%), contractual savings institutions (35.4%), brokers, custodians and depositories (9.6%), and the Bureau of the Treasury Managed Funds (8.6%).⁴⁴

2. LGU Debt Outstanding:

Almost all LGU debt outstanding is in the form of loans from public and private lending institutions (see Figure 3 below for the trend of LGU loans by institution).⁴⁵ LGU borrowing from GFIs goes through cycles where there is a rapid increase in lending (such as during the GFC, and in recent years with the economic effects of the COVID-19 pandemic), followed periods of slower growth in new lending. LGU loans grew by 11% in 2021; based upon approvals so far this year of new lending authority by the BLGF, a similar growth in lending could occur. Bonds represent a miniscule proportion of LGU debt outstanding (0.001%) and have been trending downward. Although LGU borrowing has been trending upward, it represents a small fraction of total public sector debt outstanding (in 2020, it represented only 1.3% of public sector debt). This highlights the relatively smaller role that LGUs play in borrowing for infrastructure, when compared to the central government.

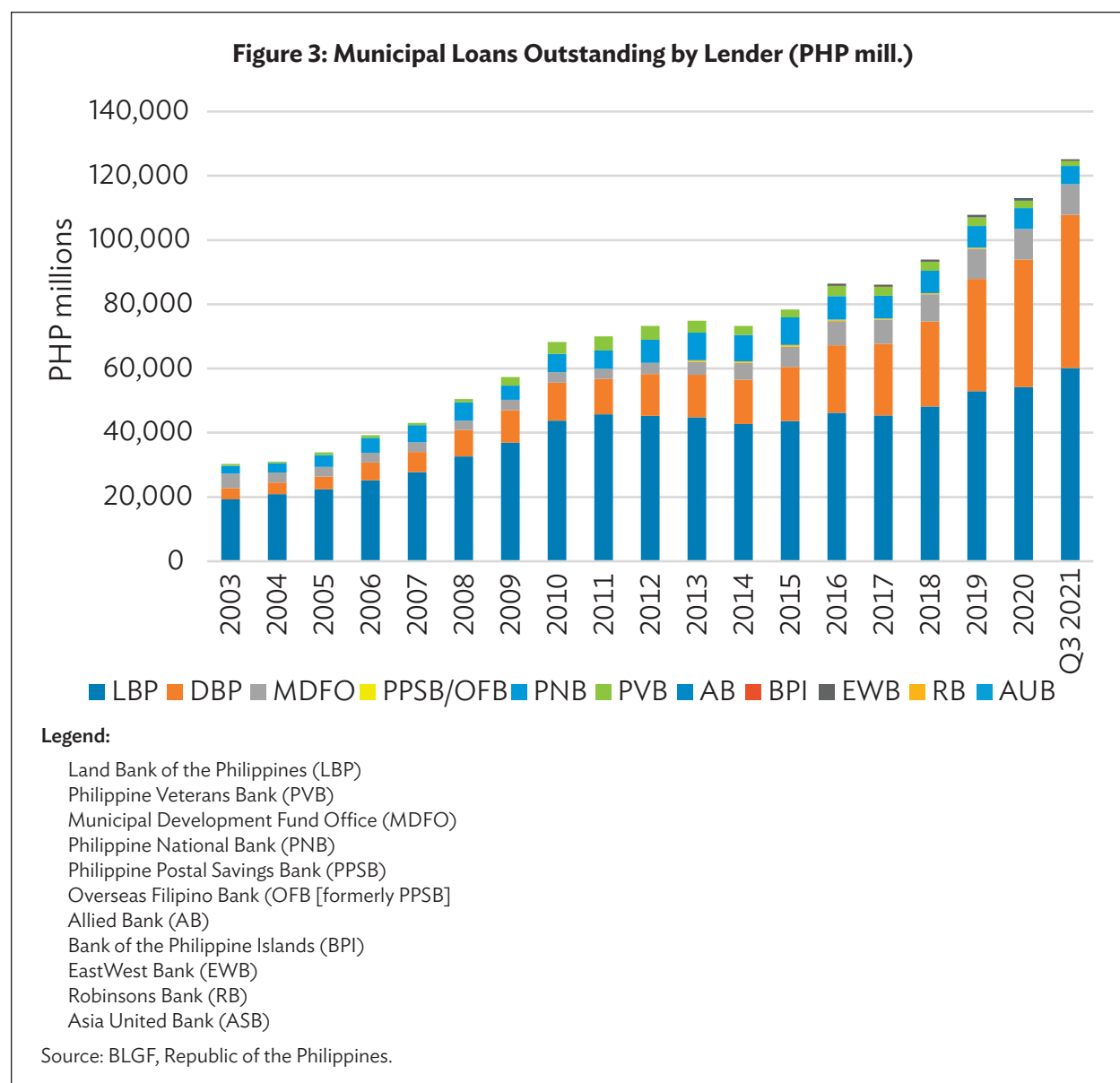
Approximately 91% of LGU loans are provided by the primary GFIs, such as the Land Bank of the Philippines, and the Development Bank of the Philippines, as well as through direct government lending through the Municipal Development Fund Office (MDFO). These sources are supplemented by lending from private financial institutions, such as the Philippine National Bank, the Philippine Veterans Bank, EastWest Bank, and the Bank of the Philippine Islands. The MDFO and GFIs generally lend at rates closer to the Government's cost of capital, thereby making the bond market uncompetitive for the issuance of municipal bonds.

For additional details about the external ecosystem for municipal bonds see Appendix 2: Philippines, Part 2: Details External Ecosystem for Municipal Bonds. For a list of historical LGU bond issuances, see Appendix 11: A Survey of Municipal Bonds in India, the Philippines and Viet Nam.

⁴³ Asian Bonds Online. *Size of LCY Bond Market*. Data Portal. 1 November 2021, <https://asianbondsonline.adb.org>.

⁴⁴ ADB. 2021. *Asia Bond Monitor*. Manila. p. 80.

⁴⁵ Annual Data on Loans of LGUs, Statistics, Republic of the Philippines, Department of Finance, Bureau of Local Government Finance, 1 March 2022, <https://blgf.gov.ph>.



F. Summary of Related ADB Projects

1. Country Operations Business Plan, Philippines 2021–2023, December 2020:

The Country Partnership Strategy (CPS) for the Philippines, 2018–2023, focuses on achieving growth by accelerating infrastructure and long-term investments, and by promoting local economic development (the plan has a focus on Mindanao and Visayas).⁴⁶ The plan is closely aligned with both ADB's Strategy 2030, and the Philippine Development Plan, 2017–2022, and seeks to promote private sector participation, among other goals. It contains a sovereign loan and grant program of \$9.4 billion, with the bulk of proposed projects providing safe passenger transport, and reduced congestion and carbon emissions, as well as promoting livable cities.

⁴⁶ ADB, *Country Operations Business Plan*, p. 1.

2. The Sustainability of Asia's Debt, Problems, Policies, and Practices, 2022:

The Philippines' 1991 decentralization policy recognized the importance of private financing to help LGUs "attain self-reliance and become effective partners in the attainment of national goals."⁴⁷ LGUGC, through its guarantees, spurred direct lending to LGUs, water districts and electric cooperatives by private financial institutions. The Philippine Water Revolving Fund was established in 2008 to mobilize private funds to the water sector. Nevertheless, progress in private financing of LGUs has been slow since loans from GFIs dominate their borrowing. Loans from private banks represent a declining share of LGU debt. GFIs can intercept or utilize LGU deposits held by their institutions to secure loan repayments, thereby lowering the risk premium. GFI loans directly compete with private bank loans and bonds for LGU borrowing. With no LGU bond issues to guarantee, the LGUGC closed at the end of 2019. The report recognizes that a more competitive subnational credit market would benefit infrastructure investments by LGUs.

3. Credit financing for local development: The subnational debt in the Philippines, ADBI, 2019:

This report philosophically concluded that credit financing should not "be dispelled as a bane to local development," but should rather "be leveraged as a strategic tool of the LGU's resource mobilization agenda."⁴⁸ The report presented several strategic issues that should be addressed if credit financing by LGUs in the Philippines is to progress. These include the following:

- (i) There is a need to reassess the LGU financing framework since much has changed since it was formulated in 1996. These changes affect both the supply and demand side of credit financing and include the current capacity of lending institutions to provide loans and of LGUs to repay those loans. The increasing cost of devolved services and expanded priorities, for instance, has altered the fiscal gaps of LGUs.
- (ii) "The traditional mindset of LGUs not to borrow or to be risk-averse at the expense of poor service delivery and a lack of quality basic services should be overcome by way of a public information campaign, enhancement of revenue generation capacity, supplementation of grants and technical assistance, and thorough guidance on negotiating and selecting the lending institution that offers capacity buildup of LGUs."
- (iii) A development-oriented partnership with LGUs must include project packaging, management, procurement, implementation, and monitoring.
- (iv) "The determination of borrowing capacity has to be improved further so that the certification is not totally dependent on the terms and conditions pre-agreed by the lending institution and the LGU, but on the actual financial position of the LGU."
- (v) The timing of LGU borrowings must be closely linked with the medium- and long-term plans of LGUs, as well as to the "term of office of the incumbent local chief executive applying for a loan." This will avoid any impression that loan proceeds are used to advance the political agenda of local incumbents for election purposes.
- (vi) Timely and effective debt monitoring must be strengthened, regularly undertaken, and properly disclosed to all stakeholders.

⁴⁷ ADB, *The Sustainability of Asia's Debt*, p. 173.

⁴⁸ ADBI. 2019. Credit Financing for Local Development: The Subnational Debt in the Philippines. *ADBI Working Paper Series*, No. 966. Tokyo: Asian Development Bank Institute. pp. 29–30.

4. Philippines: Local Government Financing and Budget Reform Program Cluster, Jan. 2013:

The Philippines Development Forum in 2007 “reiterated the government’s commitment to poverty reduction, through nurturing local growth...and promoting better service delivery by local governments.”⁴⁹ The Local Government Financing and Budget Reform (LGFBR) program cluster was designed to increase the “efficiency and effectiveness of LGUs” in basic public service delivery. The program cluster had two single tranche loan subprograms from 2006 to 2010, funded by ADB. The first subprogram (\$300 million) was approved in 2007, and the second subprogram (\$225 million) was approved in 2009. The Agence Française de Développement co-funded the second subprogram with an additional \$216 million.

The LGFBR program cluster was deemed a highly relevant and successful program, linked to the government’s reform agenda, and to ADB’s partnership strategy and operations business plan.⁵⁰ Some of its major achievements included:⁵¹

- (i) A BLGF creditworthiness rating system became available on the internet by January 2011.
- (ii) A local government financing database was rolled out in 2012.
- (iii) A local treasury operations manual was completed and distributed to all LGUs.
- (iv) The Updated Budget Operations Manual was completed and 90% of the LGUs were trained in its use.
- (v) 23 provinces prepared a provincial development and physical framework plan and investment program.
- (vi) Financing was provided for 270 LGUs for investments in environmental and health projects amounting to ₱3.2 billion.

The report commented that future initiatives by ADB to support LGU reform should include a reform of the system of intergovernmental relations, the Local Government Code of 1991 and the Local Government Financing Framework, with the aim of improving LGU access to public and private capital.

5. Philippines: Regional Municipal Development Project, May 2006

The Philippine Regional Municipal Development Project (the Project) began in 1991 with the goal of improving the “living conditions, public health standards, and urban environment in seven secondary cities.”⁵² The Project had two components:

- (i) Part A was for institutional development, and included training and project administration funded by ADB, and capacity building funded by a grant from the Australian Agency for International Development.
- (ii) Part B was for financing physical infrastructure.

The report notes that the Project did not achieve its full purpose, since subprojects in four cities were cancelled, although for the three participating cities, the subprojects achieved or exceeded expected

⁴⁹ ADB. 2013. *Philippines: Local Government Financing and Budget Reform (LGFBR) Program Cluster. Completion Report*. Manila. p. 1–2 (Program Number: 39516, Loan Numbers: 2387, 2584).

⁵⁰ ADB, *LGFBR Program Cluster*, pp. 14–15.

⁵¹ ADB, *LGFBR Program Cluster*, pp. 18–20.

⁵² ADB. 2006. *Philippines: Regional Municipal Development Project (RMDP). Completion Report*. Manila. p. 1. (Project Number: 22102, Loan Number: 1367).

developmental targets.⁵³ Types of projects that were completed included bus terminals in Iligan and Puerto Princesa, a sanitary landfill in Puerto Princesa, road improvements and partial completion of a drainage improvement subproject in Iligan, as well as solid waste management equipment in Tagbilaran.

- (i) The assessment of LGU borrowing capacity should consider all information that could affect its ability to borrow funds.⁵⁴ All of the program's target cities declared to have a higher borrowing capacity than was recognized by Department of Interior and Local Government (DILG)/MDFO.
- (ii) LGUs stated they would have liked additional loan funding for a wider range of infrastructure improvements.
- (iii) LGUs were amenable to providing collateral in the form of city assets or their budgeted IRAs as security for their loans.
- (iv) LGUs found the documentary requirements of MDFO "cumbersome and the process time-consuming," and the process of transacting with the MDFO to be more costly than transacting with the Development Bank of the Philippines or Land Bank of the Philippines, which had local branches in their cities.
- (v) LGUs wanted to enter into direct loan agreements with ADB, although they considered ADB's cost of funding to be expensive.
- (vi) The LGUs appreciated the combination of the AusAID-funded capacity building assistance and ADB-financed infrastructure subprojects.

IV. VIET NAM

A. Snapshot

Demographic	
Population (millions)	98.9
Subnational Governments	provinces (58 provinces, 5 municipalities), districts (68 cities, 49 urban districts, 50 towns, 546 rural districts), communal (1,587 wards, 602 town districts, 8,973 communes)
Legal and Regulatory Framework for Municipal Bonds	
Central government delineation of powers between levels of government	Constitution
Law for subnational governments	Law Concerning Financial Relations Between the Central Government and Local Governments 2022
authority to raise and share revenues	Yes
authority to budget for and provide services	Yes
authority to issue and service debt	Yes
responsibility to report finances, perform audit	Yes

Continued on next page

⁵³ ADB, *Philippines: Regional Municipal Development Project (RMDP)*, pp. 10–11.

⁵⁴ ADB, *Philippines: Regional Municipal Development Project (RMDP)*, p. 14.

continued

Track Record of Municipal Bond Issuance	
trends and terms of local government debt issuance	occasional issuance, primarily by two local governments
security for local government debt	debt service to be provided for in local government budget
incidence of local government loan or bond default?	NA
Existence and quality of central government database of local government finances and debt?	Ministry of Finance maintains database on public sector debt; municipal bonds listed on Hanoi Stock Exchange (HNX)
Bond Market	
Issuance of central government T-bills and bonds	Yes
Issuance of state-owned enterprise (public sector) or private corporate bonds	Yes
Issuance of securitizations	NA
Comparison of municipal bonds against benchmark government bonds and comparable corporate bonds	Yes
Depth of long-term investor base by type of funds	shallow
Regulatory bond issuance and listing guidelines	Yes
Secondary Market Activity	mostly limited to central government bonds
Evidence of competent ratings agencies	Use of local ratings emerging

Demographic Sources: Worldometers.com, UNESCAP.

B. Summary

Viet Nam is a growing Asian DMC with multiple subnational governmental entities, including provincial governments (58 provinces and five municipalities), district governments (68 cities, 49 urban districts, 50 towns, and 546 rural districts), and communal governments (1,587 wards, 602 town districts, and 8,973 communes).⁵⁵ The central government delegates power to these local governments, maintaining its constant authority to review, approve, and revise their actions, including its approvals for the issuance of local government debt. Because of these multilayered controls, the domestic bond market accepts municipal bonds as government guaranteed, even though no explicit guarantee exists, and these bonds price at a close spread to central government bonds. As of 19 May 2022, there was D11.2 trillion (approximately \$486 million) of municipal bonds outstanding, issued by only two of the many local governments (Ho Chi Minh City Finance and Investment State-owned Company, and Hai Phong People's Committee), according to current bond listings on the Hanoi Stock Exchange (HNX).⁵⁶ In the past, other local government entities issued debt through the exchange, but currently only two have bonds outstanding. Municipal debt only accounts for 0.73% of total public sector debt outstanding. A list of outstanding Viet Nam municipal bonds can be found in Appendix 11: A Survey of Municipal Bonds in India, the Philippines and Viet Nam.

⁵⁵ L. Thuan, and B. Binh. 2018. *Workshop on Municipal Public Finance for Asia-Pacific Cities*. www.unescap.org.

⁵⁶ Listing Scale, Bonds, Hanoi Stock Exchange, <https://hnex.vn>.

The central government shoulders 90% of infrastructure spending, according to an ADB study, but with some lowering of the government's fiscal space during the COVID-19 pandemic, the report also notes that the government is likely to “enhance fiscal discipline...and leverage more private financing.”⁵⁷

So far, these initiatives have been manifested with increased government oversight and efficiency initiatives over SOEs. An increase of primary debt issuances by local governments other than those already in the market is possible but not imminent. Efforts are underway, through donor assistance, to assist local governments to prepare for the possibility of PPP contracts in the future.

Like many Asian DMCs, Viet Nam's domestic bond market is small, shallow, and dominated by central government primary and secondary bond market activity. Nevertheless, corporate bond issuance in the last few years has contributed to most of the bond market's growth and diversification. The activation of a credible domestic ratings agency during this same period will be a plus for the efficient growth and diversification of the bond market.

Disclosure of local government finances on a consolidated basis, and more of a credit-driven approach to determining subnational borrowing limits should accompany any interest in strengthening local government bond market participation. A relevant study by ADBI noted that currently prescribed debt limits do not “reflect the ability of the local authorities to repay debts,” and that consolidated reporting of local government finances does not exist.⁵⁸ While the stock exchange follows local government bond listings, there is currently no public disclosure of outstanding state-owned bank loans to local governments or to their local development investment funds (LDIFs).

C. Recommendations for Future ADB Activity in Viet Nam

Recommendations for future activities by ADB are contingent upon central government interest in ongoing technical assistance projects and in how they promote greater participation by additional local governments, either through direct bond issuance, indirect bond issuance either through a local government-owned Special Purpose Vehicle (SPV), or private sector bond issuance for a local government concession PPP. Initiatives by ADB are currently underway in many of these areas. Prospective initiatives that support the potential development of municipal bond activity can be categorized as follows:

- (i) Activities undertaken to develop the broader bond market so that municipal credits can be independently evaluated and priced by domestic institutional investors. These include the following:
 - a) To develop a credit culture. ADB is currently doing this in three ways:
 - 1. by encouraging SOEs to begin having their bond issues rated to set a “normative example” for other types of issuers;
 - 2. by supporting institutional investors in the development of investment guidelines, including for ratings categories; there are currently no municipal bond guidelines, for instance; and
 - 3. by conducting market education so that investors can better understand the benefits of credit ratings.
 - b) In addition to these ongoing activities, ADB should consider assisting the central government to refine its current regulations with respect to subnational borrowing limits, making them relational to a local government's ability to repay debts.

⁵⁷ ADB. 2021. *Socialist Republic of Viet Nam: Public-Private Partnerships, Private Sector Development, and State-Owned Enterprise Reform. Knowledge and Support Technical Assistance*. Manila. pp. 1-2. (Project Number: 54445-001).

⁵⁸ P. Morgan and L. Trinh. 2016. *Fiscal Decentralization and Local Budget Deficits in Viet Nam: An Empirical Analysis*. ADBI Working Paper Series, No. 613. Tokyo: Asian Development Bank Institute. pp. 15-16.

- (ii) Activities to support individual pilot local governments to prepare for either bond issuances or PPP contracts for the financing and development of much-needed infrastructure. These include the following:
 - a) Current ADB support to at least one province or municipality to “leverage the principles of Quality Infrastructure Investment to facilitate sub-sovereign PPPs.”⁵⁹ This support includes:
 1. capacity building for early-stage project preparation;
 2. assessing creditworthiness to support infrastructure finance; and
 3. identifying opportunities for raising private sector capital PPPs.
 - b) In addition to the above activities, ADB should also consider the promotion of greater consolidation and timely reporting of local government finances according to the following criteria:
 1. that they follow a consistent format;
 2. that they be timed soon after the end of the fiscal year;
 3. that they be consolidated to include the local government and its respective LDIF and SOEs (this includes debts to state-owned banks and construction firms); and
 4. that the central government consider that financial reports also be independently audited in order to meet the above criteria.

D. Internal Ecosystem for Municipal Bonds

The Constitution of 2013 describes the country’s political subdivisions, and the National Assembly’s power to decide on the separation of budgetary responsibilities and incomes, as well as debt limits for the central government and for all public debt.⁶⁰ The delegated authorities provided to local governments are described in the Law on Organization of the Local Governments, 2015, as the need to “cooperate with centrally and locally controlled state organs in enhancing economic connections between regions and implement the regional planning and ensure the consistency of the national economy.”⁶¹ Various central government decrees and circulars also prescribe the process by which local governments can issue debt. This begins with the provincial-level People’s Committees, which set borrowing limits; these are reported to provincial-level People’s Councils and then submitted to the Prime Minister for approval. According to UNESCAP, the loan balance of Ha Noi and Ho Chi Minh City may not exceed 60% of their local government budget, but that for other provinces, the loan balance limit ranges from 20% to 30%.⁶²

Debt can be issued for socioeconomic development projects and for projects capable of capital recovery. The Ministry of Finance decides an allowable interest band for municipal bonds, allowing municipal governments to set their bond interest rates within that band. Local government finances, including debt service payments are audited by the State Audit Office of Vietnam. In addition, the Ministry of Finance collects data on domestic and overseas bond issues of government-owned enterprises, financial institutions, and local administrations, whose debt are guaranteed by the Government, and reports this debt to the National Assembly. For more details about the internal ecosystem for municipal bonds see Appendix 3: Viet Nam, Part 1: Details Internal Ecosystem for Municipal Bonds.

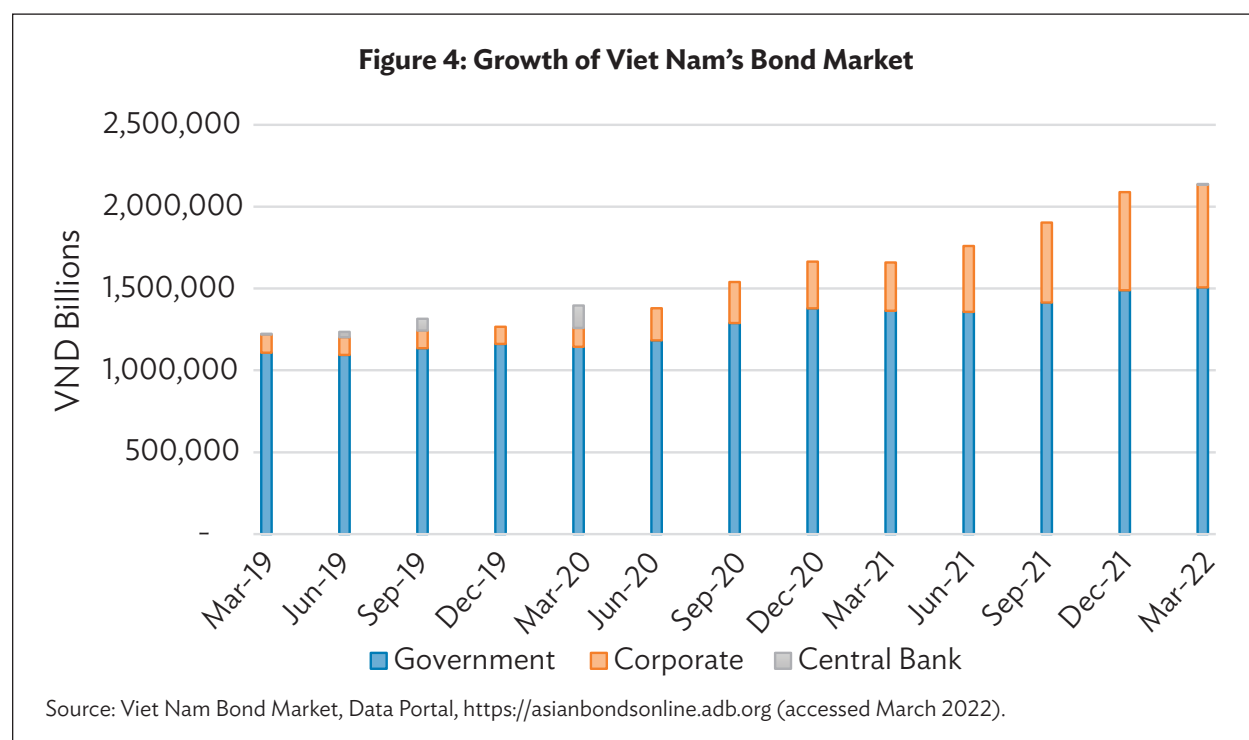
⁵⁹ ADB, *Socialist Republic of Viet Nam: Public-Private Partnerships*, p. 5.

⁶⁰ Socialist Republic of Viet Nam. 2013. Constitution. English translation by the International Institute for Democracy and Electoral Assistance, <https://constitutionnet.org>.

⁶¹ National Assembly, Socialist Republic of Viet Nam. 2015. Law on Organization of the Local Governments, No. 77/2015/QH13. www.economica.vn.

⁶² Thuan and Binh, *Workshop on Municipal Public Finance*.

E. External Ecosystem for Municipal Bonds



The Viet Nam bond market is small and continues to be dominated by central government bond issuance and trading, but it has been growing in recent years, with much of the growth occurring in corporate bonds (see Figure 4 above which shows the growth in Viet Nam's bond market). The total bond market size is D3,309,891 billion (approximately \$145 billion). On a relative scale, it grew from 22% of GDP in March 2019 to 39% of GDP by March 2022. As mentioned earlier, much of this growth occurred in corporate sector debt, which grew from 9% of outstanding bonds from March 2019 to 38% of outstanding bonds by March 2022. Because of this growth, the amount of outstanding government debt, which grew on a nominal basis, fell from 91% of outstanding bonds to 62% over that period. That represents a significant change. Municipal bonds comprise 0.73% of outstanding public sector debt. Local currency government bonds have a broad maturity spread from 5 years to 30 years.⁶³ The corporate bonds, however, have an average maturity of 4.6 years. Municipal bonds have a broader maturity range from 5 to 15 years, although they are rarely issued.

Table 2: Shifts in Holdings by Vietnamese Institutional Investors

Investor Category	2012	Q2 2021
<i>Banks</i>	83.9%	42.0%
<i>Insurance sector</i>	14.6%	57.1%
<i>Security Companies</i>	0.04%	0.0%
<i>Investment funds</i>	0.3%	0.0%
<i>Offshore</i>	1.2%	0.8%
<i>Other</i>	0.04%	0.1%

Source: Ministry of Finance.

⁶³ Vietnam Bond Market Association. 2020. *Bond Market Report 2020*. pp. 6–9.

The domestic institutional investor base consists of financial intermediaries (credit institutions, securities firms, insurance companies and investment funds), Viet Nam Social Security, Deposit Insurance of Vietnam, individual and other investors.⁶⁴ In 2012, most government bonds were held by commercial banks; gradually, the government began to convert its loans to bonds and issue bonds with longer maturities. This attracted the insurance sector, which now holds over half of government bonds (see Table 2, which shows this transition in government bond holdings from 2012 to 2021).⁶⁵ Municipal bonds attract the same investors as government bonds. Ho Chi Minh City Vice Chairman Le Thanh Liem, when announcing the city's last bond issues in November 2020, mentioned that investors in its 2017 and 2018 bonds included insurance companies and commercial banks; the same investor groups as for central government bonds.⁶⁶ For more details about the external ecosystem for municipal bonds see Appendix 3: Viet Nam, Part 2: Details External Ecosystem for Municipal Bonds.

F. Summary of Related ADB Projects

1. The Potential for Foreign Investment in a Domestic Credit Rating Agency in Viet Nam, 2020:

The 2019 Securities Law requires some public bond issues (but not private placements) to be rated by a domestic rating agency effective January 2021. To develop a credit culture, this ADB report noted that the government, domestic rating agencies, and other stakeholders should pursue three concurrent strategies:⁶⁷

- (i) SOEs, which contribute greatly to Viet Nam's economy, should begin to have their bond issues rated. This would set a "normative example to other issuers that ratings are expected."
- (ii) Demand for credit ratings could be further supported through investment guidelines for institutional investors.
- (iii) Market education can help the market understand the benefits of credit ratings.

The report mentioned signing a technical assistance agreement with a global credit rating agency to educate the domestic rating agency about creating rating methodologies, with a long-term view that a credible rating agency would give confidence to institutional investors in the rigor of its analytical processes.⁶⁸ It also mentioned the possibility of creating new ratings products such as for infrastructure projects, green bonds, and asset-backed securities (all of which would require a concurrent regulatory framework for their issuance). Finally, it contemplated the creation of non-ratings products, such as risk analytics, equity indexes, and economic and market research.

⁶⁴ Vietnam Bond Market Association. 2019. *Bond Market Report 2019*. p. 7.

⁶⁵ Vietnam Bond Market Association, *Bond Market Report 2019*, p. 14.

⁶⁶ *Tienphong News*. 2020. HCMC to Issue Bonds of VND2 Trillion This Year. November 11. <https://tienphongnews.com/hcmc-to-issue-bonds-of-vnd2-trillion-this-year-103795.html>

⁶⁷ S. Kathpalia, C. Minh, D. Huong, and D. Lambert. 2020. The Potential for Foreign Investment in a Domestic Credit Rating Agency in Viet Nam. *ADB Southeast Asia Working Paper Series No. 19*. p. 19.

⁶⁸ Kathpalia, et al., *Domestic Credit Rating Agency*, p. 20.

2. Public-Private Partnerships, Private Sector Development, and State-Owned Enterprise Reform:

This report describes a TA in support of PPPs, the private sector, and SOEs by providing policy advice, support for project preparation, and institutional capacity building.⁶⁹ It benefits from joint funding from ADB, the Government of Canada, and the Government of Australia,⁷⁰ and contributes to the ADB Strategy 2030 operational priorities, including making cities more livable. The central government already shoulders 90% of infrastructure spending, however its fiscal space is likely lower due to the pandemic. Therefore, the government aims to “enhance fiscal discipline further and leverage more private financing.” Most of the reforms to date have been in increasing the oversight and efficiency of the largest SOEs, but if “more that this knowledge is diffused to municipalities and provinces,” they will be able to potentially leverage the efficiency of PPPs.

One of the TA’s stated outputs is to support at least one province or municipality to “leverage the principles of Quality Infrastructure Investment to facilitate sub-sovereign PPPs.”⁷¹ The selected municipality will also participate in ADB’s initiative “Creating Investable Cities.” Regional support at the subnational level includes:

- (i) capacity building for early-stage project preparation;
- (ii) assessing creditworthiness to support infrastructure finance; and
- (iii) identifying opportunities for raising private sector capital PPPs.

3. Fiscal Decentralization and Local Budget Deficits in Viet Nam, 2016:

This report by ADBI notes that there are 28 LDIFs, which are local government-level special purpose vehicles.⁷² They allowed to finance and develop “cost-recovery infrastructure projects.” LDIFs engage in short-term borrowing on a rollover basis from state-owned commercial banks (SOCBs) and other SOEs. In addition to LDIFs, the report notes that there are 1,506 local SOEs and 982 public service enterprises. The local SOEs also access commercial loans from SOCBs. The report raises the following concerns:

- (i) The accumulation of debt from the LDIFs and local SOEs is a growing exposure to local governments.
- (ii) Local authorities in recent years have also accumulated payment arrears to construction firms.
- (iii) There is no formal requirement for disclosure of local debt to the public, although it is reported to the Banking and Finance Department of the Ministry of Finance. This limits information available to potential investors in local government bonds. The report also notes that “reports from local authorities...are usually late and not detailed,” and that they lack a consistent format.
- (iv) Current regulations relating to subnational borrowings may not reflect the ability of the local authorities to repay debts.

⁶⁹ ADB, *Socialist Republic of Viet Nam: Public-Private Partnerships*, p. 1. (Project Number: 54445-001).

⁷⁰ ADB, *Socialist Republic of Viet Nam: Public-Private Partnerships*, p. 6. (Project Number: 54445-001).

⁷¹ ADB, *Socialist Republic of Viet Nam: Public-Private Partnerships*, p. 5. (Project Number: 54445-001).

⁷² Morgan and Trinh, *Fiscal Decentralization and Local Budget Deficits*, pp. 15–16.

V. INDONESIA

A. Snapshot

Demographic	
Population (millions)	278
Subnational Governments	34 provinces, 508 regencies & cities
Legal and Regulatory Framework for Municipal Bonds	
Central government delineation of powers between levels of government	Constitution
Law for subnational governments	Law Concerning Financial Relations Between the Central Government and Local Governments 2022
authority to raise and share revenues	Yes
authority to budget for and provide services	Yes
authority to issue and service debt	Yes
responsibility to report finances, perform audit	Yes
Track Record of Municipal Bond Issuance	
trends and terms of local government debt issuance	None issued
security for local government debt	debt service to be provided for in local government budget
incidence of local government loan or bond default?	NA
Existence and quality of central government database of local government finances and debt?	Central Auditor maintains database, but new local government database to be developed
Bond Market	
Issuance of central government T-bills and bonds	Yes
Issuance of state-owned enterprise (public sector) or private corporate bonds	Yes
Issuance of securitizations	Yes
Comparison of municipal bonds against benchmark government bonds and comparable corporate bonds	NA
Depth of long-term investor base by type of funds	shallow
Regulatory bond issuance and listing guidelines	Yes
Secondary Market Activity	mostly limited to central government bonds
Evidence of competent ratings agencies	Yes

Sources: OECD Regions and Cities at a Glance, www.oecd-ilibrary.org; William Streeter.

B. Summary

Indonesia is a large emerging market country with many regional and local governments, and with a concerted but fragmented effort at decentralization since the late 1990s. Unlike other countries in Asia, regional and local government laws and regulations evolved in a piecemeal manner, with each regulation addressing a particular topic, but in ways that overlap with other regulations, with insufficient cross-

referencing, obscuring a coherent understanding of how municipal debt should be issued, secured, and marketed. This changed in January 2022, with the enactment of the Law Concerning Financial Relations Between the Central Government and Local Governments. While the regulations that will support the new law are still being drafted, the Coordinating Ministry of Economic Affairs is trying to renew interest among regional and municipal governments in issuing bonds.

Indonesia's domestic bond market is shallow but growing. It is dominated by Government of Indonesia bonds, although corporate and structured finance bond issuance is increasing. Corporate bonds, which tend to be with medium-term maturities of between 5 and 7 years, are primarily rated AAA and AA. Disclosure guidelines from Otoritas Jasa Keuangan (OJK), Indonesia's financial markets regulator, have been in place for local governments since 2011.

While Indonesia's growing economy, many large urban centers, now-unified regional and local government law, developing bond market, and existing financial market guidelines for municipal bond issuance would suggest that Indonesia is a good candidate for municipal bonds, to date, none have been issued. The reasons for this have been explored by ADB in various technical assistance and planning reports, some of which are summarized at the end of this chapter. Initiatives to promote municipal bonds in the future will have to be cognizant of the domestic bond market's preferences and requirements for ratings, maturities, and disclosure. None of the local governments currently have public ratings or independently produced audits, for instance. Pemeringkat Efek Indonesia (Pefindo), a local ratings agency supported by S&P, includes municipal bonds among its ratings sectors and methodologies, but to date, has not published any municipal ratings reports on its website.

Although no municipalities have issued bonds, PT. Sarana Multi Infrastruktur (PT SMI), a government-owned lending platform for PPPs, created the Regional Infrastructure Development Fund (RIDF), a separate lending platform for regional and local governments which has disbursed a small number of loans since it was created in 2017.⁷³ The lending practices and terms of the RIDF would have to be considered by potential municipal borrowers as an alternative to the domestic bond market.

This chapter summarizes the internal and external ecosystems for municipal bonds in Indonesia. The internal ecosystem consists of key laws that support the issuance of local government bonds and that promote financial disclosure to prospective lenders and investors. The external ecosystem consists of the key characteristics, customs, regulations, and oversight of the domestic bond market into which local governments will someday issue bonds. Based upon the internal and external ecosystem analysis, recommendations are provided to ADB for channeling technical and financial assistance to the development of municipal bonds in Indonesia.

C. Recommendations for Future ADB Activity in Indonesia

- (i) Assist the government in drafting the important implementation regulations that will accompany the new regional and local government law. The focus of this assistance should concern issuing and securing local government bonds, and providing the necessary financial disclosure to attract potential lenders and investors. It should also seek to avoid some of the regulatory ambiguities that were present in prior local government laws and regulations, and which were an impediment to municipal bond issuance.
- (ii) Assist the Government in conducting municipal bond workshops and other technical assistance with interested regional and local governments. A greater number of municipalities may be interested in municipal bond issuance now that the legal framework

⁷³ AIIB. 2017. *Indonesia: Regional Infrastructure Development Fund*. Beijing.

for issuing and securing municipal bonds has been consolidated and harmonized. Future technical assistance for interested regional and local governments could include the production of independent financial audits, the prioritization of capital plans based upon a debt capacity analysis, obtaining a public rating, and preparing for the disclosure, investor outreach, and listing requirements in advance of any municipal bond issuance. These services will require outside financial advisors since these firms do not exist in Indonesia for local governments.

- (iii) Conduct investor outreach on the new municipal law and on local government interest in entering the bond market. It will be necessary to confirm ratings and other disclosure requirements with key institutional investors, ascertaining what will make them feel comfortable to invest in municipal bonds. Further diversification of the domestic debt market should be welcomed if investors can feel comfortable as to how municipal bonds will be secured. Other emerging market countries, such as India and Mexico, for instance, adopted structured finance techniques to secure municipal bonds and to obtain higher ratings.
- (iv) Explore with the Ministry of Finance whether the intercept mechanism, which is available for loans from the Central government and from RIDF, can be extended to municipal bonds to the domestic bond market. This form of credit enhancement, if extended to bond investors, would provide a significant ratings uplift to new municipal bonds, and it does not require guarantees or additional budgetary appropriations, since an intercept consists of a conditional assignment of an existing appropriation. It would also avoid the creation of two classes of municipal debt: a more secure class to the government and its facilities, and a less secure class to investors.
- (v) Harmonize the definition of default across loans granted by the Central Government and RIDF with bonds to be issued to the domestic bond market. A harmonized definition would create a common trigger mechanism for the intercept mechanism if it were extended to bonds and will avoid potential intercreditor issues between bonds and loans.
- (vi) Explore with the World Bank and the Asian Infrastructure Investment Bank (AIIB) whether the RIDF can become a revolving fund. This would allow it to leverage its capital base by selling bonds to the domestic bond market, introducing local government credit risk on a portfolio basis to domestic bond investors. Currently, the RIDF uses its capitalization to make direct loans to regional and local governments. Once it has lent its capital base, it must go to the multilaterals for an additional capital injection. Instead, it could establish a more permanent financial footing by creating a reserve as collateral for its own debt issuances. This follows the revolving fund model in the US, and it would allow for the RIDF to greatly increase the scale of its lending activities to regional and local governments.

D. Internal Ecosystem for Municipal Bonds

The primary components of the internal ecosystem for municipal bonds consists of the Constitution, the Law Concerning Financial Relations Between the Central Government and Local Governments, and Law 32, which governs how local government financial audits will be conducted. The Constitution provides that Indonesia will be divided into provinces, regencies, and municipalities, each with their own regional autonomy and duties, except in areas which are specified as matters of the central government.

The Law Concerning Financial Relations Between the Central Government and Local Governments (Intergovernmental Relations Law) was enacted in January 2022 to carry out the Constitutional mandate of balancing financial relations between levels of government. The law stipulates that additional regulatory requirements, procedures, and mechanisms will follow, although the timing for these complementary regulations is unclear. The new law ends some of the ambiguities and inconsistencies of previous municipal laws and regulations and replaces Law Number 33 of 2004 concerning Financial

Balance between the Central Government and Regional Governments, and Law Number 28 of 2009 concerning Regional Taxes and Regional Levies; both were revoked and declared invalid by the new law. It bases intergovernmental financial relations between the Central Government and regional and local governments on four pillars: a tax system that supports the efficient allocation of national resources, a minimization of “vertical and horizontal inequality” through transfers to regions and through greater use of regional debt financing, better quality budgets through regional mid-term spending and performance-based budgeting, and harmonizing the fiscal policy (coordination) between levels of government.

Finally, Law 32 states that the local government financial statements will be audited by the State Audit Board, i.e., the Indonesian Supreme Audit Institution (BPK), which is a governmental entity that conducts all financial audits for the public sector. Independently produced financial audits are not required in Indonesia, and consolidated accounting of local governments and their government-owned enterprises (often with commercially oriented activities) is only in its infancy. It should be noted that the financial disclosure requirements for bond issuers do require independently produced financial audits. Should the passage of the new municipal law result in renewed interest for municipal bond issuance, it will be important to ascertain both the ability and interest of local auditing firms to provide an independent financial audit to local governments. More details concerning the internal ecosystem for municipal bonds in Indonesia can be found in Appendix: Indonesia, Part 1.

The National Development Plan 2015–2019: The National Development Planning / Head of National Development Planning Agency (BAPPENAS) sets out the 5-year external loan plan for regional development and infrastructure (RPJMN), including for local and regional governments.⁷⁴ The most recent plan, the RPJMN 2015–2019, consists of 118 projects, with a total investment value of \$42 billion, 87% of which is proposed for infrastructure. External loans of the central government can be utilized for on-lending or on-granting to local governments and to SOEs. Local governments are required to coordinate their capital expenditures with these development plans. As with many governments’ sponsored plans, there is a funding gap, and important projects within the plan often go unfunded or underfunded. More recent plans by BAPPENAS were published on forestry management and meeting the United Nations’ Sustainable Development Goals.

1. Sources of Competition with the Bond Market for Municipal Finance

As Indonesia contemplates renewed interest in municipal bond issuance, it is important to note that the government created a financial intermediary which currently makes loans to regional and local governments, and which will be in a competitive position with potential municipal bonds. Commercial banks, which would have been an option in the past, may no longer be able to lend to municipalities since they require collateral and or guarantees, i.e., two types of security prohibited by the new municipal law.

Regional Infrastructure Development Fund (RIDF): The RIDF is a domestic financial intermediary managed by PT SMI. PT SMI is an infrastructure financing company which was established in 2009 as a wholly owned SOE, managed through the Minister of Finance. PT SMI plays an active role in financing and advising on infrastructure PPP projects. The RIDF provides infrastructure project loans to local governments.⁷⁵ Under its initial phase, the World Bank and AIIB each provided \$100 million of financing (through loans managed by the Ministry of Finance), so that the RIDF can provide direct loans to local governments. It does not leverage its capital. In a subsequent phase, it anticipates additional financing of \$300 million from its donors.⁷⁶ The activity rate for the new fund, which began operations in February

⁷⁴ Ministry of National Development Planning / National Development Planning Agency, Republic of Indonesia. 2016. *List of Medium-Term Planned External Loans 2015-2019, 2016 Revision, 1st Book*. Jakarta.

⁷⁵ AIIB, *Indonesia: Regional Infrastructure Development Fund Project*, p. 6.

⁷⁶ AIIB, *Indonesia: Regional Infrastructure Development Fund Project*, p. 10.

2017 has been slow. As of its last published status report in May 2021, the facility had appraised 30 loan applications, approved eight loans, and disbursed \$38 million.⁷⁷

The RIDF funds projects that are economically viable, and which have clear development and poverty reduction impacts. Eligible sectors include water supply, sanitation, sewerage, drainage, solid waste, urban transport including roads, low-income housing, slum upgrading, and primary healthcare and education facilities. The interest rate that the RIDF charges to subnational governments is the Government of Indonesia bond rate for a particular maturity plus a margin of 75 bps.⁷⁸ A key consideration of municipal loans made by the RIDF is that, if unpaid, they benefit from an intercept mechanism of transfer payments to the borrowing subnational government.⁷⁹ Government regulations describe the procedures for such intercepts, which covers the default risk of municipal loans. This mechanism was strengthened recently by a contingent fund provided by the Ministry of Finance.

The RIDF has an interest rate advantage over most corporate bonds, as shown in the table below. Since its interest charges to local governments are pegged to a fixed spread over the Government of Indonesia bond, based upon current yield curves for government and corporate bonds at different ratings levels, RIDF's calculated interest rate is lower than the AAA corporate bond rate for each maturity shown in Table 3 (for years 4 through 10). Therefore, the RIDF, depending upon how quickly it can mobilize and deploy its capital, could deter development of municipal bonds over the short-to-medium term. The major exception might be with larger municipalities that have significant capital plans, and for which, RIDF's underwriting criteria might limit its concentration risks to individual projects and/or issuers. Ideally, the natural position would be for RIDF to limit its exposure to most municipal borrowing plans, allowing it to become a co-lender rather than a competitor, and benefitting local governments with a blend of RIDF's lower rates and the market's currently higher rates.

Table 3: Comparative Yield Curves, Indonesia (as of 5 April 2022)

Maturity (years)	Government Bonds	AAA Corporates	AA Corporates	A Corporates	BBB Corporates	RIDF Loan Rates
1	3.47	4.07	4.74	6.79	9.01	
2	4.29	5.05	5.76	7.72	9.88	
3	4.91	5.77	6.49	8.40	10.54	
4	5.41	6.33	7.07	8.92	11.08	6.16
5	5.81	6.77	7.53	9.34	11.53	6.56
6	6.14	7.13	7.91	9.71	11.91	6.89
7	6.41	7.43	8.22	10.04	12.23	7.16
8	6.62	7.67	8.47	10.34	12.49	7.37
9	6.78	7.86	8.67	10.62	12.71	7.53
10	6.91	8.01	8.82	10.89	12.88	7.66

RIDF = Regional Infrastructure Development Fund.

Sources: Corporate Bond Yield by Tenor, PT Penilai Harga Efek Indonesia (PHEI), www.phei.co.id; RIDF Project, Asian Infrastructure Investment Bank (AIIB), 27 March 2017, www.aiib.org; William Streeter.

⁷⁷ World Bank. 2021. *Regional Infrastructure Development Fund (P154947), Implementation Status & Results Report*. Washington, DC. <http://documents.worldbank.org>.

⁷⁸ AIIB, *Indonesia: Regional Infrastructure Development Fund Project*, p. 12

⁷⁹ World Bank. 2017. *Report on RIDF Funding*. Washington, DC. <http://documents.worldbank.org>.

E. External Ecosystem for Municipal Bonds

Indonesian Bond Market Activity: The Indonesian domestic bond market is in a nascent stage of development. Its primary characteristics are that it is small (the entire bond market, on a relative scale, is less than one-third of GDP), and shallow (Government of Indonesia bonds account for 91% of bonds outstanding). Despite these underpinnings, the wide range of government bond maturities has allowed for the development of meaningful yield curve benchmarks for corporate bonds. These benchmarks will prove useful once local governments obtain ratings and try to enter the bond market. The institutional investor base is diverse for being so small, and it is supplemented by a relatively new retail investor base, especially for government bonds. For more details concerning the external ecosystem for municipal bonds in Indonesia see Appendix 4: Indonesia, Part 2.

Table 4: OJK Disclosure Requirements – Regional & Local Bond

Note: OJK regulation Kep-67/BL/2007 requires that the prospectus include: overview of the rights of bond holders, an overview of the municipal bond sinking fund, an overview of any guarantee agreement (if applicable), project and regional property attached to project being financed, which may be a guarantee for a municipal bond.

Source: OJK regulation Kep-67/BL/2007

Ratings Agencies: The three main ratings agencies in Indonesia are Pefindo, Fitch Ratings Indonesia (wholly owned subsidiary of Fitch), and Kredit Rating Indonesia, a new ratings agency that rates corporate and small and medium-sized enterprise transactions.⁸⁰ Fitch provides local and international ratings, mainly in the corporate sector. Pefindo is a full-service ratings agency providing local domestic market ratings, and while it has not published municipal ratings, it posts a methodology for rating municipal governments on its website (loosely based on international local and regional government rating criteria by S&P).⁸¹ In 2011, Pefindo announced that it was targeting 4–5 local governments for issuer-level ratings, in conjunction with a pilot program between the Ministry of Finance and the World Bank to promote municipal bond issuance.⁸² Should the passage of the new municipal law result in a resurgence of interest in the issuance of municipal bonds, Pefindo would be in a position to provide ratings of those local government issuers.

OJK Guidelines: OJK is the financial services regulator for Indonesia. In 2011, Indonesia became the first country among Asian DMCs to provide guidelines for the issuance of regional and local government bonds (see Table 4 below). These guidelines provide a regulatory “light touch,” since they require certain disclosure documents but are not overly prescriptive as to what local governments should include in those documents. Municipalities will require assistance in preparing these disclosure documents, filing to list their bonds on the Indonesia Stock Exchange (IDX), and preparing investor outreach prior to marketing of their bonds. An impediment is that independent financial advisory services do not exist in Indonesia to guide local governments through these important processes.

- (i) Cover letter for registration statement (a prescribed form)
- (ii) Prospectus, including rating of offering
- (iii) Plan schedule for the public offering
- (iv) Sample form of regional bonds

⁸⁰ World Bank, *Report on RIDF Funding*, p. 1000.

⁸¹ Pefindo. 2022. *Rating Methodology, Municipality*. May 5. <https://pefindo.com>.

⁸² Kabar 24. 2011. Pefindo to Expand Into Local Govt Rating Services. <https://kabar24.bisnis.com>.

- (v) Most recent audited regional financial report
- (vi) Trustee contract
- (vii) Local government regional head statement (a prescribed form)
- (viii) Capital markets supporting professionals' statements (a prescribed form)
- (ix) Feasibility study on the project and its appraisal
- (x) Approval by Minister of Finance for bond issuance
- (xi) Approval of regional council to issue bonds

1. Stand-Alone vs. Credit-Enhanced Local Government Bonds

If the municipal bonds are supported solely by budgetary revenues, with no ratings link to the sovereign, then it is likely that not many municipalities will obtain a high enough rating to gain access to the bond market, given current market preferences for highly rated securities. Local governments will represent a new and untested asset class to the Indonesia domestic bond market, which is dominated by Government bonds and a mix of SOE and private corporate issuers. While the process of decentralization has a somewhat established history dating back to the 1990s, until passage this year of the new municipal law, this sector was governed by fragmented and sometimes ambiguous laws and regulations. How the local governments will operate under the new law is unknown.

If the municipal bonds are primarily supported by budgetary revenues but have a link to the sovereign, in the form of the intercept mechanism that currently benefits loans to the Government and to RIDF, then this would result in higher national scale ratings for many local governments and lower borrowing costs. The intercept mechanism would act a form of external credit enhancement for the bonds, with its notching value above the underlying local government issuer rating dependent upon the mechanics of how the intercept is structured, and the rating agency criteria for evaluating the intercept. In this case, it is possible that the bonds would attract the same investors who purchase government bonds, since there would be an indirect link to the sovereign.

F. Summary of Related ADB Projects

Country Partnership Strategy (CPS): Indonesia, 2020–2024 (September 2020): Lessons from the prior CPS indicated that strong country ownership is important, including cooperation with multiple stakeholders, including subnational governments for delivering infrastructure projects.⁸³ The prior CPS also revealed that a community-driven approach is cost-effective, and that capacity constraints across central and subnational governments can impact project implementation. This resulted in several recommendations for the current CPS, including strengthening local government capacity, and diversifying financing options to ensure that policy reforms supported are complemented by other lending modalities. ADB will support the development of livable cities through a combination of knowledge, policy, and financial support.

Indonesia: Strengthening the Local Government Bond Market, TA 8753 (January 2020): The TA aimed at improving the debt management capacity of the West Java Provincial Government, allowing it to go to the bond market and serve as a “pathfinder” for other subnational governments.⁸⁴ The project was able to achieve an updated credit rating, as well as training on debt management practices. Draft regulations on municipal bond issuance, including for setting up a debt management unit and sinking fund

⁸³ ADB. 2020. *Country Partnership Strategy, Indonesia, 2020–2024, Emerging Stronger*. Manila.

⁸⁴ ADB. 2020. *Indonesia: Strengthening the Local Government Bond Market. Completion Report*. Manila. (Project Number: 48169-001, Technical Assistance Number: 8753).

were presented to the West Java parliament, but were not enacted. The Kertajati International Airport was preselected by West Java prior to the TA, and while the process was underway for registration of a bond, the Indonesian government announced that it would finance the new airport through the central government's budget, so that bonds were never issued. Nevertheless, valuable inputs were provided to MOF, OJK, and the Bank of Indonesia for fine-tuning various regulations on municipal bonds. Significant regulatory revisions included OJK accepting audited local government financial statements issued by the BPK and removing the requirement that municipal bond debt service had to be paid from the underlying project's revenue (which amounted to a revenue bond).

Republic of Indonesia: Sustainable Infrastructure Assistance Program, Phase I Subproject 16: Municipal Bond Issuance and Infrastructure Finance, C-KSTA 46380-035 (October 2018): The Government of Indonesia began an infrastructure development agenda since inadequate infrastructure investment was viewed as an impediment to higher and more inclusive economic growth.⁸⁵ The government's ambitious infrastructure development agenda included increases in public sector infrastructure spending (which contemplated issuance of provincial bonds), and in PPPs (this resulted in the creation of PT SMI). The Sustainable Infrastructure Assistance Program, which was administered by ADB, and was scheduled to close in 2019, provided policy and advisory services, capacity building of sector agencies, project preparation support, and knowledge sharing. The report mentions that in 2013, ADB worked with West Java provincial government to help it obtain an above-investment grade shadow rating, but the province did not go to the bond market. The Sustainable Infrastructure Assistance Program TA looked to help Special Capital Region (DKI) Jakarta with infrastructure project selection and securing local parliament approval of the municipal bond program. DKI Jakarta, however, did not go to the bond market.

Central and Local Government Relations in Asia, Achieving Fiscal Sustainability, The Asian Development Bank Institute (ADBI) (2017), Ch. 8, The government decentralization program in Indonesia: This report documents the “big bang” approach to decentralization that took place from the late 1990s in Indonesia, and which gave greater political power and budgetary authority to local governments.⁸⁶ It describes how the centralized, government planning system was replaced by a democratic and autonomous system. Laws introduced in 2003–2004 replaced the antiquated cash-based, single-entry system with a modern double-entry accounting system and a tightly scheduled auditing system. Bypassing the provincial government, the laws provide districts (kabupaten) and municipalities (kota) with greater involvement in the management of their day-to-day affairs. Nevertheless, the report notes that decentralization has had limited success since:

- (i) the technical capabilities of the local bureaucracies and legislatures were insufficient to meet the demands for business planning, and for implementing development programs; and
- (ii) decentralization created new local oligarchs, with widespread corruption, collusion, and nepotism.

⁸⁵ ADB. 2018. *Republic of Indonesia: Sustainable Infrastructure Assistance Program, Phase I, Subproject 16: Municipal Bond Issuance and Infrastructure Finance. Knowledge and Support Technical Assistance (C-KSTA)*. Manila. (Project Number: 46380-035).

⁸⁶ A. Nasution. 2016. Government Decentralization Program in Indonesia. *Asian Development Bank Institute Working Paper Series* No. 601. Tokyo. pp. 276–305.

VI. LESSONS LEARNED FROM MUNICIPAL BOND DEVELOPMENTS IN LATIN AMERICA

A. Summary

Several countries in Latin America have experience with the issuance of subnational bonds and loans, and there are some lessons that will be useful for the development of municipal bonds in Asian DMCs. As in Asia, different subnational debt models developed in Latin America, from selective guarantees of subnational debt by the central government in exchange for debt restructuring and governmental reforms (as in Brazil), to structured finance approaches to state and municipal debt, mostly through the quasi-securitization of shared government revenues or interventions (as in Argentina and Mexico). Today, in Latin America, only Mexico has a semi-active subnational debt market, consisting of commercial bank and development bank loans and a small amount of bonds. The frequency and severity of economic and financial cycles in some Latin American countries has affected the development and growth of their bond markets, including for municipal bonds.

Mexico has P637.3 billion (approximately \$31.9 billion) of subnational debt outstanding, i.e. from state, municipal, and autonomous local bodies, such as municipal water utilities and local universities. In terms of distribution by type of issuer, 87% is debt issued by the states, 7% by state authorities, 6% by municipalities, and 0.43% by municipal authorities.⁸⁷ Over 80% of the subnational debt is secured by participations (shared revenues, known as participaciones in Mexico). Of the municipal debt, however, only P1.4 billion (approximately \$70 million) is in the form of bonds. Subnational debt issuance is dominated by commercial bank and development bank loans. Government-owned banks provide interest rates that are somewhat below market rates, which explains why so few subnational governments go to the bond markets.

The Mexican bond market is one of the most developed among the emerging markets, with a capitalization equal to 72% of GDP. Nevertheless, the market is shallow, since public sector bonds comprise 71% of that market; the corporate and securitization sectors are much smaller but are also active in Mexico. Of the nonfederal bonds, 90% are rated AAA, which helps to explain why the municipal bonds are issued as structured transactions.

In 2001, the Mexico Securities Market Law was amended to allow states, state enterprises, municipalities, and municipal enterprises to enter into fiduciary trusts that could issue fiduciary stock exchange certificates (certificados bursátiles).⁸⁸ The SPV trust was allowed to issue the certificates that offer investors a beneficial interest in pledged revenues of the trust. This secured debt was payable either from a carve-out of shared revenue or own source revenues. Under the trust scheme, the subnational government pledges a percentage of its shared or local revenue stream to the trust account.

Although the quasi-securitization of shared revenues was first tried in Argentina (see discussion below), in Mexico, the slice of shared revenues that could be pledged for debt service was limited upfront, in recognition that these shared revenues were primarily dedicated for the provision of public services. A debt service coverage margin was also maintained. These limitations on debt issuance and the strength of the trust structure created a viable, long-term security for state and municipal debt. The shared revenues of the federal government and subnational governments are subject to volatility during economic cycles, and this has resulted in a history of periodic municipal defaults on short-term lines of

⁸⁷ Hablemos de Deuda. 2021. *Reporte de Deuda Subnacional, Diagnostico IMCO*. <https://imco.org.mx>.

⁸⁸ SE REFORMAN, ADICIONAN Y DEROGAN DIVERSAS DISPOSICIONES DE LA LEY DEL MERCADO DE VALORES Y DE LA LEY DE LA COMISION NACIONAL BANCARIA Y DE VALORES, 01/06/2001, <http://dof.gob.mx>.

credit from banks, but there is no record of default on long-term debt, especially debt secured under a fiduciary trust structure.

Argentinean provincial debt outstanding equals \$20.6 billion, much of which is in the form of loans from commercial banks, the federal government and from multilateral financial institutions. The bond portion, estimated at \$3 billion, is held by the Coalition of Argentine Provincial Bondholders (CAPB), which is a group of international asset managers who are in active negotiations with the provinces for repayment of the debt. Argentina is currently in default, as are many of its provinces.

Brazilian subnational governments have R\$1.007 trillion (\$200 billion) of debt outstanding, most of which is loans repayable by states; 20% of the loans are repayable by municipalities. There are no municipal bonds in Brazil, but there is a small outstanding amount of securitized state government loans that were sold to the bond market on a secondary basis. Subnational lending comes primarily from domestic development banks, the federal government, or from multilateral development banks, and a portion of this debt is guaranteed by the federal government. Most of the debt has been restructured in one of a series of subnational debt restructurings by the federal government. These were made necessary because of the country's frequent economic and financial cycles, many of which have been extreme. As the economic performance of the country dips in one of these cycles, the cost of capital goes up, and this volatility has hampered economic and financial market growth.

B. Major Lessons Learned from Subnational Debt Issuance in Latin America

- (i) Debt can be secured by shared revenues or transfer payments from a higher level of government if the market lacks confidence in the reliability of local government revenue streams.
- (ii) Structured finance techniques, including the assignment of shared revenues to a trustee, the frequent cash sweeps of these pledged revenues, advanced segregation, and overcollateralization (two structured finance concepts explained below), a fully funded debt service reserve and imposed debt limits on local governments and on shared revenues, can produce a viable long-term security for municipal debt. For shared revenues, the economic volatility of these pledged revenues should be understood, so that they are not overleveraged by a debt issue.
- (iii) Since these government revenue streams (locally generated and shared) are most likely collected or remitted in the local currency, investors should not invest in municipal bonds that are issued in a foreign currency.
- (iv) Investors should also not take a long-term view on an investment with a currency peg to a major international currency, especially if the host country has a history for poor or volatile credit quality.
- (v) If governments want to stimulate municipal bond issuance, one measure that they can take is to limit the participation of government owned banks in municipal lending. This, along with structured finance techniques, will create room for municipal bonds to play a larger role in satisfying the infrastructure investment needs of local governments.

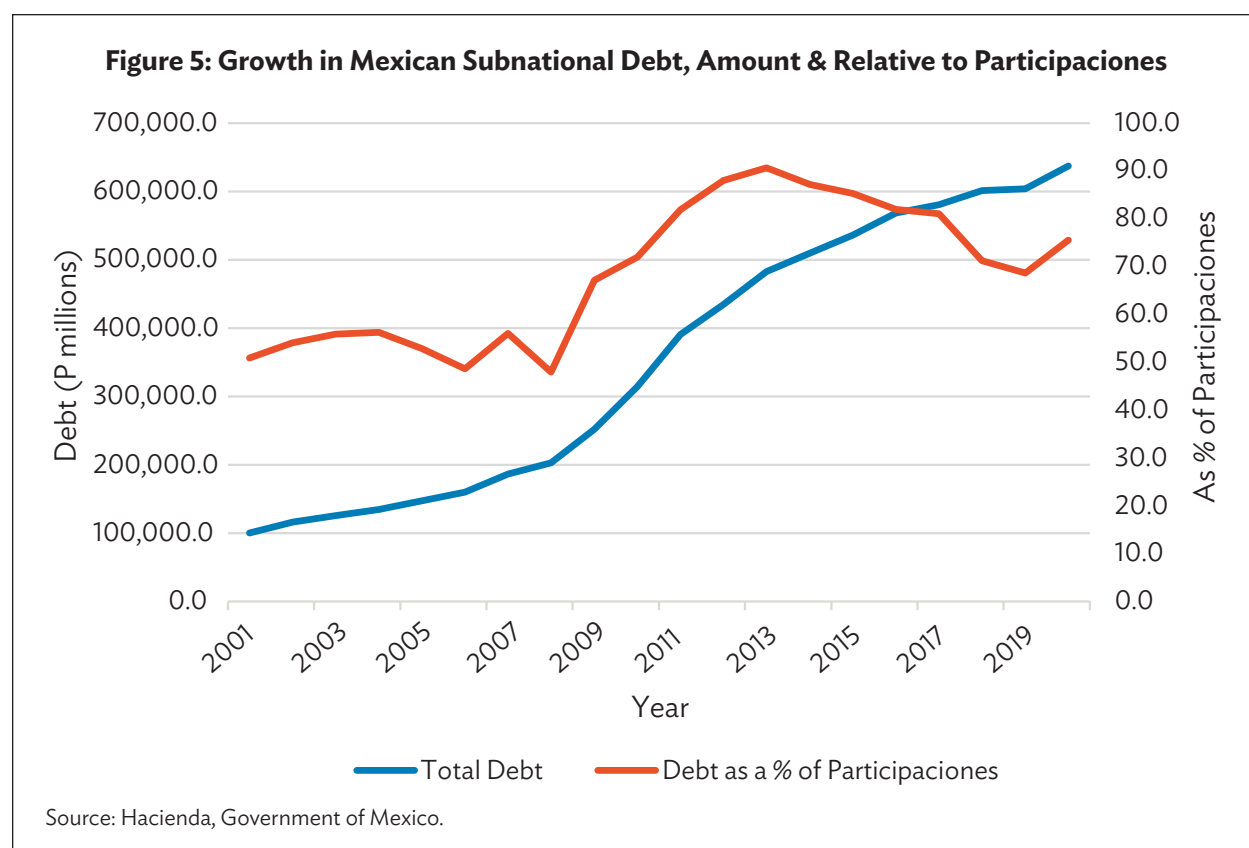
C. Mexico

Mexico has 31 states, the Federal District, and 2,477 municipalities.⁸⁹ All of the states and many of the largest municipalities have outstanding debt obligations (and credit ratings), although subnational

⁸⁹ F. Trillo, A. Cayeros, R. Gonzalez. 2002. *Fiscal Decentralization in Mexico: The Bailout Problem*. www.iadb.org.

debt only represents 7% of public sector debt outstanding; an amount equal 3.6% of GDP. In terms of distribution of subnational debt, 87% is debt issued by the states, 7% is by state authorities, 6% by municipalities, and 0.43% by municipal authorities.⁹⁰ Over 80% of the subnational debt is secured by shared participaciones. The remainder is secured by own source revenues or transfer payments.

Very little of state and municipal debt is financed by the bond market. Subnational debt issuance is dominated by commercial bank loans (63% of subnational debt issuance).⁹¹ The Mexican development banks provide 33% of subnational debt, while the bond market only provides 3%. Government-owned banks provide interest rates that are somewhat below market rates, which explains why so few subnational governments go to the bond markets. For instance, in December 2019, the spread of municipal loans over the Government of Mexico 10-year bond was 100 bps. For AAA-rated corporates, however, that spread ranged from 160 bps to 280 bps.



A fiduciary trust structure was created by law that allows the states, larger municipalities, and autonomous enterprises (including state and municipal water authorities, ports and even a few universities) to enter the debt market through the issuance of structured certificates.⁹² Figure 5 above shows the growth in state and municipal debt in Mexico, both in aggregate and in relation to the amount of shared participaciones.⁹³ Growth in subnational debt accelerated in the years after the GFC.

⁹⁰ Hablemos de Deuda, *Reporte de Deuda Subnacional*.

⁹¹ Hablemos de Deuda, *Reporte de Deuda Subnacional*, p. 11.

⁹² Fitch Ratings. 2013. *Listado de Calificaciones*. www.fitchratings.com/region/mexico.

⁹³ Financiamientos y obligaciones de municipios y sus entes públicos por tipo de acreedor y fuente de pago, Gobierno de Mexico, www.disciplinafinanciera.hacienda.gob.mx.

The Mexico Securities Market Law was amended in 2001, allowing for a trust vehicle to issue certificates that offer investors a beneficial interest in pledged revenues of the trust, and allowed credit institutions and exchanges to act as fiduciary trustees for the trusts. The major strengths of the certificate program include the creation of a separate trust for debt service payments outside of the subnational government's treasury, and the direct assignment and deposit of pledged participaciones into the trust, which allows for the certificates' rating to be higher than the underlying rating of the local government issuing them. Other strengths include a cap on the percentage of the participaciones that can be pledged, the collection of pledged revenues in advance of when they are needed for debt service (in structured finance, this is called advance segregation), and the collection of pledged revenues at a coverage level slightly higher than what is required for the upcoming debt service payment (in structured finance, this is called overcollateralization). After a debt service payment is made, excess revenues are released back to the state. All these provisions create a strong and sustainable security for subnational debt.

The major weakness of the certificate program is that prevailing economic conditions can and have caused revenue collections in the trust to fall short of expectations. When the price of oil has been depressed, for instance, this created shortfalls in federal government revenue, which resulted in commensurate shortfalls in transfer payments to state and municipal governments. This contributed to some of the municipal short-term bank LOC defaults in the past, although there is no record of defaults under the certificates program.

For more information on the legal and regulatory system for municipal debt issuance in Mexico, see Appendix 5: Mexico, Part 1: Internal Ecosystem for Municipal Debt Issuance. For more information about the Mexican bond market, as well as the default history of subnational bank lines of credit and the major structural features of the subnational debt certificates program, see Part 2: External Ecosystem for Municipal Debt Issuance, in Appendix 5.

D. Argentina

Argentina is a federal country, made up of 23 provinces (provincias) and one autonomous city (Buenos Aires); the country also has 2,218 autonomous municipalities (municipios).⁹⁴ Public sector debt stock in 2019 includes \$323.4 billion gross debt for the federal government (equal to 88% of GDP), and \$20.6 billion for the provinces (equal to 5.6% of GDP).⁹⁵ Provinces borrowed from commercial banks (public and private), from the federal government, and from multilateral financial institutions.⁹⁶ The Ministry of Economy granted the provinces the authority to issue foreign currency debt in 1993. This debt was to be secured by co-participation payments (shared tax revenues) handed down from the federal government to the provincial governments, but there was never a limit or restriction on how much of the shared tax revenues could be pledged for debt service. From 1988 to 2003, the consolidated debt of Argentine provinces rose from less than 4%–18.79% of GDP.

Much of that debt has now been retired, but a portion of the remaining amount is held by foreign investors and is the subject of debt restructuring negotiations, given the country's recent history of somewhat frequent debt defaults. The CAPB is a group of international asset managers that have over \$3 billion in Argentinean provincial bonds under investment and have been in active negotiations with the provinces for repayment of that debt. Because of the default history, there is currently not a functioning domestic bond market in Argentina.

⁹⁴ Profile Argentina, OECD, www.oecd.org.

⁹⁵ International Monetary Fund. 2020. *Argentina, Staff Technical Note on Public Debt Sustainability*. www.imf.org.

⁹⁶ M. Besfamille, D. Jorrat, O. Manzano, P. Sanguinetti. 2019. How Do Subnational Governments React to Shocks To Revenue Sources? Evidence from Argentina. *CESifo Working Papers*, 7622. www.CESifo-group.org/wp.

The main strengths of the US dollar co-participation secured debt included the broad pool of shared taxes with a long history of collections and a constitutional provision for their allocation to the provinces, the presence of a fixed guaranteed payment under the scheme, from which debt service coverage was calculated, the assignment agreement, whereby the province assigned its right to receive those revenues to a trustee for the bonds, the frequent cash sweeps transferred from the domestic trustee to the international trustee, and a fully funded debt service reserve fund (DSRF).

The major weaknesses of the provincial debt program included the authority of the Argentinean government to amend the tax-sharing program that provided security for the bonds, and/or the minimum guaranteed payment amount. The country's history of pronounced economic and financial cycles, and its propensity for default, created volatility in the collection and remittance of pledged revenues to the trustee under the agreements. Commensurate with these factors is that Argentina eventually lost its ability to maintain currency convertibility, subjecting its currency to severe depreciation. The provinces also had no limits on how much of their revenue allocation could be used for debt service and did not have debt management policies in place. Finally, the provinces, under the Constitution, had the right to declare an economic emergency, which granted them the authority to change the terms of outstanding bonds. A province's history of declaring an economic emergency was a major ratings consideration for these bonds.

For more information on the laws and regulations governing subnational debt issuance in Argentina and the history of sovereign and subnational debt defaults and workouts, see Appendix 6: Argentina, Part 1: Internal Ecosystem for Municipal Debt Issuance, and Part 2: Argentina's Default History & Investor Relations.

E. Brazil

Brazilian subnational governments have a sizable amount of debt with R\$1,007 billion (\$200 billion) outstanding as of the end of 2020.⁹⁷ Most of this debt (79%) is of the states, while municipal debt outstanding is R\$206.7 billion (20.5%).⁹⁸ None of this debt was originally issued as bonds, although a small amount of securitized state loans remain outstanding. Most state and municipal debt is in the form of loans from domestic development banks, the federal government, or from multilateral development banks, and a portion of this debt is guaranteed by the central government. Most of the debt has been restructured in one of a series of subnational debt restructurings by the central government. The federal government's significant role in subnational debt can also be explained by a series of debt bailouts and government reforms:

- (i) The first bailout occurred in 1989 for external debt of the states and for domestic debt that was in arrears, involving the Brazilian Real equivalent of \$8.7 billion.⁹⁹ That bailout provided 20-year national currency loans with a 5-year grace period before amortization and an interest rate indexed to the federal government's cost of capital.
- (ii) The second bailout came in 1993 and affected contractual domestic debt of the subnational governments, affecting the Brazilian Real equivalent of \$32.7 billion. This bailout had similar debt terms to the first bailout.

⁹⁷ Tesouro Nacional. 2021. *Boletim de Finanças dos Entes Subnacionais 2021*. <https://sisweb.tesouro.gov.br>. p. 46

⁹⁸ Tesouro Nacional, *Boletim de Finanças dos Entes Subnacionais 2021*, p. 63

⁹⁹ R. Barroso. 2014. *Subnational Fiscal Rules and Debt Control in Brazil*. Slide 7.

- (iii) The third bailout came just 4 years later in 1997, and it permitted the refinancing of all the debt affected by the first two bailouts, affecting the Brazilian Real equivalent of \$74.2 billion. This offer was extended to municipalities in 2000. In return for the refinancing, however, the subnational governments had to submit to a series of restrictions. Other restrictions included supervision by the National Treasury, establishment of a fiscal adjustment and restructuring plan, a final maturity of no more than 30 years.¹⁰⁰

The Constitution of Brazil provides that the states are organized and governed by their own Constitutions, and that the states can create their own metropolitan regions, urban clusters, and micro-regions. The federal government established a subnational debt guarantee system for a portion of restructured state, municipal, federal bank, and SOE loans. This growing contingent liability has been a drag on the federal government's own credit quality. For more information on the laws and regulations governing municipal debt issuance in Brazil, see Appendix 7: Brazil, Part 1 – Internal Ecosystem for Municipal Debt Issuance).

Brazil's bond market is relatively small and shallow, equal to approximately 35% of GDP and dominated by federal government bonds. Nevertheless, its investor base is diverse, with bond assets held by retail investors, pension funds, insurance companies, other investment funds, and the federal government. The availability and use of ratings is limited in Brazil. A domestic ratings agency primarily provides ratings to domestic structured finance transactions and the three large international ratings agencies (Moody's, S&P, and Fitch Ratings) provide ratings to offshore bond issues by the federal government and by major corporate credits. For more information on the development of the domestic bond market in Brazil, see Appendix 7: Brazil, Part 2 – External Ecosystem for Municipal Debt Issuance).

VII. LESSONS LEARNED FROM DEVELOPED MUNICIPAL BOND MARKETS – UNITED STATES, PRC, JAPAN

A. Summary

There are only a few large and active municipal bond markets in the world. Municipal bond studies instinctively point to the established US municipal bond market, which has many lessons for countries that would like to develop municipal bonds. Fewer studies, however, recognize that the two other established municipal bond markets are in Asia: in the PRC and Japan. In fact, on a nominal basis, the PRC now has the largest municipal bond market in the world.

¹⁰⁰ Barroso, *Subnational Fiscal Rules*, slide 8

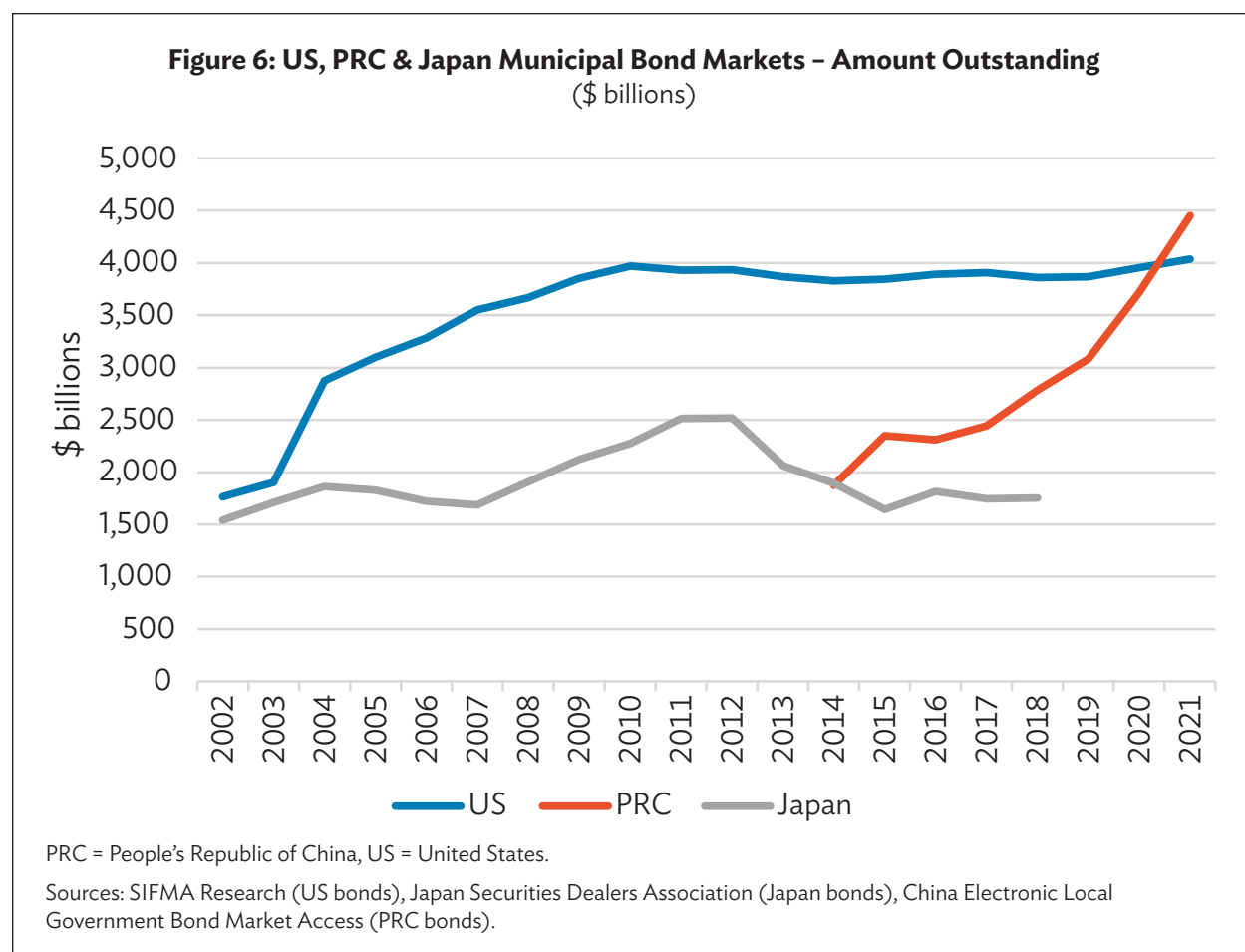


Figure 6 above shows the growth (in USD billions) of the US, PRC, and Japanese municipal bond markets over the last 20 years. The difference in growth trajectories for each of these municipal bond markets is related to their economic strengths and demographic maturity. For the PRC, an additional factor is that the central government has heavily promoted infrastructure project investment by subnational governments and their enterprises, and only recently allowed for active municipal bond issuance.

These three developed municipal bond markets evolved in the context, characteristics, and conventions of their already sizable domestic bond markets. Typical characteristics of a developed bond market can include an above average or high sovereign debt rating, sizable wealth generation through economic activity that can be partially invested in the bonds of a significant number of creditworthy debt issuers over trusted market exchanges, and then freely traded among investors in a secondary market.

While the graph shows only municipal sector debt, public sector debt in all three countries has grown to concerning levels over recent decades; nonetheless, each country has mitigating factors that provide some protection against the vagaries of international debt markets. Emerging DMCs in Asia share neither the developmental characteristics nor the protective elements of these three countries, so their bond markets expand or retreat in tandem with global financial cycles. The current inability of emerging DMCs in Asia to replicate the emergence of a robust municipal bond market, however, does not diminish the importance of lessons that can be learned from these three countries as they developed their own municipal bond markets.

B. Major Lessons Learned from Subnational Debt Issuance in Developed Municipal Bond Markets

- (i) If a country has a deep and diversified bond market (both in terms of issuers and investors) and a large population distributed among many urban centers that have been given powers through a decentralization process to raise revenue, provide public services and issue debt, then the ingredients exist for the development of a municipal bond market. An active bond market, however, must precede a municipal bond market, and investors in that bond market must be open to investing in credits within a wide range (not a narrow range) of investment-grade rating categories.
- (ii) Public sector debt grew extensively over the last 20 years in the PRC and Japan, but since most of that debt is held onshore, these countries face little exposure to a potential debt crisis by foreign financial markets. Public sector debt grew extensively in the US over the same period, and a significant portion of it is held by foreign investors, but the US is largely shielded from a potential debt crisis by its position as the dominant reserve currency.
- (iii) Debt management policies, enhanced government approvals, and robust debt structures which aim to mitigate municipal default risk evolve as concerns grow about the sustainability of local government debt, or in response to instances of debt defaults.
- (iv) Where intermittent concerns develop as to the predictability of a revenue source, but where its long-term ability to retire debt appears strong, default risk can be mitigated through a series of covenants built into a bond financing document, such as reserve funds, rate covenants, and a robust additional bonds test. This is a differentiating feature of municipal bonds versus structured finance bonds, where the former are structured to increase chances of survival to final maturity, while the latter are structured to enhance recovery in the event of a default before final maturity.
- (v) Frequent and accessible financial information and market confidence in external credit ratings can facilitate the emergence and growth of a municipal bond market. Where these conditions are less prevalent, a municipal bond market can still emerge where there is common investor belief in central government controls or guarantees of local government debt (explicit or implicit). Heavy local government debt levels, a noticeable pattern of municipal debt defaults, and/or concerns for a downgrade of the sovereign rating, however, can shake these widely held investor beliefs.
- (vi) Direct local government bond issuance is possible using a wide variety of pledged revenue sources, as long as those revenue sources can legally be pledged, have an established track record of collection or remittance, and remain underleveraged as a source of payment for debt.
- (vii) Issuance of joint local government bonds is possible, as is the case of Japan and the US; however, the responsible counterparties for this debt should have an alignment of interest around a shared infrastructure project. Otherwise, a joint and several contingent liability of each party makes no political sense. While a joint local government bond can be attractive to investors due to its larger prospective size, issuers should be aware that the rating for the bond will be based upon the lowest rating among the obligated parties.
- (viii) Conduit debt issuance, such as through Japan Finance Organization of Municipalities (JFM), or through the many state authorities in the US, is a great technique for pooling and mitigating credit risk, providing bond market access to weaker or smaller municipalities, and meeting investor demand for larger bond issue (ticket) sizes.

C. United States

Municipal bonds are issued by over 50,000 subnational governments in the US, which include the 50 states, their agencies, and instrumentalities (public authorities providing housing, health care, airport, port, and economic development services, etc.). The State of New York, for instance, has several important public authorities, such as the Dormitory Authority of the State of New York, New York State Energy Research and Development Authority, New York Power Authority, State of New York Mortgage Agency, Metropolitan Transportation Authority, etc.¹⁰¹ In addition, the states have political subdivisions, including counties, cities, towns, and school districts. Many cities issue tax-supported bonds for their general infrastructure needs but have created dedicated public authorities or administrative entities for key services, such as municipal utilities for power, water, sewer, and solid waste. Many of these authorities and entities issue their own debt, often backed by dedicated user fees. This proliferation of dedicated entities and established debt securities produced the vast number of municipal bond issuers. State statutes provide the legal framework for how municipalities are governed and authorize the types of debt that they can issue, including:

- (i) General Obligation Bonds, which are secured by their tax revenues, often with a “full faith and credit” pledge of the issuing entity, which means that they will increase tax rates if necessary to honor debt service obligations on their bonds.¹⁰² Studies on municipal bonds often refer to general obligation bonds without fully appreciating this pledge to raise taxes as necessary.
- (ii) Revenue Bonds, which are secured by a pledge of user fees, usually generated by a system of related projects, such as a water utility system. The pledge is usually on a net revenue basis, which means that the utility’s user fees must first cover operation and maintenance (O&M) costs before they can be used to cover debt service on its bonds. This net revenue pledge concept was later adopted by project finance.
- (iii) Lease Revenue Bonds, which can be in the form of public facility leases,¹⁰³ and usually involve a conduit special purpose authority created by the local government, but separately managed or governed.

Table 5 below illustrates how municipal bonds in the US are structured. Tax-supported bonds usually have less structure than revenue bonds; the latter can have dedicated debt service reserve funds (DSRFs), and covenants to maintain rates and charges to produce a minimum debt service coverage level. Most municipal debt in the US is amortizing, like a mortgage, in contrast to most debt markets where bonds are marketed with bullet maturities. For more details on the legal and regulatory framework for municipal bonds in the US, see Appendix 8: United States, Part 1: The Internal Ecosystem for Municipal Bond Issuance.

¹⁰¹ NYS Public Authorities Directory. 2022. website listing. <https://opengovny.com>. pp. 1–5.

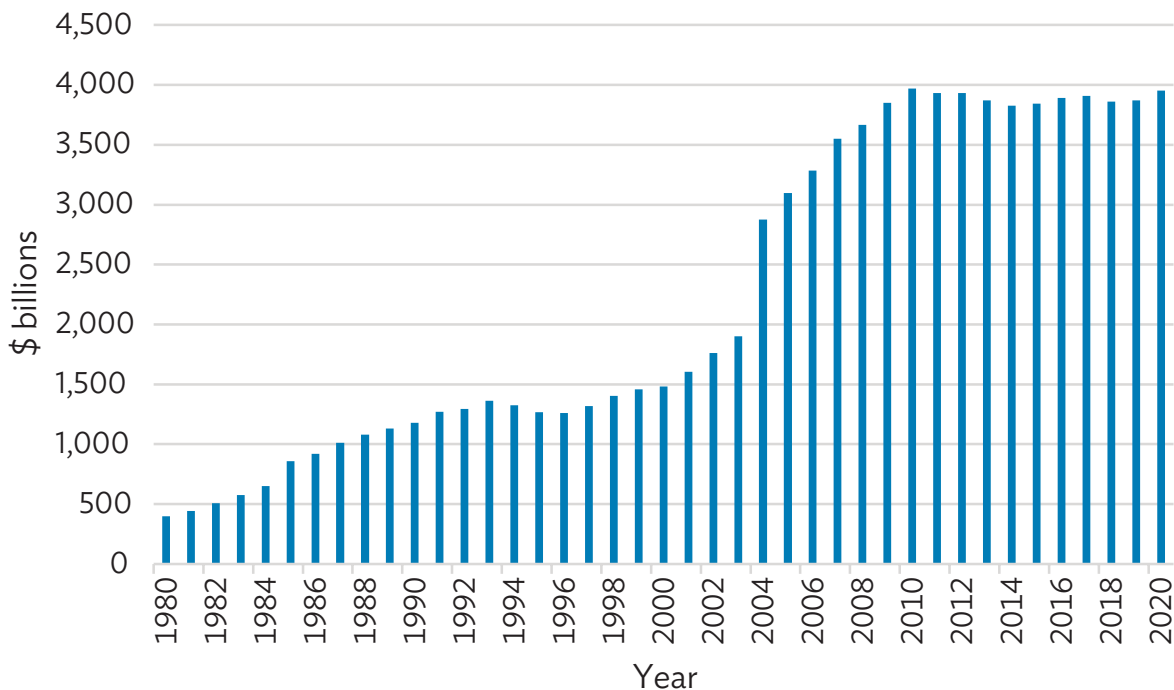
¹⁰² National Governors Association (NGA). 2020. *State and Local Fiscal Facts – 2020*. www.nga.org. p. 3.

¹⁰³ *Lease Revenue Bonds – Everything You Need to Know*. www.cfajournal.org.

Table 5: Typical Terms of Municipal Bonds in the US

Terms	Description
Purpose	Municipal bonds issued for capital improvements projects; local governments generally prohibited from issuing for operating deficits.
Security	(i) General obligation bonds are supported by municipal taxes (mostly property taxes). (ii) Revenue bonds supported by user fees (public utility charges, toll revenues, farebox revenue, etc.). (iii) Municipal leases usually supported by budgetary appropriations for the life of the bond.
Debt Service	Typically paid every 6 months.
Amortization	Most municipal bonds are amortizing; some longer dated bonds can be term bonds, but they have a mandatory redemption schedule, so they function as amortizing bonds.
Covenants	(i) Typical covenants for tax-supported debt include unlimited tax support for debt service, as well as standing budgetary authority to include debt service for the life of the bond, and trustee held accounts. (ii) Typical covenants for revenue bonds include pledge to maintain rates to meet a certain minimum debt service coverage level, a flow of funds to establish payment priority, a debt service reserve fund, and trustee held accounts.
Defaults	Payment default for not meeting payment on a full-and-timely basis; nonpayment default for not meeting bond covenants, not publishing financial audit as required.

Source: William Streeter.

Figure 7: Outstanding Municipal Bonds, United States

Source: SIFMA

As of the second quarter of 2021, there are \$4 trillion outstanding of state and municipal bonds (see Figure 7 above for a history of the US municipal bond market).¹⁰⁴ The US has the oldest municipal bond market in the world, and until recently, it was also the largest; however, rapid growth in municipal debt within the PRC in recent years has resulted in that country having the largest municipal bond market on a nominal basis. Economic growth and rapid suburbanization in the US in the 1970s to 1980s resulted in increased local government infrastructure investment and municipal bond issuance. Municipal bonds outstanding plateaued in the 1990s, but grew rapidly again in the early 2000s prior to the GFC in 2007–2008. The GFC saw a dip in bond market activity, which has only begun to recover in recent years.

In addition to the wide variety of debt issuers and debt securities, the US municipal bond market has two other defining characteristics. One is tax exemption for a large segment of its bonds, and the other is a bankruptcy code that is unique to municipal bonds and separate from the more broadly applied corporate bankruptcy code. Under the Internal Revenue Code, Section 103, subnational governments, including states, municipalities, school districts, and public utilities are allowed to issue tax-exempt debt if it meets a public purpose. Because of the reciprocal immunity principle between the federal government and state and local governments, they are prohibited from taxing the interest on each other's bonds. Thus, tax exemption developed not as a means to stimulate the development of a municipal bond market, but out of the separation of powers in the US system of government.

The US is also the only country that has bankruptcy law specifically for municipal bonds: Chapter 9 of the US Bankruptcy Reform Act of 1978. Bankruptcy is not a legal option for the states, which the Constitution treats as sovereign entities. This law was amended in 1994 to provide that state law must specifically authorize a municipality to file for bankruptcy. So far, only 12 states have authorized local governments with the option to file for bankruptcy under Chapter 9. Municipal bankruptcies remain rare but have increased since 2010. Most filings have been by utility authorities and other special districts, although since the GFC, there were several high-profile municipal bond defaults that resulted in bankruptcy filings, including Detroit, Michigan, and Puerto Rico. For more details on the bond issuance activity and regulatory framework for municipal bonds in the United States, see Appendix 8: United States, Part 2: The External Ecosystem for Municipal Bond Issuance.

The US is also the only country that has bankruptcy law specifically for municipal bonds: Chapter 9 of the US Bankruptcy Reform Act of 1978. Bankruptcy is not a legal option for the states, which the Constitution treats as sovereign entities. This law was amended in 1994 to provide that the state must specifically authorize a municipality to file for bankruptcy. So far, only 12 states have authorized local governments to file for bankruptcy under Chapter 9. Municipal bankruptcies remain rare but have increased since 2010. Most filings have been by utility authorities and other special districts, although since the GFC, there were several high-profile municipal bond defaults that resulted in bankruptcy filings, including Detroit, Michigan, and Puerto Rico. For more details on the bond issuance activity and regulatory framework for municipal bonds in the US, see Appendix 8: United States, Part 2: The External Ecosystem for Municipal Bond Issuance.

Market-Based Credit Enhancement in the US Municipal Bond Market:

The investors and issuers of municipal bonds in the US benefit from varying forms of credit enhancement, which is a strategy for improving the rating of a bond issue above the underlying credit quality of the issuer. Credit enhancement for a bond benefits the investor with a safer asset, which has a lower risk of default. It benefits the issuer because the higher rating from credit enhancement results in lower borrowing (debt servicing) cost, which can provide significant budgetary savings for the issuer over the life of the bond. Nevertheless, the US municipal market is both broad and deep, and, except in a crisis

¹⁰⁴ US-Municipal-Bonds-Statistics-SIFMA, last updated 4 October 2021, www.sifma.org.

(such as in 2008, with the GFC), it accommodates primary and secondary bond market activity across all investment-grade ratings categories (from BBB- to AAA). In addition, US municipal bonds are generally a highly rated sector, with 91% of municipal credits rated A or higher as of the end of 2021.¹⁰⁵ Even after high profile defaults, such as with the City of Detroit in 2013 or Puerto Rico in 2016, it remains a sector with a very low default rate.

Credit enhancement, therefore, played a nuanced role in the US municipal bond market. Whether market-based credit enhancement stimulated municipal bond issuance to a greater volume than it would have otherwise is a complex question. Its presence accommodated specific market needs, such as those of money market funds (in the case of Variable Rate Demand Obligations [VRDOs]) or retail bond investors (in the case of monoline insurance)—two investor components that grew because of the presence of credit enhancement. It also provided debt service savings for issuers who were able to borrow at lower interest rates because of the credit enhancement providers. Fluctuations in municipal bond issuance, however, were more driven by broader economic and financial market trends than by credit enhancement and by changing political landscapes at the local government level.

Box: Empirical studies of credit enhancement and municipal bonds in the United States

Given the limited fiscal space going through the pandemic, how to enhance municipal access to private financing sources is an important policy topic. One obstacle is how to increase the creditworthiness of the municipalities. One of the suggestions is to use credit enhancement mechanisms and products for municipal bond financing. Empirical analyses present results of implications to Asian DMCs. Pop and Georgescu (2016) find the absence of appropriate credit enhancements can be considered among the factors that contributed to the underdevelopment of a municipal bond market.^a Yang (2022) presents that the effect of state credit enhancement programs reduces school district bond interest rates by 6% and increase per-student capital spending by 6%–7%.^b A study by the Federal Reserve Bank of New York showed that banks are still important in providing credit enhancements and their use by banks will serve as a buffer against observable risk in the securitization process.^c As to the cost-effectiveness of private municipal bond insurance, over the 1980s and early 1990s, there were many studies examining the effects of bond insurance. Most found a positive relationship between private bond insurance and interest-cost benefits of municipal bond issuance. However, research shows that there is a structural change due to the 2008 GFC, which upset the insured municipal bond market. Those private insurers carried ratings no higher than AA from the major rating agencies since the GFC.

In conclusion, credit enhancement instruments can be important tools to municipalities for lowering borrowing costs and gaining investors' confidence. Depending on the country context and specific tools available to municipalities, increasing confidence in the creditworthiness of the issuing municipalities and also enhancing the marketability of the municipal bonds in the secondary market are important considerations for DMCs in Asia and the Pacific.

^a POP, Cornelia, and Maria-Andrada GEORGESCU. 2016. "Credit Enhancements and the Romanian Municipal Bond Market." *Transylvanian Review of Administrative Sciences*, pp. 104-123.

^b Yang, Lang Kate. 2022. "School District Borrowing and Capital Spending: The Effectiveness of State Credit Enhancement." *At SSRN*: <https://ssrn.com/abstract=4251852>.

^c Mandel, Benjamin H, Donald Morgan, and Chenyang Wei. 2012. "The Role of Bank Credit Enhancements in Securitization." *FRBNY Economic Policy Review* July 2012.

¹⁰⁵ US Public Finance. 2022. US Municipal Bond Defaults and Recoveries, 1970–2021. *Moody's Investors Service*, 21 April. p. 28, www.moody.com.

Internal Credit Enhancement: Credit enhancement can either be internal or external. Internal credit enhancement is built into the design of a financial transaction in the form of cash flows that are collected:

- (i) in advance of when they are needed to make a debt service payment (known as advance segregation);
- (ii) in excess of the amount needed to make a debt service payment (known as overcollateralization); and
- (iii) placed into a dedicated reserve, for the benefit of investors, as a contingency for any debt service shortfall from pledged cash flows.

The table below provides four rated examples of how the credit quality of a bond issue was boosted by internal credit enhancement provisions. The table includes the issuer (and the country of issuance), the issuer's underlying credit quality, the ultimate bond rating (most are international scale ratings, but the Indian municipal rating is a national scale rating), and a description of the credit enhancement provisions that, when combined, boosted the issue's rating. The rated examples come from the US, Mexico, and India, three countries where municipal bonds often rely on structural enhancements instead of government guarantees to get to a higher rating. The US and Mexico examples are transactions using the international ratings scale, while the India example is a transaction using the Mexican national scale. Sections of this report that describe structured municipal bond provisions in these three countries are also footnoted below.¹⁰⁶

1. Internal Credit Enhancement in Bond Transactions*

Issuer (Country)	Issuer Rating	Bond Issue Rating		Applicable Internal Credit Enhancement Features
Pennsylvania Turnpike Commission (US) ¹	'A' Long-Term Issuer Default Rating (IDR)	'AA-' Senior Lien; 'A' subordinate lien	(i)	Senior lien bonds secured by net revenue pledge of tolls and other income from use of the turnpike, net of operation and maintenance (O&M) costs; 2.9x; funded debt service reserve fund (DSRF).
			(ii)	Junior lien bonds secured by Commission revenues after senior lien bonds satisfied; funded DSRF.
North Texas Tollway Authority (US) ²	'Baa1' implied given rating rationale of subordinate lien debt	'A1' first tier bonds; 'A2' second tier bonds; 'Baa1' subordinate debt	(i)	First tier bonds secured by priority claim on net system revenue (after O&M) pledge of no less than 1.35X debt service coverage ratio (DSCR); funded DSRF equal to average annual debt service.
			(ii)	Second tier bonds secured by second tier claim on net system revenue pledge of no less than 1.2X DSCR; funded DSRF equal to one-half average annual debt service.
			(iii)	Subordinate lien bonds are unsecured obligations with no pledge of revenue, however, all outstanding debt service obligations have a sum sufficient (1X) revenue covenant; no DSRF (therefore, this unsecured obligation is used as a proxy for an issuer rating in this table).
Indore Municipal Corporation (India) ³	'IND A+' Long-Term Issuer Rating	'IND AA+' nonconvertible debentures	(i)	Gross lien on pledged tax revenues, fees, and user charges; external escrow account with frequent revenue sweeps; pre-funding of interest payments by one year in lieu of DSRF; sinking fund contributions for bullet principal payment at maturity date.

Continued on next page

¹⁰⁶ References in this report to internal credit enhancement in municipal bonds: Chapter 7: Lessons Learned from Developed Municipal Bond Markets, United States, p. 54; Appendix 1: India, Part 2: External Ecosystem for Municipal Bonds, Municipal Bond Structure in India, p. 73; Appendix 5: Mexico, Part 2: External Ecosystem for Municipal Bonds, Major Strengths of the Certificate Program, p. 103.

continued

Issuer (Country)	Issuer Rating	Bond Issue Rating	Applicable Internal Credit Enhancement Features
Mexico City Airport Trust (Mexico) ⁴	'BBB-' (not formal rating, but Fitch says consistent with 'BBB-')	'BBB-' Senior Secured Notes	(i) Senior secured notes have a gross lien on passenger charges (future flow securitization with trust estate); 6-month debt service reserve account Debt Service Reserve Account; coverage limitations on additional indebtedness; Principal Accumulation Account provides additional reserve protection. (ii) Passenger charges not needed for debt service and other airport revenues pay O&M expenses of airport.

* All ratings are in the international scale, except for Indore Municipal Corporation, which is in the Indian national scale.

Notes:

- international scale ratings
- While the credit report acknowledges the internal credit enhancement from the provisions above, there was no elevation in the transaction rating since it was already at the sovereign ceiling

Sources:

1. Fitch Rates Pennsylvania Turnpike Senior Revs 'AA-'; Upgrades Outstanding Senior and Sub Bonds, Fitch Ratings, 23 Aug, 2022, press release, pg. 1 and 7, www.fitchratings.com
2. Moody's assigns A1 to North Texas Tollway Authority's First Tier Taxable Revenue Refunding Bonds Series 2021A and A2 to Second Tier Revenue Refunding Bonds Series 2021B, outlook is stable, Moody's Investors Service, 19 Apr 2021, press release, www.moody.com
3. India Ratings Assigns Indore Municipal Corporation 'IND A+/Stable' and its Proposed NCDs 'IND AA+/Stable', India Ratings, Dec 06, 2022, press release, www.indiaratings.co.in
4. Fitch Affirms Mexico City's Airport Trust Sr Secured Notes at 'BBB-'; Outlook Revised to Stable, Fitch Ratings, 29 Nov, 2021, press release, www.fitchratings.com

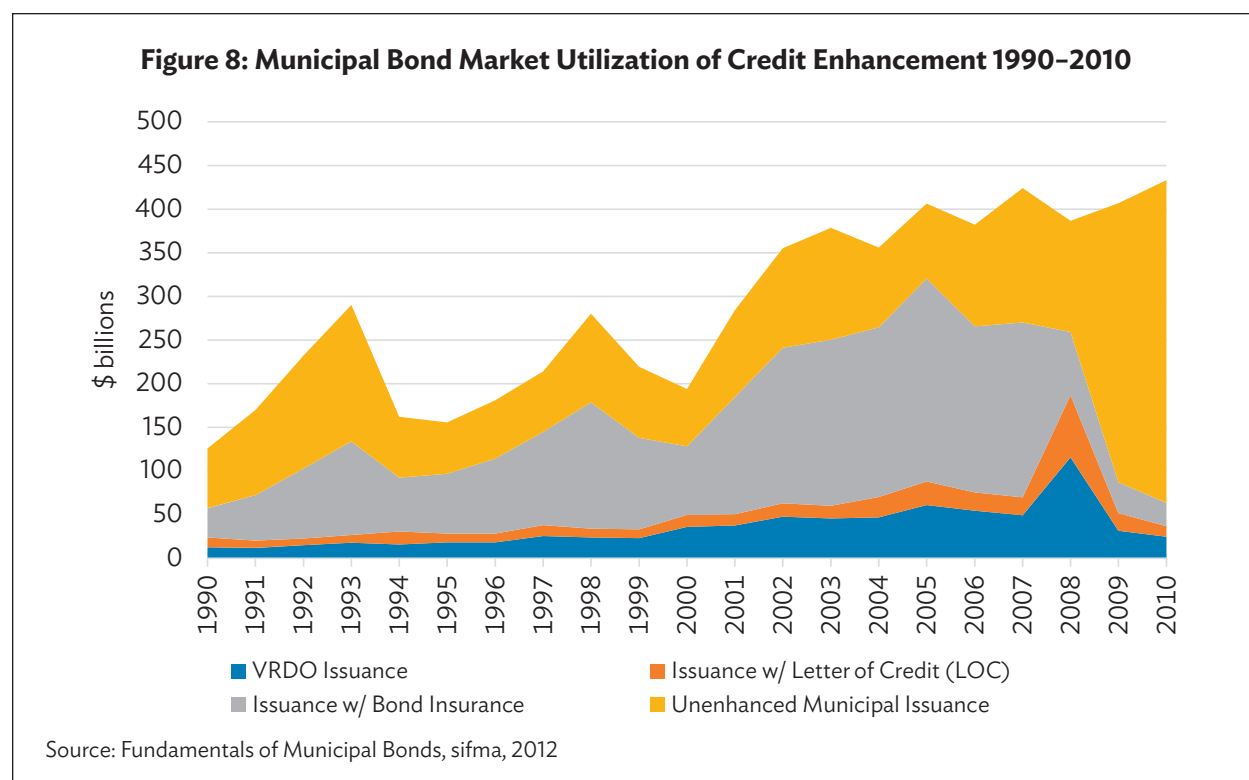
External Credit Enhancement: External credit enhancement is provided by an external party, which can be either a public sector or private sector entity, provided that it has a higher rating than that of the bond issuer. An example of credit enhancement provided by a public sector entity is a state intercept program, in which transfer payments are regularly budgeted to go from a state to a local government entity. The local government entity issues debt supported by its own revenues (which include state transfer payments), but if there are any shortfalls in its payments for debt service, the bonds backed by a state intercept allow for a trustee to trigger an intercept of future state transfer payments to make up for any debt service shortfall.

Finally, credit enhancement differs from credit substitution. The evaluation of a credit enhanced bond issue begins with an analysis of the issuer's underlying credit quality, and then looks at how the credit enhancement provider elevates the credit quality (lowers the default risk) at the issue level. The evaluation of a bond with credit substitution ignores the issuer's underlying credit quality, since a guarantee agreement allows the credit of a higher rated entity to be substituted for that of the lower rated issuer. Credit substitution usually involves an unconditional and irrevocable guarantee, and can either be proactive (triggered in advance of a debt service payment date; before an event of default), or reactive (triggered after a debt service payment default, and paid within the cure period allowed under the financing agreement); some financing agreements allow for a cure period of 7–15 days after a technical payment default by the issuer, giving the guarantor time to substitute its payment and avoid a legal default under the terms of a financing agreement. While monoline insurance is a form of credit enhancement and not credit substitution, since it is triggered on a postdefault basis, bonds with this type of insurance achieve ratings at the level of the monoline insurance provider, since they are structured under the insurance agreement to pay on the next business day after an event of default, serving similarly to credit substitution.

In the US municipal market, the three main types of market-based credit enhancement for municipal bonds are monoline insurance, bonds backed by a bank issued letter of credit (LOC), and VRDOs, which are bonds that allow the investor to exercise a put feature, as if they were a form of short-term paper. For a VRDO, a bank-provided LOC or Standby Bond Purchase Agreement (SBPA) for a municipal bond

advances the payment to the investor if the remarketing agent for the bonds needs additional time to find a new buyer for the bonds. All three forms of privately provided credit enhancement were prevalent from the 1980s until the GFC of 2008. They still exist today, but at a much lower level of coverage of municipal bond issuance.

Economic and Financial Conditions That Drove Municipal Bonds and Credit Enhancement:



From 1990 through 2010, the volume of municipal bond issuance grew in most years (see Figure 8). At the beginning of the period, there was \$126 billion in issuance, but by the end of the period there was \$433 billion in issuance.¹⁰⁷ A primary contributor to this growth was declining long-term interest rates, which, except for 1994 when the Fed implemented a series of rate increases, experienced a decline that lasted from 1980 throughout the study period.¹⁰⁸ Declining interest rates made it cheaper for state and local governments to borrow for infrastructure needs. Noticeable dips in annual municipal bond market issuance coincided with a recession, such as in 1990, 2000, and 2008 (the GFC described above). Another major dip in issuance coincided with a series of Fed interest rate increases in 1994 (also described above). A sharp increase in annual municipal bond issuance between 2000 and 2004, coincided with an acceleration of property values, which resulted in increased property tax collections and borrowing capacity for local governments.¹⁰⁹ The recessions noted above contributed to an increased perception of market risks, and so it is no surprise that those years also saw an increase in the use of bank LOCs for municipal bonds and for LOC-backed VRDOs.¹¹⁰

¹⁰⁷ Securities Industry and Financial Markets Association (SIFMA). 2012, New York. *The Fundamentals of Municipal Bonds*, Sixth Edition. p. 15.

¹⁰⁸ 10 Year Treasury Rate – 54 Year Historical Chart, Macrotrends, <https://www.macrotrends.net>

¹⁰⁹ L. Dadayan. 2022. State Tax and Economic Review, 2022 Quarter 2. Research report, Tax Policy Center, Urban Institute, Brookings Institution. December 13. p. 32.

¹¹⁰ *Fundamentals of Municipal Bonds*, p. 16.

The penetration of monoline insurance (as a percentage of municipal bond issuance) reached its peak in the late 1990s and averaged 49.5% of issuance from 1996 to 2007. During the late 1990s until 2003, there was an increased spread between BBB bonds and AAA bonds, making monoline insurance more, profitable for the monoline providers, but also more attractive to municipal bond issuers.¹¹¹ From 2004 to 2007, however, the bond spreads tightened sharply, reducing the economics for monoline providers. This incentivized the monoline providers to insure riskier credits, such as mortgage securitizations. Losses on some of these structured financial instruments during the GFC resulted in financial difficulties for the monoline providers,¹¹² and many of their ratings were lowered. The American Municipal Bond Assurance Corporation (AMBAC) lost its AAA rating in 2008 and was lowered to CC in 2009; other, but not all, monoline providers followed.¹¹³ Bank credit quality also weakened. The financial fallout from the GFC resulted in fewer independent credit enhancement providers, and the ratings of remaining providers was generally lower than what they were prior to the crisis. With their lower ratings, their financial products were less attractive to municipal governments. Because of this, the penetration of credit enhancement relative to annual issuance has been low ever since. Municipal bond issuance, however, quickly recovered from the GFC, and grew back to high levels as shown in the graph, despite the demise of many credit enhancement providers as described above. As mentioned earlier, this is because the municipal bond market is an investment grade market, and the median municipal ratings are relatively high.

Monoline Bond Insurance: A monoline insurer is an insurance provider that operates in only one line of business, such as wrapping municipal bonds. This type of company differs from an insurance provider that operates in different lines of business (a multiline insurer), such as property and casualty insurance plus life insurance, for example. Some of the monoline providers either started as insurers of municipal bonds, but then migrated into providing insurance for other types of assets, such as mortgage securitizations, or began by insuring nonmunicipal assets but migrated into primarily insuring municipal assets.

The first firm to offer financial guarantee insurance for municipal tax- and revenue-backed bonds, industrial revenue bonds, hospital bonds, and municipal bond portfolios was AMBAC, which was founded in 1971.¹¹⁴ Other municipal bond financial guarantee providers followed, including the Municipal Bond Insurance of America, founded in 1974; the Financial Guaranty Insurance Corporation, founded in 1983; the Bond Investors Guaranty, founded in 1984; and the Capital Guaranty Insurance Corporation, founded in 1986.¹¹⁵ Financial Security Assurance, which is now Assured Guaranty Municipal (AGM) and Assured Guaranty Corporation (AGC), was founded in 1985, and was originally focused on guarantees of corporate structured finance transactions and securitizations, but later went into municipal bond guarantees.¹¹⁶

These major monoline providers were initially rated AAA by the major ratings agencies. In time, other monoline insurers entered the market with less than AAA ratings. Radian Asset Assurance (Radian) was founded in 1999 through a merger with two other insurers and was initially rated AA.¹¹⁷ ACA Financial Guaranty Corporation was founded in 1997 and was initially rated A.¹¹⁸ In 1975, New York City suffered

¹¹¹ Moody's Seasoned Baa Corporate Bond Yield Relative to the Yield on 10-Year Treasury Constant, FRED, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org>

¹¹² *Fundamentals of Municipal Bonds*, p. 14.

¹¹³ D.D. Jayasuriya. 2016. *The Rise and Fall of the Monoline / Bond Insurers: Icarus of the 21st Century*, 4th National Business and Management Conference, July 22–23, p. 657.

¹¹⁴ Federal Reserve Bank of New York. 1987. The Growth of the Financial Guarantee Market. *FRBNY Quarterly Review* Spring, p. 20.

¹¹⁵ Growth of the Financial Guarantee Market, p. 21.

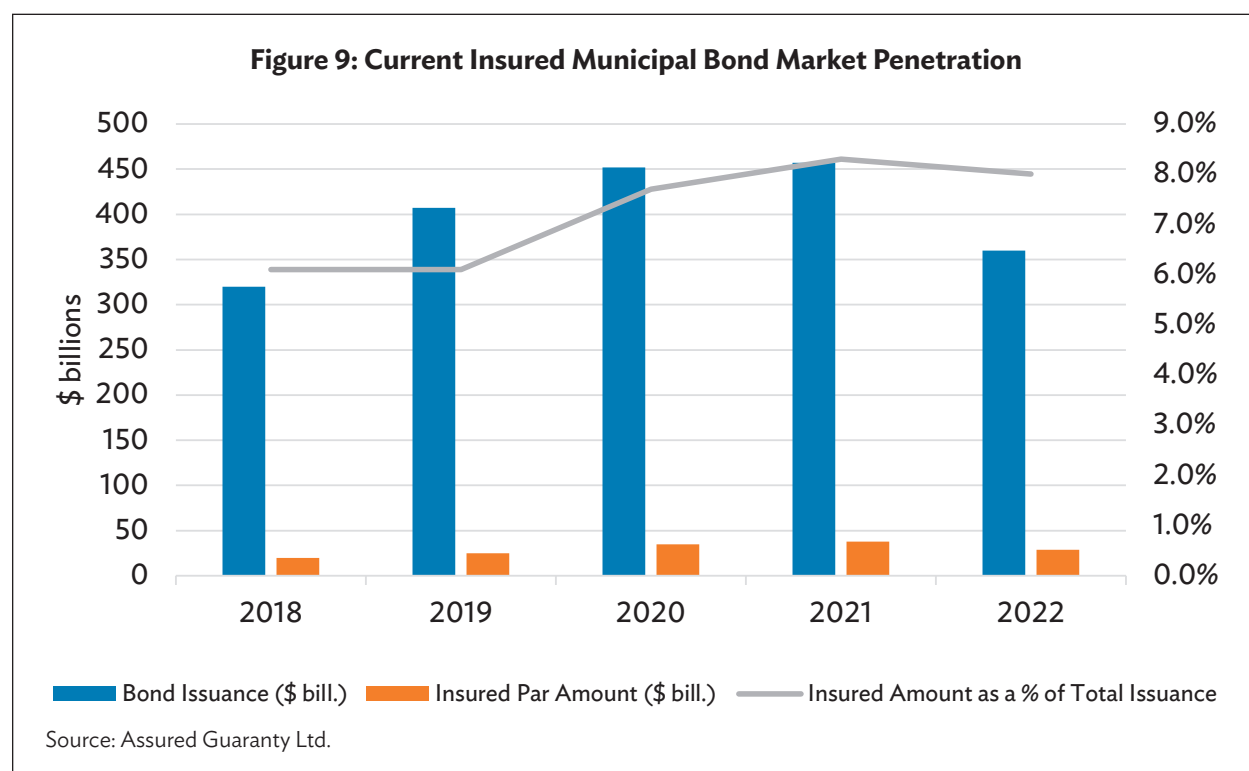
¹¹⁶ Growth of the Financial Guarantee Market, p. 22; B. Garruppo and G. Binkiewicz. 2016. *The Municipal Bond Insurance Industry: A Chronology*. www.municipalbonds.com.

¹¹⁷ Radian Factsheet, Data as of Quarter End December 31, 2022, www.radian.com

¹¹⁸ About ACA, www.aca.com.

a fiscal crisis and neared bond payment default.¹¹⁹ In 1983, the Washington Public Power Supply System defaulted on \$2.25 billion of its bonds, of which \$23.6 million was insured by AMBAC. AMBAC's quick response to ensure payment of debt service to holders of those bonds reportedly increased the demand for credit enhancement.¹²⁰

Today, the remaining monoline insurers are AGM, rated AA/Stable by S&P Global Ratings and A1/Stable by Moody's Investors Service,¹²¹ and Build America Mutual Assurance Co., rated AA/Stable by S&P Global Ratings.¹²² AGM focuses on guarantees for US public finance and infrastructure bonds.¹²³ AGM's has various subsidiaries, such as Assured Guaranty UK Limited, which focuses on non-US public finance, infrastructure and structured transactions, and AGC, which focuses on structured finance transactions. AGM is the larger of the two remaining monoline insurers. Its US public finance insured portfolio was \$424.9 billion in 2009 but by 2022, it was \$179.6 billion, and the average underlying rating of insured assets is A-. Its operating leverage (insured net par outstanding / adjusted operating shareholders' equity) has decreased considerably, from 157X in Q4 of 2009 to 42X by Q4 of 2022, making the company's operations more conservative.¹²⁴ In part, this was driven by changes in the methodology for rating the monoline providers. Figure 9 below (Current Insured Municipal Bond Market Penetration) shows the market penetration of municipal bond insurance in recent years, both in amount insured by year (\$ billions) and insured as a percentage of total municipal bond issuance.¹²⁵ The current insured market penetration of 8% is a far cry from the average annual market penetration of 49.5% from 1996 to 2007.



¹¹⁹ Garruppo and Binkiewicz. *The Municipal Bond Insurance Industry*.

¹²⁰ Growth of the Financial Guarantee Market, p. 18.

¹²¹ Ratings, Assured Guaranty, <https://assuredguaranty.com>.

¹²² Build America Mutual Assurance Co., S&P Global Ratings, July 7, 2022, www.standardandpoors.com/ratingsdirect.

¹²³ Assured Guaranty, Equity Investor Presentation, December 31, 2022, slide 7, <https://assuredguaranty.com>.

¹²⁴ Equity Investor Presentation, slide 15.

¹²⁵ Equity Investor Presentation, slide 19.

Bond Insurance – Investor Benefits: While investors view the ratings agency monitoring of outstanding bonds as a critical input to their own due diligence, there is an additional commercial distinction to a monoline insurer’s oversight of a wrapped bond—its own capital is also at risk.¹²⁶ The bond carries the rating of the monoline insurer, based on its claims-paying ability, depth and experience of its professional staff, and the strength of its underwriting standards. This higher rating represents a lower payment risk to the investor than the credit quality of the underlying municipal bond issuer.

While the investor gives up some of the extra yield for investing in a higher-rated insured bond, it benefits from the payment certainty provided by the monoline insurer. It also benefits from the higher secondary market liquidity of the insured bond, although the municipal bond market has a history of secondary market trading for all investment grade categories, as mentioned above. The monoline insurer’s underwriting process includes a careful assessment of the underlying credit risks of the transaction, as well as structural risk mitigations, such as reserves and other pledged collateral, and investor rights and remedies. In the event of an issuer default, the insurance agreement requires the monoline to step in immediately (usually next business day) and pay the debt service amount due to the investor. In effect, the monoline becomes like a mezzanine investor in the event of an issuer default since it recovers defaulted debt service from the issuer while the investor is paid by the monoline on a full-and-timely basis. In return for this full-and-timely payment, the insurer gives itself subrogation rights over the legal remedies provided to the bond investors so that it can recover paid claims from the issuer.

While bond insurance is usually acquired and paid for by the issuer at the time of a primary market transaction, it is possible for an investor to request a monoline insurer to wrap an uninsured bond in the secondary market for a fee. The remaining monoline insurers, Assured Guaranty and Build America Mutual, have lists of preapproved credits they are willing to insure in the secondary market.

Bond Insurance – Issuer’s Benefits: In the primary market, the issuer (or its investment banker or financial advisor) may request a monoline insurer to wrap its upcoming bond issue if the monoline has a higher rating than the underlying issuer. If the insurer wraps the bond, this provides the issuer with a lower interest cost than it would have paid if the bond did not have insurance. Over the life of the bond, this interest savings can be significant, depending upon prevailing market conditions. Nevertheless, it is important to note that although most of the monoline insurers and their wrapped bonds carried an AAA rating, the pricing of insured bonds was closer to the average yield of uninsured AA rated municipal bonds, according to a study completed in 2002 by the California Debt and Investment Advisory Commission.¹²⁷ This slight yield pick-up improved the attractiveness of insured debt to investors, but meant that monoline insurance carried no economic value for issuers with an underlying rating of AA or above.

The monoline conducts due diligence, as described above, and, based on its risk assessment, will charge an upfront insurance premium, which is expressed as a percentage of the expected principal and interest amount. Now that the ratings of monoline providers are below AAA, the value of their benefit to issuers (and, by extension, their premium) is lower than it was before the GFC. Typically, due diligence includes a review of the draft offering memorandum, several years of audited financial statements and the bond indenture, as well as the economic, demographic, and political considerations that might also affect an issuer’s long-term ability and willingness to pay debt service on its bonds. The premium, which is usually paid upfront at the time of issuance, is an allowable borrowing cost that can be amortized over the life of the bond. The premium is quoted as a percentage of total debt service over the life of the bonds.¹²⁸

¹²⁶ J. Stern. 2014. *Do Capital Markets Need Financial Guaranty Insurers?*. www.law360.com. p. 2.

¹²⁷ California Debt and Investment Advisory Commission. 2002. *Bond Insurance as a Form of Credit Enhancement in California’s Municipal Bond Market*. www.treasurer.ca.gov. p. 6.

¹²⁸ Garruppo and Binkiewicz. *The Municipal Bond Insurance Industry*.

Local governments can enter into contractual arrangements with a monoline insurer, using their statutory authority to issue debt and to enter into financial contracts. The issuer's financial advisor will run debt service schedule comparisons showing how much the local government would pay in interest costs with or without the credit enhancement. The issuer's evaluation of whether to use bond insurance should involve the following considerations:¹²⁹

- (i) The ability of the credit enhancement provider to make payments when due under the terms of the credit enhancement instrument
- (ii) The business reputation and credit rating of the credit enhancement provider
- (iii) The right to substitute the credit enhancement provider in the event that the provider's rating falls below the credit rating of the debt issue being credit enhanced
- (iv) The maximum term of the credit enhancement coverage relative to the maturity of the bonds being credit enhanced
- (v) The cost of the credit enhancement premiums relative to the interest savings from issuing credit enhanced debt at a higher rating than would be possible if the debt was unenhanced

Bank Letters of Credit: Bank LOCs pay principal and interest on a credit enhanced municipal bond in the event of a default by the underlying issuer.¹³⁰ They are typically from 1 to 10 years in duration, compared to the longer-term 20–25-year municipal bonds that they wrap, which poses some remarketing risk to the issuer when the LOC is extended or replaced. A bank LOC is an irrevocable and unconditional obligation of the bank to guarantee the payment of all scheduled principal and interest payments to bondholders. The key factors influencing the use of bank LOCs are bank credit quality, the cost of obtaining an LOC, and the availability of other forms of credit enhancement, such as monoline insurance. Since the LOC provides an unconditional and irrevocable guarantee, its capital charges are booked as a direct liability of the bank.¹³¹

Commercial bank LOCs were especially prevalent for lower rated corporate tax-exempt bond issues (part of what the Internal Revenue Service classifies as tax-exempt private activity bonds), such as for industrial revenue and pollution control bonds.¹³² Industrial revenue bonds could only be issued for capital activities that qualified under the IRS private activity guidelines. The LOC provider could either make a direct payment to the bond trustee for the full principal amount of the issue, plus a specified interest payment, or it could make a standby payment to cover a payment default by the issuer. In either case, the issuer remained obligated to pay back the LOC provider.

LOC-backed issuance tended to increase during times of perceived market stress, such as during a recession or in 1994 when interest rates increased. The latter event stimulated greater reliance by issuers on shorter-term (and lower interest cost) VRDOs, which were also backed by LOCs and are discussed below. As mentioned above, fallout from the GFC resulted in the downgrade of many bank ratings, making credit enhancement of municipal bonds less attractive to the higher rated municipal bond issuers. Nevertheless, bank LOCs for municipal bonds continue, especially in states with high municipal bond volume, such as New York and California. Some top US commercial banks still provide LOCs for municipal bonds and for VRDOs, although many have split ratings, which reduces the value of their LOC.¹³³

¹²⁹ D. Goodfriend and T. Myers. *Bond Insurance and Section 168.00 of the Local Finance Law, Bond Basics for Towns, Villages and Cities in New York State*. <https://media.orrick.com>. p. 126, 2010.

¹³⁰ *Fundamentals of Municipal Bonds*, p. 15–17

¹³¹ Interview with Bill DeSante, former Vice President and Managing Director, Structured Finance, Moody's Investors Service, March 22, 2023.

¹³² S. Provus. 2006. *CDFA Spotlight: The Basics of Industrial Development Bonds*. Council of Development Finance Agencies, www.cdfa.net.

¹³³ VRDO Ratings Recap, S&P Global Ratings, 2019, www.spglobal.com; NYC Bonds, Letter of Credit and Standby Purchase Agreement Counterparty Exposure, Q2 FY2023, <https://comptroller.nyc.gov>.

Variable Rate Demand Obligations: The growth of municipal tax-exempt money market funds created a demand for short-term municipal paper that could not be met by the existing supply of short-term municipal notes. This resulted in the creation of VRDOs, a new type of long-term amortizing municipal bond with a short-term demand (or put) feature. This allowed investors to call their bonds within a short notice as if they were holding short-term debt; it also allowed the bonds to price like short-term debt, which was very attractive to some issuers.

The process for exercising a put requires a VRDO holder to provide notice to a tender agent, who then notifies a remarketing agent to tender the bonds (find a new investor). This requires the bonds to be repriced. The VRDO also carries an LOC or SBPA, so that if there is a lag between when the original investor exercises its put, and when the remarketing agent is able to find a new investor for the bonds, the LOC would step in and pay the investor on a full-and-timely basis. Since the interest rate is reset frequently by the remarketing agent, and since the bonds are backed by an LOC, they always sell at par, with full capital preservation, which is a key feature of VRDOs. While an LOC is unconditional and irrevocable, the SBPA has certain conditions precedent to a draw. This makes it less useful, but also cheaper to the issuer. If the original issuer uses its own funds to purchase the bonds upon a put, this is called “self-liquidity.” If the bank LOC is used to purchase the tendered bonds, this is called “Bank Bonds.” VRDO bank facilities typically expire within 3 years, so there is a risk of nonrenewal.

From 1990 to 2010, annual VRDO issuance increased in two different ways – during times of perceived market stress (especially in 2008 with the GFC), just as with bonds backed by a LOC, but also when municipal bond issuance was trending upward; when there would also be an increase in demand from US municipal money market funds.¹³⁴ VRDO issuance was hurt after the GFC, just as with issuance of LOC backed bonds, because of deterioration in bank credit ratings.

VRDOs make up between 90% and 95% of all tax-exempt money market fund assets, and most have the highest short-term ratings of A-1/P-1.¹³⁵ Maturity dates usually range from 1 to 5 business days, although other short-term maturities of less than 1 year are also available. They carry a yield that is slightly higher than other short-term benchmark investments, such as the 1-month T-bill. The yield rises and falls with the FED funds rate. New York and California, two states with high municipal bond volumes, also have the largest share of VRDO issuance.

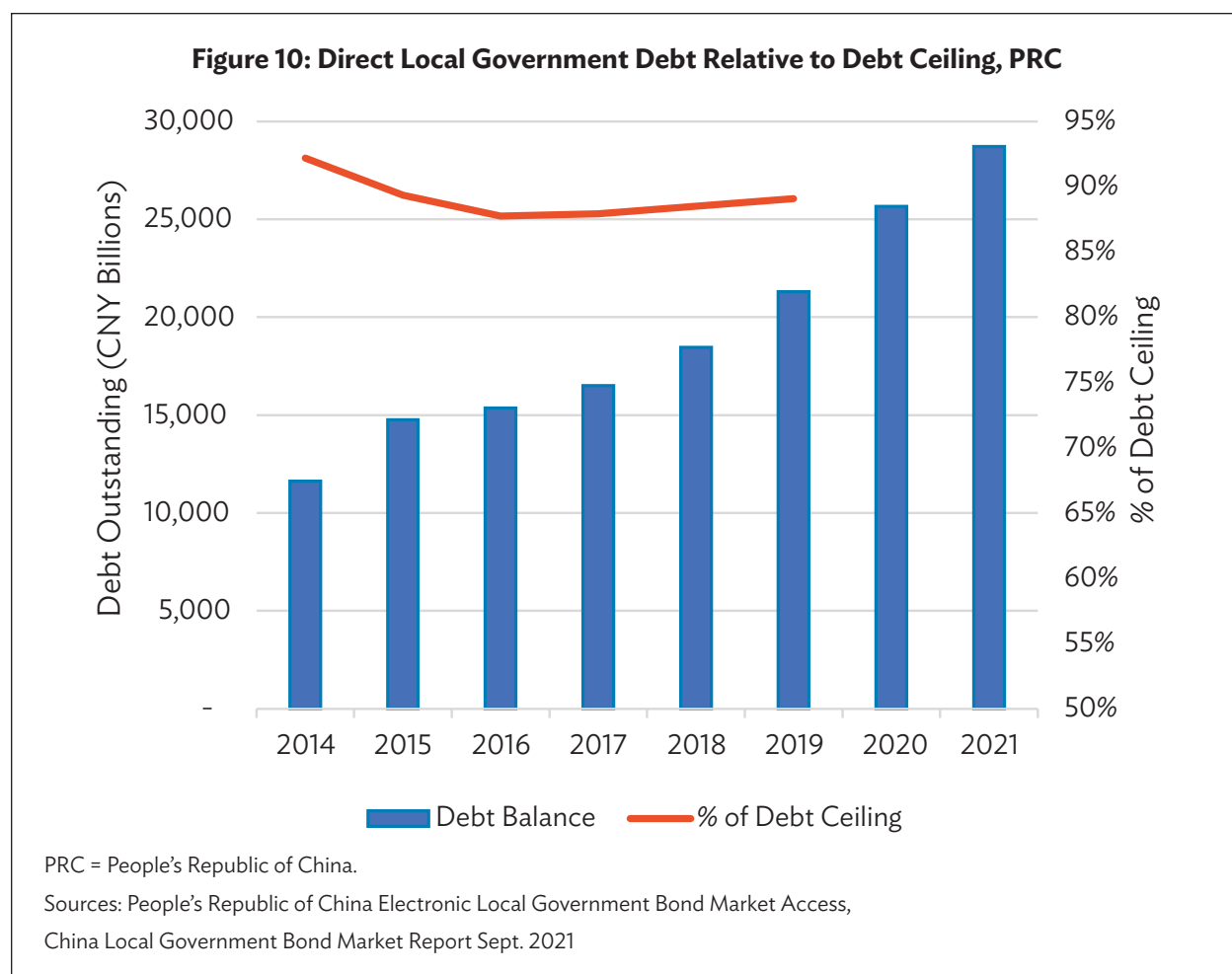
D. People’s Republic of China

The PRC’s subnational hierarchy includes 33 provinces (but this term also includes four municipalities), 334 prefectures, 2,851 counties (which includes counties, county-level cities and districts), 39,864 townships, and 662,393 villages and residential communities. Historically, local governments did not have debt issuing authority, but many managed to get around this by creating special purpose corporations called local government financing vehicles (LGFVs) to finance infrastructure improvements and economic development projects. Local governments were gradually given approval to issue bonds in 2015. With this change, direct local government debt grew from CNY0.9 trillion (\$146 billion) outstanding in 2013 to CNY28.7 trillion (\$4.5 trillion) outstanding as of September 2021.¹³⁶ As a result, the PRC now has the largest municipal debt market in the world, surpassing the much older US market (this is just for direct, on-balance sheet local government debt; see Figure 10 below for a trend of local government bonds outstanding by year, as compared to the local government debt ceiling established by the central government for local government bond issuance).

¹³⁴ *Fundamentals of Municipal Bonds*, p. 39

¹³⁵ Seeking Alpha. 2022. *Municipal VRDOs: Price Stability and Attractive Yields*. <https://seekingalpha.com>.

¹³⁶ China Government Debt Center. 2021. *China Local Government Bond Market Report*. <http://kjhx.mof.gov.cn/>.



The history of the PRC's bond market is one of rapid evolution, with blurred boundaries between government sector (central and local) bonds and corporate sector bonds. This makes a true accounting of local government debt exposure difficult to pinpoint exactly—it can only be approximated, and different sources provide different amounts outstanding. In this study, numbers used either came from official government reports, foreign academic or development agency studies, or from banks.

Debt figures were cross-referenced as much as possible. Between bonds issued directly by local governments, and bonds and loans issued by SOEs that in varying degrees are financially supported by local governments, the debt load of the local government sector (explicit and implicit) is enormous. For more information about the legal and regulatory framework for municipal bond issuance in the PRC, see Appendix 9: Part 1: Internal Ecosystem for Municipal Debt Issuance.

Missing from the official accounting of outstanding local government debt is the debt (sometimes called shadow debt) of the LGFVs. There are two components to LGFV debt (bonds and loans), which are used to finance infrastructure, real estate, and other economic development projects. LGFV bonds are publicly recorded as enterprise bonds (therefore, they are counted as corporate debt, not as local government debt). ADB estimates that, as of the end of 2019, outstanding local government enterprise bonds, issued by LGFVs, totaled CNY2.615 trillion (\$410 billion).¹³⁷ Nomura, however, estimated that

¹³⁷ ADB. 2020. The Inter-Bank Bond Market in the People's Republic of China. In *Asian Bonds Online*. Manila. <https://asianbondsonline.adb.org>. p. 90.

local government shadow debt totaled CNY45 trillion (\$7 trillion) at the end of 2020,¹³⁸ and Goldman Sachs put that estimate at CNY53 trillion (\$8.2 trillion) for the same year.¹³⁹

By some estimates, the shadow debt of local governments may even be larger than the outstanding direct local government bonds. Although the LGFV bonds and loans are supported by revenues generated from the projects being financed, the market prices these bonds as if they are guaranteed by the local government. Together, the direct and contingent debt liability of local governments in the PRC ranges from CNY76.3 trillion to CNY84.3 trillion (\$12 trillion to \$13 trillion). It seems doubtful that all of this can be supported without significant financial stress; indeed, defaults of LGFV debt are already starting to occur. The PRC's response has been to reform the local government sector, consolidate LGFVs where possible, restrict investment in off-balance sheet local government debt, and then, reverse course by encouraging local governments to borrow more, with the latter course through direct issuance of local government bonds, and through debt issuance by LGFVs.

The PRC's bond market is now the second largest in the world, after that of the US. It has developed a comprehensive regulatory framework and a modern system of over-the-counter and exchange-driven platforms for primary and secondary bond market activity. Central government bonds represent 16% of the bond market and are issued through the interbank market (CIBM) and the Exchange.¹⁴⁰ Maturities tend to range from 3 months to 50 years. Local government bonds represent 23% of the bond market and are also issued on the CIBM and Exchange. Maturities for these bonds range from 1 year to 10 years. Corporate and SOE bonds, which use the same exchanges, represent 12% of the market and have maturities that range from 3 to 30 years.¹⁴¹ While the corporate sector issues bonds, most of its financing is done by banks, which account for 70% of outstanding corporate debt. The International Monetary Fund (IMF) expects corporate debt to become a larger share of the PRC's bond market in the future.¹⁴²

Table 6: Distribution of Municipal Bonds by Investor Class

Distribution of Investors	Amount (CNY 100 mill.)	Proportion (%)
Inter-bank Market		
Commercial Banks	242,110	84.3
Credit Unions	1,478	0.5
Insurance Institutions	8,907	3.1
Securities Companies	2,843	1.0
Unincorporated Products	9,630	3.3
Foreign Institutions	111	0.04
Other	13,500	4.7
Over-the-Counter Market	80	0.03
Other Market	8,450	2.94
Totals	287,110	100.0

Source: China Bond, www.chinabond.com.cn.

¹³⁸ Reuters. 2021. China Tightens Grips On Local Government Hidden Debt. www.reuters.com.

¹³⁹ W. Pesek. 2021. *Goldman Flags \$8.2 Trillion Threat Worse Than China Evergrande*. www.forbes.com.

¹⁴⁰ R. Marshall, Z. Yang. 2020. *Chinese Bond Market – Evolution and Characteristics*. www.ftserussell.com. p. 4

¹⁴¹ Marshall and Yang, *Chinese Bond Market – Evolution and Characteristics*, p. 5

¹⁴² International Monetary Fund (IMF). 2019. *The Future of China's Bond Market*. www.imf.org. p. 99.

Most of the municipal bonds are sold through the inter-bank market. A smaller amount is sold through the two exchanges (see Table 6, which shows the distribution of municipal bonds by investor, as of September 2021).¹⁴³ Most municipal debt (84%) is held by banks, so municipal debt has very low secondary market liquidity. Insurance institutions, and a category called “unincorporated products,” which include banks’ wealth management products, securities investment funds, and trust funds, are the next largest categories of investors, holding roughly 3% of local government bonds each. Although this snapshot of market and investor preferences is for September 2021, these relationships have changed little since the local government bond renaissance started in 2015. AAA and AA category ratings reportedly account for 99% of all bond ratings in the Chinese domestic market. An IMF report states that credit ratings in the PRC do not seem to differentiate credit quality among the provinces, with most local governments achieving an AAA rating.¹⁴⁴ This results in bond spreads not being correlated to measures of provincial growth, debt ratios, or fiscal balances, according to the IMF. For more details about the bond market’s development and regulatory framework, see Appendix 9: PRC, Part 2: External Ecosystem for Municipal Bond Issuance.

E. Japan

Japan has 47 prefectures, 1,719 municipalities (which include local governmental entities designated as cities towns and villages), and 23 special wards, which are in Tokyo.¹⁴⁵ The most recent figures for actual local government debt outstanding are from FY2018, which show that the outstanding ¥194 trillion (\$1.76 trillion) of local government debt consists of public and private placement bonds, bonds issued by a conduit financing institution on behalf of municipalities, joint-local government bonds, and loans to local governments from the central government. Total local government debt outstanding is equivalent to 35% of GDP, or to 18% of public sector debt outstanding.¹⁴⁶ Approximately 74% of this debt is supported by the ordinary budget accounts of local governments, but ¥31.6 trillion (or 16%) is supported by the special local government accounts for local allocation tax and transfer tax grants, while another ¥18.3 trillion (or 9%) is supported by public enterprise activities. Key public enterprises at the local government level include sewerage, water supply, hospitals, and transportation.¹⁴⁷ Local government debt outstanding increased rapidly in the late 1990s, but in the last 20 years, there has been very little change in the amount outstanding; essentially, new issuance is almost balanced out by scheduled retirements, like what has happened in the US.

The Japanese Constitution gives local public entities the right to manage their “property, affairs and administration.”¹⁴⁸ The Local Autonomy Law allows local public bodies the authority to issue local public bonds, providing for the purpose of the issuance and the payment of debt service in their respective budgets.¹⁴⁹ Since the 1950s, and after enactment of the new postwar Constitution and the Local Autonomy Law, Japan enacted a series of decentralization reforms that were aimed at decreasing the number of local governmental entities, while increasing their responsibility and accountability. This includes a municipal audit, which shall be submitted to the audit commissioners, to the Minister of Home Affairs or to the prefecture governor (depends upon the level of government), and to the public. Issuers with a high real-debt payment ratio, and public enterprises with a high deficit, must obtain approval from the Ministry of Internal Affairs and Communications (MIC) or the prefecture governor to issue debt.

¹⁴³ China Government Debt Center, *China Local Government Bond Market Report*, p. 16

¹⁴⁴ IMF, *The Future of China’s Bond Market*, p. 126.

¹⁴⁵ A. Sasaki. 2014. *Local Self-Government in Japan*. www.soumu.go.jp.

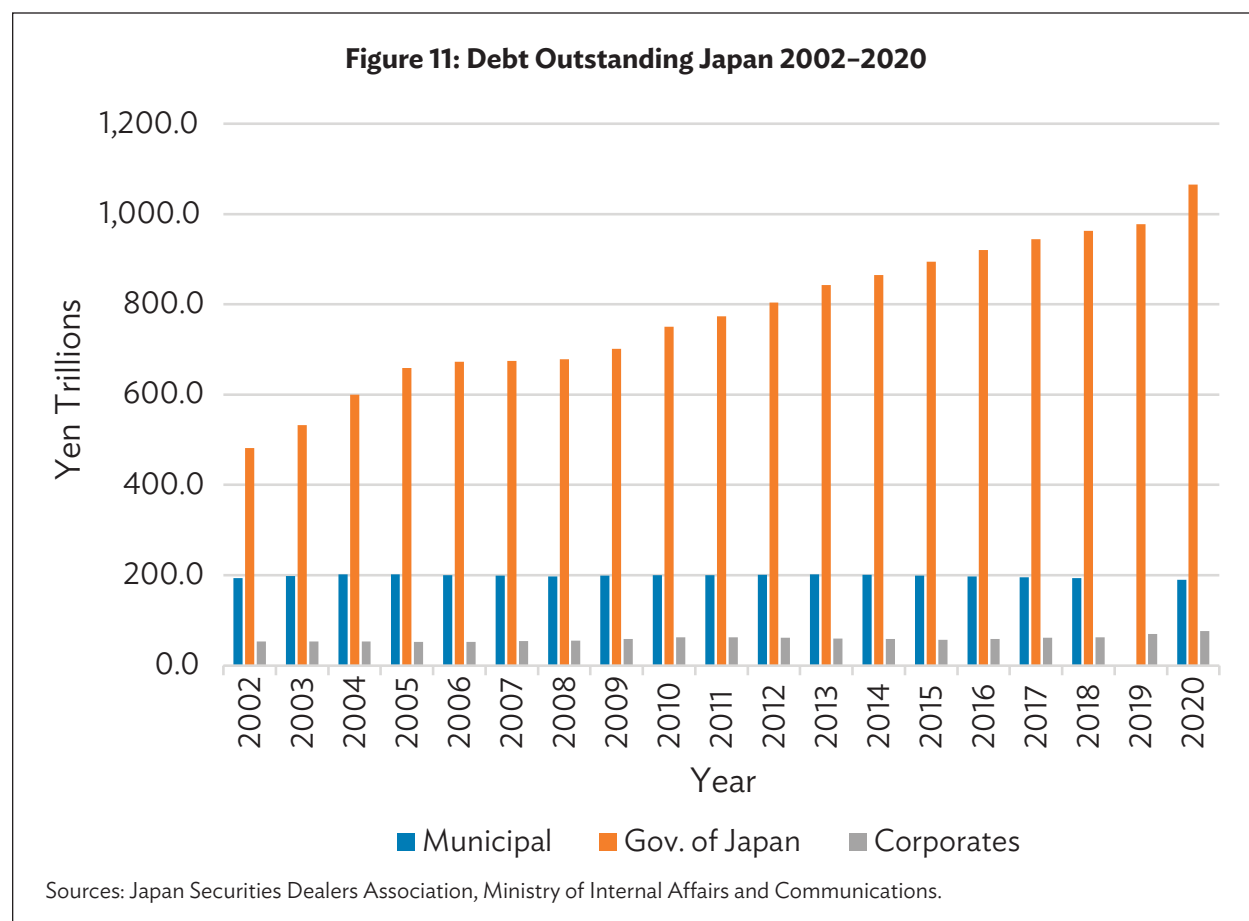
¹⁴⁶ Local Public Finance Bureau, Ministry of Internal Affairs and Communications, Government of Japan. 2020. *White Paper on Local Public Finance, FY 2018 Settlement*. www.soumu.go.jp. p. 26.

¹⁴⁷ Government of Japan, *White Paper on Local Public Finance*. p. 28.

¹⁴⁸ The Constitution of Japan, <https://japan.kantei.go.jp>.

¹⁴⁹ Local Autonomy Law, Chapter IX Finance, p. 3-4 & 6, www.chihousai.or.jp.

Several developments have allowed for larger and more liquid municipal bond issues to be offered to the bond market. These include the issuance by two or more local governments of a “joint-and-several-obligation” of each issuer.¹⁵⁰ JFM was created as a nonprofit organization, wholly owned by Japanese local governments, to issue bonds on a conduit basis directly to the bond market. Its proceeds are then used to make loans to local governments. For more information on the legal and regulatory system for municipal debt issuance in Japan, see Appendix 10: Japan, Part 1: Internal Ecosystem for Municipal Debt Issuance.



The Japanese debt market is characterized by the largess of public sector borrowing (central government as well as prefectures and municipalities). This can be seen in Figure 11 above, which includes outstanding Japanese government bonds (but excludes guaranteed government bonds and Fiscal Investment and Loan Program agency bonds), local government bonds and loans, and corporate bonds from 2002–2020.

While local government debt levels have remained largely level over the last 20 years (both nominally and relative to GDP), central government debt levels have continued to climb, with appreciable increases in the late 1990s, during and after the 1997 Asian financial crisis, in 2008 with the GFC, and again recently with the economic impact of the COVID-19 pandemic. Public sector debt stood at 59% of GDP in 1990;

¹⁵⁰ In a “joint and several obligation”, all of the parties to a financing are each responsible for paying the entire amount of the financing. If, for instance, one party is unable to pay, the other party in the obligation must pay the amounts due by both parties.

by the end of 2020, it was over 250% of GDP, and is now the highest among developed countries.¹⁵¹ The sluggishness of economic growth and a declining population base have had a commensurate effect on hindering the growth of public sector revenues, while the rapidly aging population has had a commensurate effect on exploding social service spending. This combination, along with aggressive public sector investment in infrastructure, has resulted in permanent structural budgetary deficits in Japan, which are financed with debt. Since most of this debt is issued and held domestically (87% of Japanese government bonds [JGBs] are owned by domestic investors, including the Bank of Japan),¹⁵² and since domestic savings are significant, the rapid growth in public sector debt has resulted in bond ratings downgrades, but never a debt crisis for Japan.

Government bonds are primarily listed on the Tokyo Stock Exchange (TSE), but many corporate bonds are increasingly listed on the TOKYO PRO-BOND Market (TPBM), an electronic bond trading platform created in 2011. Its listing requirements include a rating by Moody's, S&P, and Fitch, and underwriters and securities companies for the bonds must be recognized by the TSE. For more information on the debt market framework for municipal debt issuance in Japan, see Appendix 10: Japan, Part 2: External Ecosystem for Municipal Debt Issuance.

¹⁵¹ Ministry of Finance, Japan. 2020. *Japanese Public Finance Fact Sheet*. www.mof.go.jp. p. 6, 15.

¹⁵² Ministry of Finance, Japan, *Japanese Public Finance Fact Sheet*, p. 40.

APPENDIXES

A. Appendix 1: India

1. Part 1: Details Internal Ecosystem for Municipal Bonds

States' Authority to Issue Debt: The legal authority for Indian states to issue debt comes from Article 293 of the Constitution of India.¹ The executive power of a state includes borrowing within India, and securing any borrowing from its Consolidated Fund, within the limits that the legislature of the state places on debt issuance or debt guarantees.

a. The Constitution (74th Amendment) Act, 1992

This act, which was designed to empower urban local bodies (ULBs), includes the following among its provisions:²

- (i) Requires each state to revise its own municipal law to promote greater decentralization, resource mobilization, accounting reforms and entry of private sector partnerships. This has led to the development of a model municipal law to be enacted by the states.
- (ii) Authorizes each state legislature to grant municipalities authority to levy, collect, and appropriate certain taxes.
- (iii) Contains provisions for shared tax collections by the state, and state grants which can be distributed to the ULBs.
- (iv) Provides for the establishment of funds at the ULB level to credit such moneys received and withdrawn.

Municipal Law: States have all adopted a municipal law that authorizes the municipal governments to issue debentures or raise loans, and to create a sinking fund for debt service on its debt.³ The framework of the municipal law enables ULBs to:

- (i) Establish core municipal functions, including water supply and sewerage
- (ii) Provide for state oversight through State Finance Commission recommendations
- (iii) Conduct receivership for cities that default in performance of duties or abuse powers
- (iv) Generate internal sources of revenue
- (v) Establish a state municipal accounting manual, and state appointment of a municipal auditor
- (vi) Prepare an annual balance sheet and appoint a municipal accounts committee
- (vii) Prepare an inventory of properties and facilities
- (viii) Implement development plans of their own
- (ix) Encourage private sector participation in the construction, financing, and delivery of services

¹ A. Sengupta, A. Sharma, R. Sharma. 2014. *Research Report on Queries Raised by the Fourteenth Finance Commission; On Central Control Over Sub-National Debt in India*. https://vidhilegalpolicy.in/wp-content/uploads/2019/05/141010_CentralControlOfStateDebt.pdf; also Finance Commission India, www.fincomindia.nic.in.

² The Constitution (Seventy-Fourth Amendment) Act, 1992, <http://indiacode.nic.in>.

³ Policy Option Paper for Framing Municipal Law in India, Financial Management of Municipalities: Borrowings, Ministry of Urban Development, India, <http://moud.in>.

b. National Municipal Accounting Standards

The NMAM prescribes the audit process, as well as how this authority rests with the Municipal Chief Auditor, but it does not prescribe a timetable for the production and release of an audit.⁴ Guidelines as to when and how the financial reporting process is to begin can also be found in the individual Municipal Acts of each state.

In practice, there is the cash-based audit done by the municipal comptroller, the modified accrual-based accounting (sometimes audited and sometimes unaudited) done by the municipal finance director with help from an outside auditing firm, and a process audit done by the state auditor's office. Municipalities that have issued or plan to issue in the bond market are required by SEBI guidelines to provide independently produced audited financial reports, using the NMAM standards; these audits are also required to be produced soon after the end of the fiscal year. In the past, some municipal corporations would not begin their audit process until the following budget season, producing a 1- to 2-year lag time between the end of the fiscal year and the publication of the audited results. Bond market conventions are beginning to influence the timeliness of the municipal audits.

The NMAM requires that a ULB's Annual Report include the following:

- (i) Financial Statements consisting of:⁵
 - a) Balance Sheet;
 - b) Income and Expenditure Statement;
 - c) Statement of Cash flows (a summary of an enterprise's cash flow over a given period of time);
 - d) Receipts and Payments Account (detailed as per the account heads);
 - e) Notes to Accounts and National Municipal Accounts Manual Financial Statements; and
 - f) Financial Performance Indicators.
- (ii) Report of the Municipal Chief Auditor;
- (iii) Municipal commissioner's Report on the Annual Financial Statements and the qualifications and comments made in the Report of the Municipal Chief Auditor; and
- (iv) Standing Committee's Action Taken Report on the qualifications and comments made in the Report of the Municipal Chief Auditor and the Report of the Municipal commissioner.

Smart Cities Mission: The Smart Cities Mission is under the MoHUA. It has a stated goal of catalyzing \$30 billion worth of investments into the 100 smart cities over a period of 5 years, from 2015 through 2019.⁶ As with all Government of India initiatives, the mission squeezes what should be a 20-year plan under the best of circumstances into a 5-year plan. The mission's focus is to provide a good quality of life to India's growing number of urban residents through integrated infrastructure and services and "smart solutions", a phrase that entails a marriage of traditional infrastructure with technological innovations, such as the 24/7 water project that was financed by Pune Municipal Corporation, with its focus on geo-mapping, metering and data processing, and management of citywide municipal water service. The core infrastructure improvements to be included under the Smart Cities Mission are very broad and include water supply, electricity supply, sanitation (including solid waste management), urban mobility and public transport, affordable housing (this seems to have a focus on slum remediation), IT connectivity and digitalization, e-governance and citizen participation, a sustainable environment, safety and security of citizens, and health and education. To date, 33 municipal corporations have been awarded under the Smart Cities Mission.

⁴ Institute of Chartered Accountants of India. 2005. *Committee on Public Finance and Accounting Standards for Local Bodies Announcement*. www.icai.org.

⁵ USAID. 2004. *National Municipal Accounting Manual, India*. <https://pdf.usaid.gov>. p. 31.1–31.2.

⁶ Government of India, Ministry of Urban Development. 2015. *Smart Cities Mission Statement & Guidelines*. <https://smartnet.niua.org>.

Atal Mission for Rejuvenation and Urban Transformation (AMRUT): AMRUT has as its purpose ensuring that households have access to water and sewer services, well-maintained parks and open spaces, and reduced pollution through access to public transportation.⁷ AMRUT also has a reform agenda that includes provisions for ULBs to obtain an issuer-level credit rating.⁸ So far, credit ratings have been completed for 255 ULBs (see AMRUT Program's Municipal Rating Exercise below). The MoHUA decided to incentivize up to 12 ULBs during FY2019–20, by providing an incentive grant for issuing bonds. The incentive, which is on a first-come, first-served basis, is limited to ₹130 million per ₹1 billion of bonds issued. The ULBs that issued bonds under SEBI municipal bond guidelines received the grant, which is paid in one lump sum and credited to the escrow account of the ULB, after it has issued municipal bonds.

2. Part 2: Details External Ecosystem for Municipal Bonds

Subnational Debt Issuance and Investors:

State debt has many sources, including State Development Loans (SDLs), whose issuance and debt servicing is facilitated by the RBI. Other sources of state debt include loans from the central government, government-owned pension and life insurance companies, and state-owned banks. RBI facilitates the issuance of SDLs through the electronic auction system for government securities into the bond market. Since RBI reserves the power to make repayments on SDLs from central government allocations to the states (a soft intercept provision), SDLs are considered superior to state-issued bonds. This means that banks can invest in SDLs without investing reserve capital. The spread of SDLs above comparable central government treasuries remains low compared to other types of debt because of the soft RBI intercept provision. In Q1 2021, for instance, the average SDL coupon was 7.95%. By comparison, the median AAA- to AA-rated corporate coupon was 8.5%.

Table A1.1: Ownership of Public Sector Bonds
(as of 5 Dec. 2021)

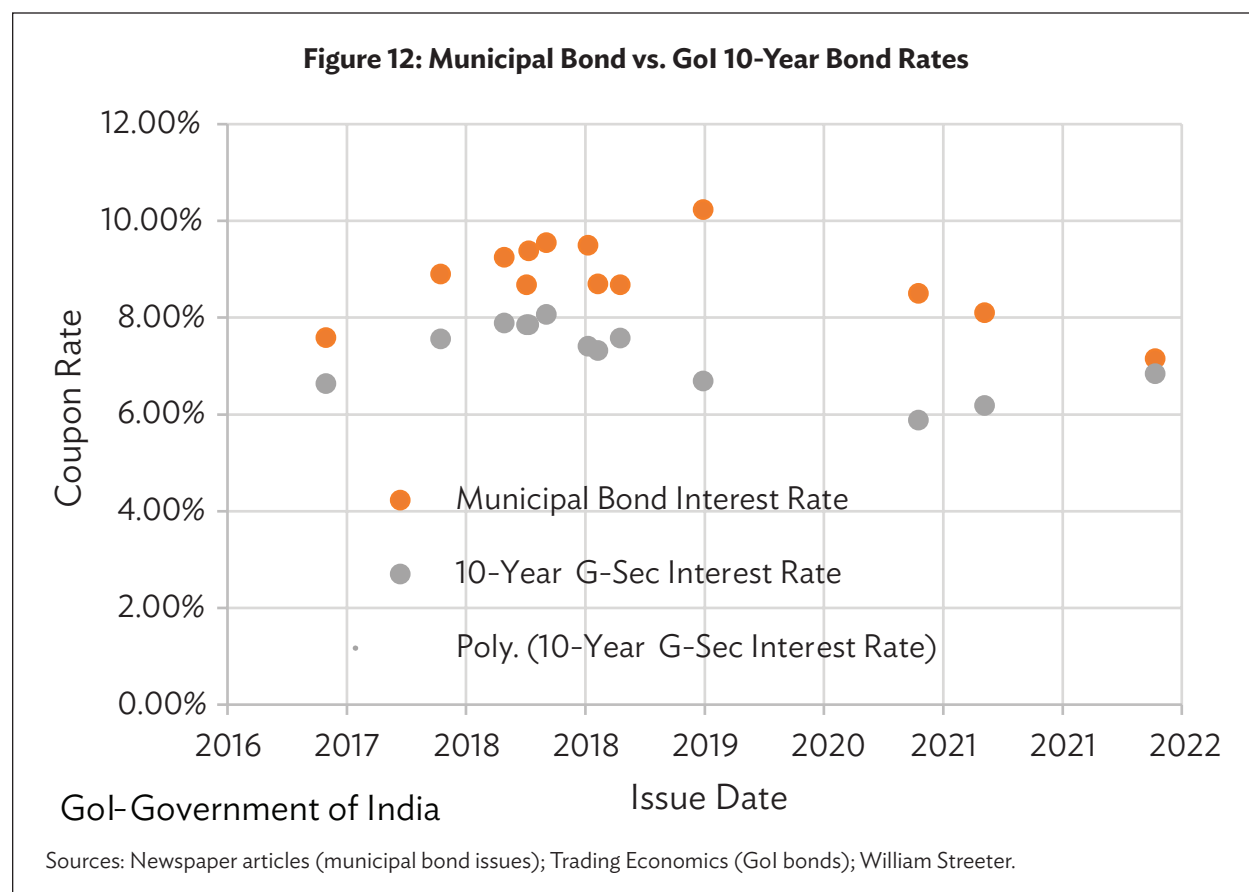
Investor Category	Central Gov. Bonds (%)	State Government Bonds (%)
Commercial Banks	35.40	34.41
Nonbank Financial	0.27	0.40
Insurance Companies	25.74	28.85
Mutual Funds	3.08	1.91
Cooperative Banks	1.82	4.07
Financial Institutions	1.69	1.73
Corporates	1.37	1.70
Foreign Portfolio Investors	1.66	0.02
Provident Funds	4.33	20.66
Reserve Bank of India	16.92	0.83
Others	7.73	5.40
State Governments	1.69	0.19

Source: Reserve Bank of India.

⁷ About AMRUT/The Mission, Government of India, Ministry of Housing and Urban Affairs, <http://amrut.gov.in/content/>.

⁸ M. Thakur. 2019. D.O. No. K16012/2/2018-AMRUT. <http://amrut.gov.in/content/>.

Investors in state debt are primarily commercial banks, insurance companies, and provident funds (see Table A1.1 above for a breakout of investor categories for central and state government debt). The first two investor groups also purchase central government bonds, but provident funds invest very little in central government debt. RBI, on the other hand, is also a large purchaser of central government bonds, but holds almost no state bonds. Central and state government debt can be considered as core investments for many institutional investors. This is because of the frequency of their issuance, the large amounts of outstanding debt, and the relative ease of secondary market trading of these securities.



Outstanding municipal bonds were all issued since 2017, 2 years after SEBI's municipal bond guidelines took effect. Figure 12 above shows each of the municipal bond issuances, by year of issuance and by coupon rate. These rates are compared to the benchmark Government of India 10-year bond. From 2018 through 2020, the benchmark interest rates declined. Beginning in 2021, however, the benchmark interest rates began a slow climb, which has continued to the present, due to concerns about global increases in interest rates, the high price of oil, and uncertainty with respect to the Russian invasion of Ukraine. Details of the individual bond issues can be seen in Table A1.2 below:⁹

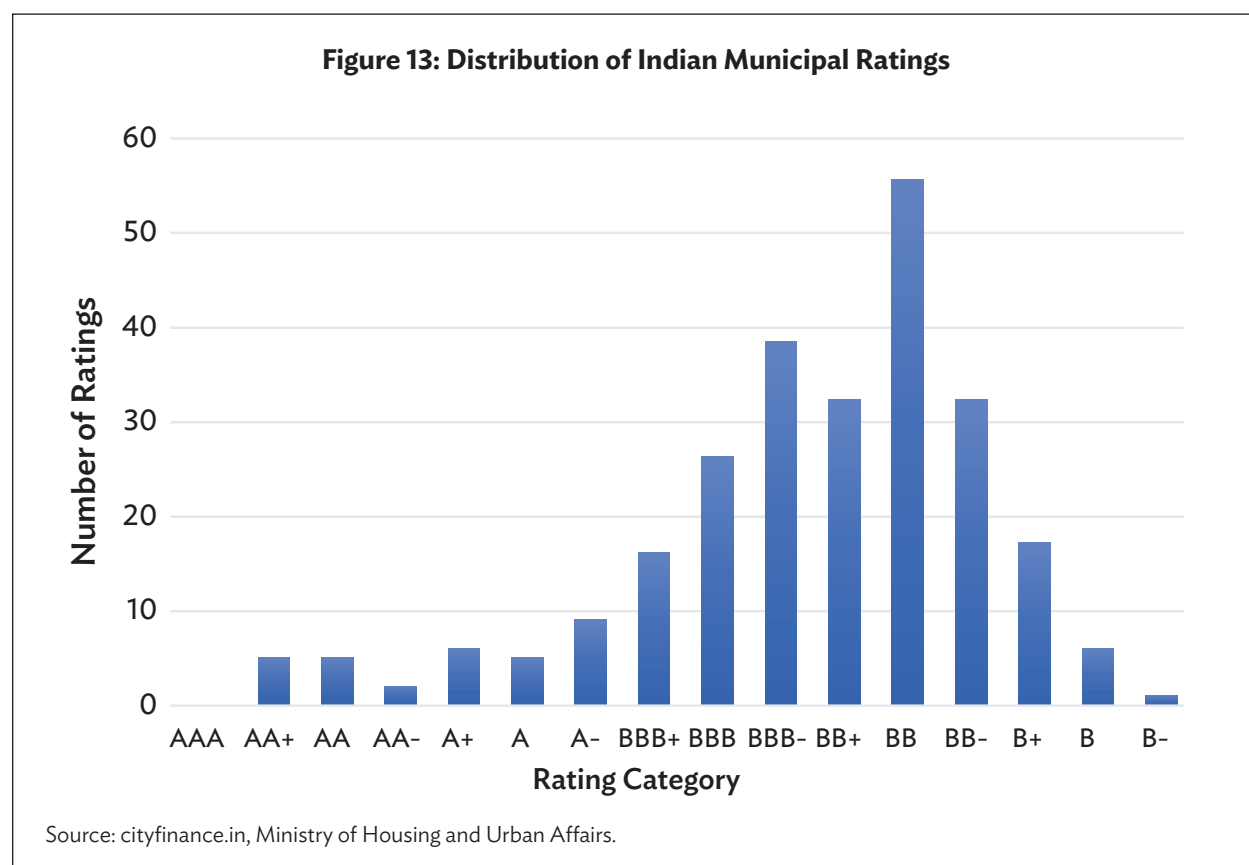
⁹ Bond issue details from news articles at the time of bond issuance; 10-Year G-Sec Interest Rate from Trading Economics, <https://tradingeconomics.com>; spread (bps) calculated.

Table A1.2: Indian Municipal Bonds by Date & Terms of Issuance

Municipal Corporation	Issue Amount (₹)	Rating	Issue Date	Maturity (Years)	Municipal Bond Interest Rate	10-Year G-Sec Interest Rate	spread (bps)
Pune	200	AA+	6/20/2017	10	7.59%	6.64%	95
Greater Hyderabad	200	AA	2/16/2018	10	8.90%	7.56%	134
Indore	139.9	AA	6/29/2018	10	9.25%	7.89%	136
Andhra Pradesh Capital Region Development Authority	2000	A+/AA-	8/15/2018	10	8.68%	7.85%	83
Greater Hyderabad	195	AA	8/19/2018	10	9.38%	7.85%	153
Bhopal	175	AA	9/25/2018	10	9.55%	8.07%	148
Visakhapatnam	80	AA	12/21/2018	10	9.50%	7.41%	209
Ahmedabad	200	AA+	1/11/2019	5	8.70%	7.32%	138
Surat	200	AA+	2/27/2019	5	8.68%	7.58%	110
Greater Hyderabad	100	AA	8/20/2019	10	10.23%	6.69%	354
Lucknow	200	AA	11/13/2020	10	8.50%	5.88%	262
Ghaziabad	150	AA	3/31/2021	10	8.10%	6.18%	192
Vadodara	100	AA+	3/24/2022	5	7.15%	6.84%	31

Sources: Newspaper articles (municipal bond issues); Trading Economics (GoI bonds); William Streeter

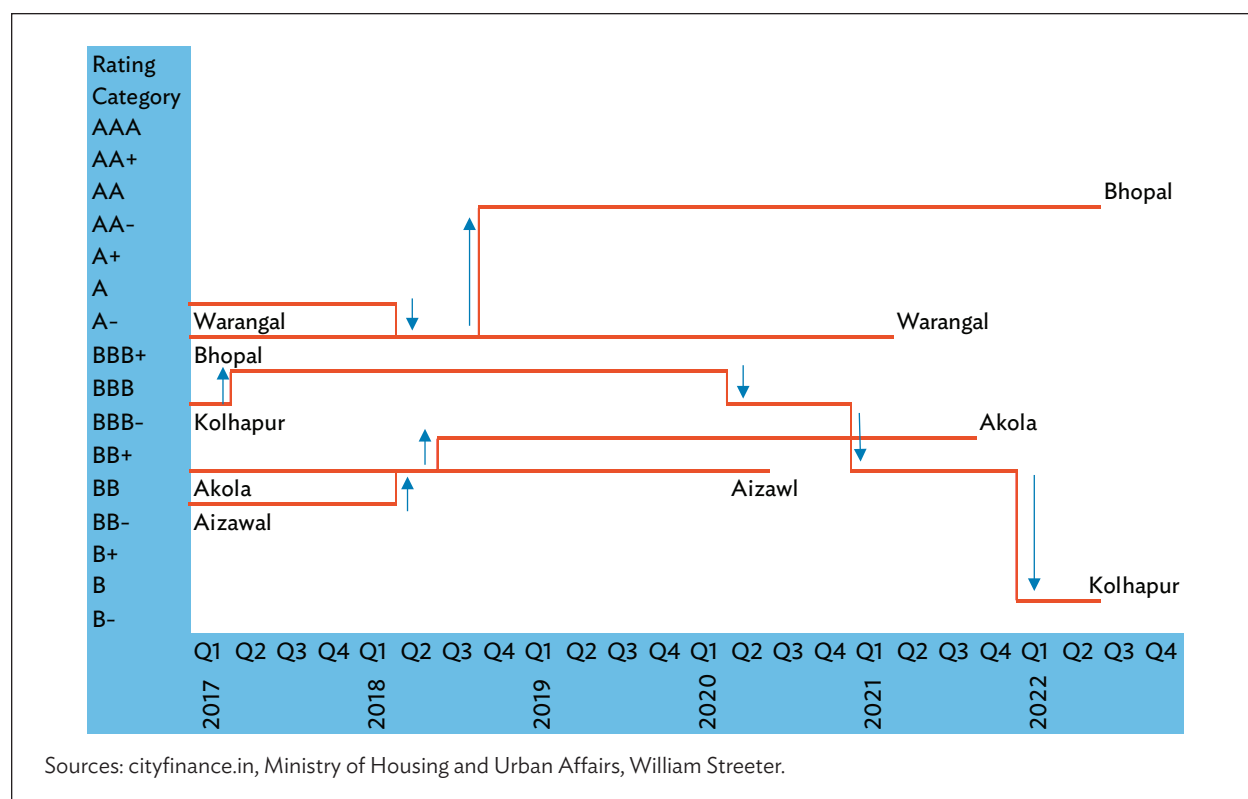
All the municipal bond issues are rated AA in the national scale. In many cases, these issue ratings are at least one notch above the issuer rating because of additional strength provided by the trust structure and escrow agreement, which are common features of Indian municipal bonds. Most of the municipal bond issuances have a 10-year maturity, but during times of market uncertainty, such as in 2019 when Infrastructure Leasing & Financial Services (IL&FS) went bankrupt, in 2020 with the COVID-19 pandemic, and again this year, with the externalities mentioned above, two things have happened: the spread of the municipal bonds above the Government of India benchmark usually widened (the bonds had a higher relative interest rate) and the market preference sometimes shifted from 10-year to 5-year municipal bond maturities. Spreads for the most recent municipal bond (for Vadodara Municipal Corporation) tightened after the upward adjustments in the benchmark rate but were only issued with a 5-year maturity. This market behavior demonstrates how the emergence of externalities can affect a new asset class irrespective of its rating. It is possible that municipal bonds could become an alternative investment to state debt since both are public sector debt, with a yield pick-up above central government debt with a comparable maturity. For instance, commercial banks and new pension scheme funds also purchased some of the original municipal bonds. Nevertheless, the frequency and volume of municipal bond issuance in India is too low to make that determination.

a. **AMRUT Program's Municipal Rating Exercise**

As mentioned earlier, the AMRUT program provided mostly point-in-time ratings for 255 ULBs, from 2016–18. The ratings distribution from this exercise, which was created using raw data from the MoHUA database, can be seen in Figure 13 above.¹⁰ Although 112 ULB ratings (44%) are investment grade in the India national scale, only 12 ULB ratings are in the AA category, which is the minimum conventional threshold for domestic investors in the bond market. The largest clusters of ratings were in the BBB category (31%) and BB category (47%).

Currently, 180 (71%) of the ratings have been withdrawn. Of the remaining 75 active ratings, 69% have been affirmed, four have been upgraded and two have been downgraded. It is typical for some ratings to migrate over time, but it is fair to categorize the remaining active municipal ratings as stable but low. The graph below, which was also created using raw data from the MoHUA database, shows the ratings migration for the few ULB ratings that were either upgraded or downgraded since being assigned. In most cases, the ratings were eventually withdrawn, but a few active ratings remain. Short descriptions follow for each of the ULBs that had a ratings migration, including the rating agency rationale for the changes.

¹⁰ Raw data for the graph came from Credit Rating Report, cityfinance.in, Ministry of Housing and Urban Affairs, <https://cityfinance.in/borrowings/credit-rating>.



Akola Municipal Corporation:¹¹

- (i) Originally rated BB+ by CRISIL in August of 2017.
- (ii) Upgraded to BBB- in August of 2018, due to improvements in property tax and nontax income. Collections benefitted from implementation of a geographic information system. Revenues were also augmented by property tax rate increases.
- (iii) Strong support from the Maharashtra state government was also sighted as a credit positive.
- (iv) In August of 2021, the rating was withdrawn.

Kolhapur Municipal Corporation:¹²

- (i) Originally rated BBB by CRISIL in August of 2014.
- (ii) In June of 2017, the rating was upgraded to BBB+ due to perceived improvement in the municipality's finances, including increased property tax collections due to monetization, as well as additional clarity from the Maharashtra state government on a compensation mechanism in lieu of the Goods and Services Tax, once that tax became centralized. Large capital expenditure needs over the medium term were cited as an ongoing concern.
- (iii) CRISIL began a series of ratings downgrades from BBB to BB+ in January of 2021, and again from BB+ to B in January of 2022. The rationale for the downgrades were not because of deterioration of credit quality, but because the municipality was not cooperating with the agency in providing information to maintain the rating. Typically, in these circumstances, the rating agency would simply withdraw the rating, but CRISIL chose to downgrade instead.

¹¹ Akola Municipal Corporation, Crisil Ratings Limited, reports dated 3 August 2018, and 24 August 2021. www.crisil.com.

¹² Kolhapur Municipal Corporation, Crisil Ratings Limited, reports dated 29 June 2017, 10 July 2019, and 30 January 2022. www.crisil.com.

Aizawl Municipal Corporation:¹³

- (i) In October of 2016, Aizawl Municipal Corporation was assigned a BB rating by CRISIL. Factors contributing to the low rating included a high perceived dependence on grants from the State of Mizoram, and inadequate service levels at its nascent stage of operations as a new municipal corporation.
- (ii) The Mizoram State government passed its municipal act in 2007, and later amended it in 2009.¹⁴ The Aizawl Municipal Corporation was created in 2010.
- (iii) In June of 2018, CRISIL upgraded the municipality's rating from BB to BB+. Factors cited included the expectation for continued growth in property tax collections, and improvements in operating efficiency, as well as the strategic importance of the municipality to the state economy.
- (iv) In May of 2020, the rating was withdrawn.
- (v) Note that the MoHUA database counts this ULB twice, once under the name of Aizawl (the correct spelling) and once under the name of Aizawal. The graph above only shows the ULB once.

Greater Warangal Municipal Corporation:¹⁵

- (i) CARE assigned an A rating to the Greater Warangal Municipal Corporation in December of 2015. Its strong financial position was cited as a credit strength.
- (ii) In March of 2018, the rating was downgraded from A to A-, due to a perceived deterioration in the municipality's revenue surplus, and a significant increase in its capital expenditures, although this spending did not require the issuance of debt.
- (iii) In May of 2021, the rating was withdrawn.

Municipal Corporation Bhopal:¹⁶

- (i) In February of 2017, Municipal Corporation Bhopal got an issuer level rating of A-. It was recognized at the time of the ratings assignment that the municipality was looking to raise additional funds for infrastructure projects under the Smart Cities Program.
- (ii) In October of 2018, the municipality issued ₹1.75 billion of 10-year bonds in the domestic bond market. The bond issue was rated AA by both Brickwork and Acuite ratings agencies. The database treats this as an upgrade, but it is more likely the difference between the issuer-level rating and the issue-level rating (see Municipal Bond Structure in India section below).
- (iii) Key ratings strengths cited are the municipality's position as the administrative capital of the State of Madhya Pradesh, the structured payment mechanism for the bond, and a strong operating revenue surplus. The bond issue rating is ongoing.

¹³ Aizawl Municipal Corporation, Crisil Ratings Limited, Reports dated 4 June 2018, 30 May 2019, and 28 May 2020. www.crisil.com.

¹⁴ A. Singh. 2018. *Urban Local Government in Mizoram*. Mittal Publications.

¹⁵ Greater Warangal Municipal Council, Care Ratings, Reports dated 28 February 2017, 13 March 2018, and 27 May 2021. www.careratings.com.

¹⁶ Municipal Corporation Bhopal, Acuite Ratings & Research, Reports dated 11 December 2020. www.acuite.in; Bhopal Municipal Corporation, Brickwork, Report dated 19 January 2022, www.brickworkratings.com; Municipal Corporation Bhopal, Ref. No. 129, Compliance Report for the quarter September 30, 2021, Municipal Corporation Bhopal, adc_finance@bmconline.gov.in.

b. Current Illiquidity in India's Domestic Bond Market

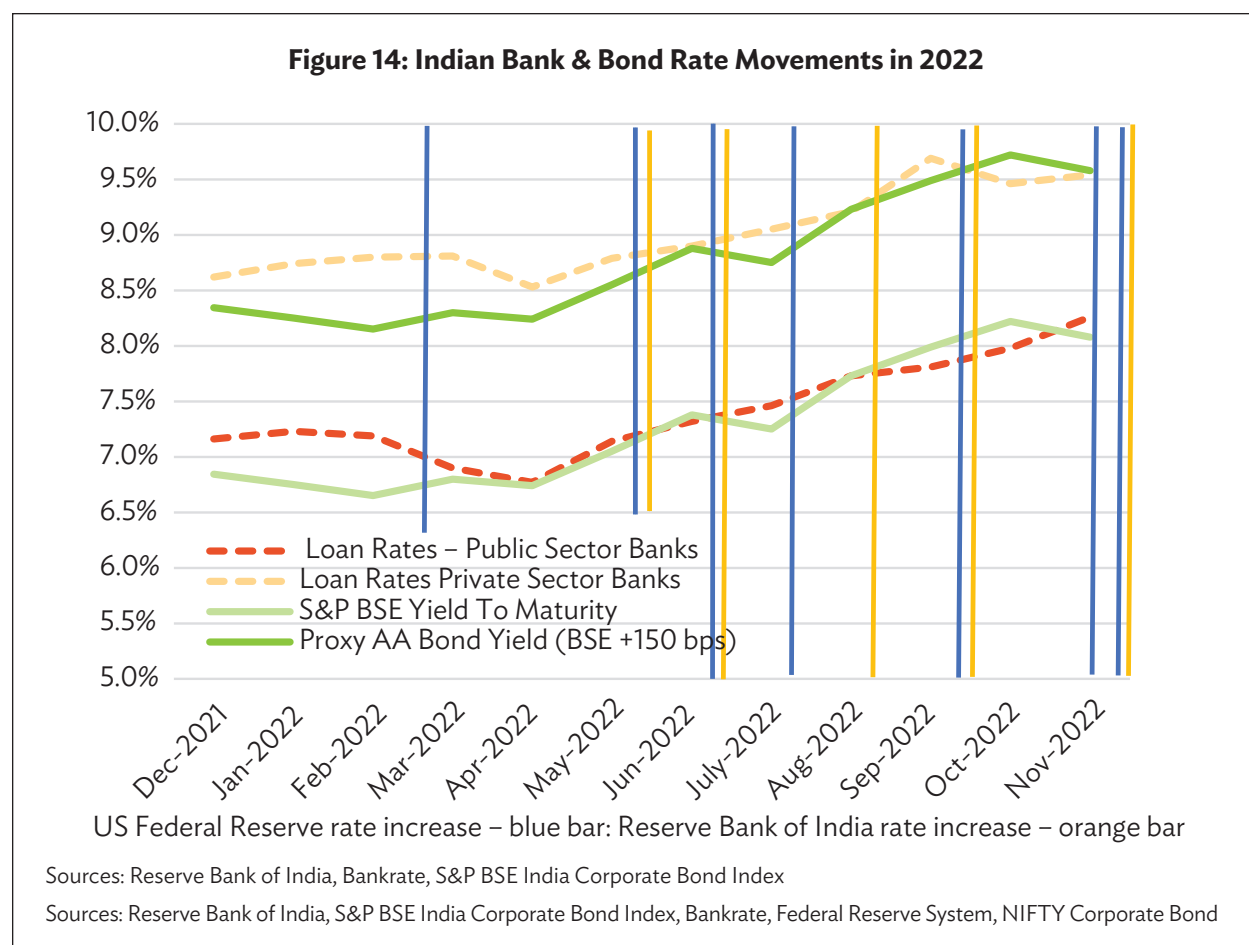
Currently, low bank interest rates and ample liquidity have made the bond market illiquid, driving many corporate and some municipal borrowers to the bank market; particularly to public sector banks, which continue to offer lower interest rates than the bond market. A better balance between bank lending rates and bond interest rates is needed before the bond market can become liquid again. This process is starting to take place in response to global increases in borrowing rates, as well as RBI adjustments to its benchmark lending rate.

Figure 14 below shows the impact of United States Federal Reserve (US FED) rate increases on the Indian domestic bond market yields, as well as the impact of RBI rate increases on public sector and private sector bank fresh loan lending rates.¹⁷ US FED rate increases are shown as blue bars, while RBI rate increases are shown as orange bars. Public sector bank fresh loan rates are shown as a red dotted line, while private sector bank fresh loan rates are shown as a pink dotted line. The S&P Bombay Stock Exchange (BSE) corporate bond index covers AA- and AAA-rated corporates, but the average yields are tilted toward the AAA public sector enterprises that make up much of the index. For this reason, a proxy for AA-rated corporates was created for this exercise by adding 150 bps to the S&P BSE average yields. The S&P BSE average yield, as a proxy for AAA-rated corporate bonds, is shown as a light green line, while the AA corporate proxy is shown as a dark green line.

The graph shows that public sector banks and the S&P BSE index have the lowest interest rates, but the bond market is mostly uncompetitive with public sector banks, since the current median corporate bond rate is 8.6%. Bond rates started to move upward in advance of US FED interest rate hikes, and again in response to further US FED interest rate hikes. Bank rates are playing catch up now, as there was a lag before the RBI began to raise its benchmark lending rates. Bank rates have started to increase now, in response to RBI rate increases. While bond interest rates are currently competitive with private sector bank fresh loan rates, they are still uncompetitive with public sector bank fresh loan rates. This is true even though bond rates have temporarily reached a plateau, since the bond market move out ahead of rate increases by the US FED.

Going back a little further, the bond market's competitiveness began to wane in 2018 due to a series of small interest rate increases by the US FED. This disadvantage worsened in 2019 with the default and bankruptcy of IL&FS. Bonds started to become competitive again during the two major COVID-19 waves in India, but with suppressed economic and bond market activity during those months, the advantage did not make a material difference. Recent bank rate increases are tightening the gap between the public sector bank loans and the AA-rated corporate bonds, but a gap remains: in July of 2017, for instance, AA-rated bonds had a lower average interest rate of 54 bps against public sector fresh bank loans. By July 2022, even after some bank tightening, AA-rated bonds had an average interest rate of 129 bps higher than against public sector fresh bank loans. In order for the bond market to become competitive again, the spread between the interest rates for the AA-rated corporate bonds and the public sector bank fresh loans needs to tighten considerably.

¹⁷ Lending and Deposit Rates of Scheduled Commercial Banks for the month of July 2022, Reserve Bank of India, www.rbi.org.in; S&P BSE India Corporate Bond Index, www.asiaindex.co.in; S. Foster. 2022. *Fed's Interest Rate History: A Look at the Fed Funds Rate from the 1980s to the Present*. www.bankrate.com; India TV News. 2022. *RBI Hikes Benchmark Lending Rate by 50 Basis Points to Curb Inflation*. www.indiatvnews.com; William Streeter.



In addition, the yield curve for corporate bonds is flattening, and bond maturities are getting shorter.¹⁸ Bond market data for 5 August 2022 show that most of the corporate bonds sold and traded on that date have maturities between 1 and 5 years. The yield curve is also flat, with no appreciable difference in interest rate by maturity for bonds that mature between 1 and 5 years, or even out to 13 years, which are the longest maturities for trading on that date. With the degree of uncertainty right now (rates are still rising, oil prices are still high, the Russian invasion of Ukraine, etc.), the market is only able to offer short-to-medium-term bonds. It is not able to offer longer-term debt of 10 years, which municipal issuers prefer. While most of the Indian municipal bonds issued since 2017 had a 10-year maturity, the most recent bond issue by the Municipal Corporation of Vadodara only has a 5-year maturity.

Tax-Free Bond Activity:

In India, Provident Fund investments are exempt from income taxes, but for most types of investors, investment earnings are taxable, such as for bank deposits, company fixed deposits, Post Office Monthly Income Scheme, Senior Citizen Savings Scheme, certain government, and corporate bonds, etc.¹⁹ Tax-free bonds are occasionally issued by government SOEs, and the interest income from these bonds is fully exempted from income tax.²⁰ The biggest issuers of tax-free bonds are the National Highway Authority of India, India Infrastructure Finance Company Ltd., the Rural Electrification Corporation

¹⁸ Fixed Income & Debt Market, Bonds traded in capital market on 5 August 2022. www.nseindia.com.

¹⁹ Relakhs. 2019. *Best Tax-Free Bonds to Invest in 2020, Factors to Consider when Investing in Bonds*. www.relakhs.com.

²⁰ Tax-Free Bonds, Bonds India, www.bondsindia.com.

Limited, HUDCO, the Indian Railway Finance Corporation, the National Bank for Agriculture and Rural Development, the Power Finance Corporation, the National Thermal Power Corporation Ltd., and Indian Renewable Energy Development Agency Ltd. These SOEs are frequent issuers in the Indian domestic bond market of both taxable and tax-exempt bonds, have high ratings, and form liquid, core investments for many domestic institutional investors. SEBI allows qualified institutional investors to invest in tax-free bonds, but limited liability groups, partnerships, certain trusts, nonresident Indians, and high net-worth individuals can also opt to invest in tax-free bonds.²¹ Typically, the tax-free bond investment is required to be “locked in” for at least 10 years, which greatly restricts secondary trading in those bonds.

In 2001, the Ministry of Urban Development (MoUD, now MoHUA) issued guidelines for the issuance of tax-free bonds by ULBs to incentivize investor demand, but it capped the interest rate at a maximum of 8%, which, according to a Brookings Institution report, was perceived at the time as an “inadequate return given the associated risk of investing in local government projects.”²² Nevertheless, from 2002–2007, several municipal governments issued tax-free municipal bonds for basic infrastructure projects.²³ These included the municipal corporations in Ahmedabad, Nashik, Hyderabad, Visakhapatnam, and Chennai, as well as the metropolitan water supply and sewerage boards in Hyderabad, Chennai, and Nagpur. If municipalities go back to issuing tax-exempt bonds, the market should discover the interest costs, rather than having the government prescribe the interest costs.

SEBI Municipal Bond Guidelines:

SEBI’s municipal bond guidelines were issued in 2015 and were amended in 2017, 2018, and 2019 with additional disclosure requirements.²⁴ SEBI aims for consistency between disclosure requirements for the newer municipal bond issuers and the established class of corporate bond issuers. As such, SEBI’s disclosure requirements are not always geared toward municipal finance or to the way that municipalities record their finances. Differences in the role of a Municipal Commissioner versus a corporate CEO, or a municipal balance sheet versus a corporate balance, are not well appreciated by SEBI. Preparing required disclosure for a municipal bond issuance is an arduous task for most municipalities that can take from months to years to complete, depending upon the circumstances. This makes alternatives to municipal bonds attractive, even if the interest cost is higher. Nevertheless, consistency and comprehensiveness of disclosure should provide long-term benefits to the development of a municipal bond market in India. Below are some of the major categories of regulation included in the municipal bond guidelines, which are the most prescriptive set of guidelines for municipal issuers anywhere in the world.

Eligibility:

- (i) Municipality should be authorized to issue debt securities (this authority is provided by the municipal act, is made official through the passage of a municipal bond resolution, and is approved for issuance by the parent state of the municipality).
- (ii) Financial accounts of municipality shall be prepared according to the National Municipal Accounts Manual for at least the three immediately preceding financial years (most of the municipalities that issued bonds so far had to obtain audited finances as part of the preparation period before the bond issue, and did not have audited finances ready before wanting to issue a bond).

²¹ Tax-Free Bonds, India Filings, www.indiafilings.com.

²² S. Ravi, A. Tomer, A. Bhatia, and J. Kane. 2016. *Building SMART Cities in India, Allahabad, Ajmer, and Visakhapatnam*. Brookings India & Brookings Institution. www.brookings.edu. p. 26.

²³ G. Kapoor, P. Pati. 2017. *Municipal Bond Market in India*. <https://pahleindia.org>.

²⁴ Securities and Exchange Board of India (SEBI). 2015. *(Issue and Listing of Debt Securities by Municipalities) Regulations*. www.sebi.gov.in.

- (iii) Municipality shall not have negative net worth in any of the three immediately preceding financial years (this is a corporate finance concept that does not apply to municipal finance, but SEBI has left it in place).
- (iv) Municipality shall not have a default on any debt securities or loans during the last 365 days.

General Conditions:

- (i) An issuer shall issue revenue bonds (this is interpreted to mean that the bonds shall have an earmarked revenue pledge, which could be taxes, and need not be user fees).
- (ii) The issuer shall create a separate escrow account for servicing the revenue bonds.
- (iii) The issuer has obtained in-principle approval for listing of its revenue bonds on one of the recognized stock exchanges.
- (iv) The issuer has at least one credit rating from an agency registered with SEBI and the rating is a minimum of investment grade (at least BBB on the national scale); SEBI's regulation calls for a threshold rating of investment grade, whereas the market convention is for a minimum rating of AA on the national scale.
- (v) The issuer has entered into an agreement with a depository for dematerialization of the bonds.
- (vi) The revenue bonds shall have a maturity of at least 3 years, and no more than 30 years.
- (vii) The issuer shall appoint one or more merchant bankers, and a trustee for the bond issue.

Use of Proceeds:

- (i) The proceeds of the bond issue shall be clearly earmarked for a defined project or a set of projects which have obtained the requisite project approvals from concerned authorities; the projects also require a detailed project report from an independent engineering firm (this is a very important provision from an investor perspective).
- (ii) The issuer must maintain a project bank account for parking the bond proceeds for payment of project costs; this is a good attempt at shielding bond proceeds only for construction of the approved project. A better structure would require the proceeds to be held in a construction account managed by the escrow trustee; this would eliminate any risk of co-mingling of funds.
- (iii) The issuer shall establish a project implementation cell to monitor progress of the project, and the proper use of funds for which debt was issued.
- (iv) The issuer is required to contribute no less than 20% of the project costs from its own funds; this is an important test, since if the municipality does not have the surplus cash flow to meet this test, it does not have surplus cash flow for debt service.

Trust Deed:

- (i) The security for the bonds shall be spelled out in the Trust Deed.
- (ii) The Trust Deed must stipulate that the pledged assets are free from any encumbrances, and if an existing lien on pledged revenues exists, SEBI requires that "permissions or consent to create second or pari-passu charge has been obtained from the earlier creditor." (For some of the outstanding municipal bonds, this provision has been wrongly interpreted to equate a no-objection clause with an intercreditor agreement. An intercreditor agreement would specify the preference and priority of any existing lender with the bond holders and would provide a roadmap for how they would treat each other in the event of a payment deficiency or default). This is rarely done in India.

Continuing Disclosure:

- (i) Issuer shall file annual audited financial results with the stock exchange and debenture trustee (municipal issuers have followed this regulation).
- (ii) The issuer shall have a chartered accountant file half-yearly certification concerning the use of proceeds; this shall also report on the status of project implementation and if there are any project delays (municipal issuers have not generally followed this regulation).
- (iii) Semiannual certifications by the project engineer shall be furnished to the bond trustee, the rating agencies and stock exchanges (municipal issuers infrequently follow this regulation).
- (iv) Issuers must report material adverse changes that could affect the servicing of the bonds (materiality has not been sufficiently defined, and municipal bond issuers do not follow this regulation).

Amendments to the Municipal Bond Guidelines (2019):²⁵

- (i) The term issuer has been broadened to mean municipality, statutory body, corporation, authority, trust or agency, or any SPV notified by the parent State Government or by the Central Government (the MoHUA wanted for SPVs to be added so that they could issue municipal debt, such as under the Smart Cities Program; trust was also added so that Pooled Finance Vehicles could issue municipal bonds).
- (ii) The term financial disclosure has been amended to also include audits on a half-yearly basis (this will be very onerous for most municipalities in India, where producing a timely annual audit is difficult enough).
- (iii) The lead manager is required to be satisfied concerning the “veracity and adequacy of disclosures in the offer document” (this is similar to SEC requirements for lead underwriters of municipal bonds in the US, where the underwriters are regulated but the municipal issuers are not).

c. Municipal Bond Structure in India

Municipal bonds in India are secured using provisions borrowed from structured finance. Mexico is the other emerging market country that has structured finance provisions securing municipal bonds. The structured finance provisions provide a ratings uplift from the issuer-level rating (underlying rating on an unsecured basis) of the municipality. In India, this ratings uplift is usually one notch, so that if the issuer-level rating is AA, then the issue level rating would be AA+. The key security features of municipal bonds in India are described below. In India, some of these provisions were borrowed from the architecture for state authority debt (such as for state economic development and irrigation authority bonds), and from project finance debt. Others were developed at the time that Pune issued its municipal bonds in 2017.

Security: The security for municipal bonds to date has been property taxes or some combination of municipal taxes. If the security for the bonds is described in the resolution, this is known as a statutory security, the strongest form of security for a subnational bond. If the payment security is only described in the Trust Deed and the Escrow Agreement, but not in the resolution, then the bonds have a contractual security, which is the second strongest form of security. Where the security is identified in the resolution, its provisions are further defined in the Trust Deed and Escrow Agreement. The Trust Deed describes the security, any additional bond covenants in the financing structure, the reporting requirements of the

²⁵ Securities and Exchange Board of India (SEBI). 2019. *(Issue and Listing of Debt Securities by Municipalities) Amendment*. www.sebi.gov.in.

issuer and the bond trustee, and investor recourse to the extent that there is a payment default. The Escrow Agreement describes the payment accounts, the remittance process for pledged revenues, and the flow of funds to the payment accounts.

Advanced Segregation: An important structured finance technique used by Indian municipal bonds is advanced segregation. The structured payment mechanism describes the process and timing by which pledged taxes are to be collected by the municipality and then remitted to the escrow account in advance of a scheduled debt service payment. The first municipal bond issued by Pune had monthly sweeps of property taxes. These were also remitted monthly, as they were collected, to the escrow account. Debt service payments are made semiannually, but since the property taxes were being collected monthly, the funds needed for debt service were deposited into the escrow account in advance of a debt service payment date, a process known as advanced segregation. The escrow account, as noted above, acquires the tax payments as soon as they are collected, and is a no-prior lien account (as prescribed by SEBI). Therefore, the pledge of tax revenues is known as a gross pledge since debt service gets paid by collected and remitted tax revenues before they are free to pay for services or salaries.

Overcollateralization: The payment security mechanism employs an additional structured finance technique. The pledged and remitted tax revenues that flow into the escrow account are a factor larger than the upcoming debt service payment. Municipal bonds in India utilize a rolling coverage test that transfers 1.25X the amount of pledged taxes needed for the upcoming debt service payment on a gross lien basis. This excess amount of security is known as overcollateralization. Once the debt service payment is made on the due date, the excess revenues are remitted back to the municipality for any public purpose.

Flow of Funds: Pledged taxes are deposited into a no-lien escrow account, as described above. At the beginning of every month, the funds lying deposited in the escrow account shall be used in the following priority:

- (i) Firstly, to the Debt Service Reserve Account (DSRA); any shortfall is remedied first, so that the account maintains the required reserve amount, usually equal to two interest payments, which is also 1 year of interest payments. The DSRA is typically funded up front by bond proceeds and is available for interest payment deficiencies but not for principal payment deficiencies.
- (ii) Secondly, to the Interest Payment Account on monthly basis, until the amount is equal to the upcoming interest payment amount plus the rolling coverage mentioned above.
- (iii) Thirdly, to the Sinking Fund Account on monthly basis, until the amount is equal to the scheduled sinking fund contribution for that year, plus the rolling coverage mentioned above. Bonds in India are sold with bullet maturities, so the sinking fund contributions are made in equal installments over the life of the bond, until the sinking fund has the requisite amount to retire the outstanding principal on the principal maturity date.
- (iv) Any surplus funds in the account after the scheduled amount for the current interest payment and the current sinking fund contribution is transferred out of the escrow account to the revenue account of the municipality.

The Trustee is required to check the sufficiency of the amount lying in the interest payment account several times in advance of actual payment date. At 25 days prior to the interest payment date, if any shortfall is detected, the Trustee notifies the municipality, which is required to transfer an amount equal to the shortfall for deposit in the interest payment account. If a shortfall is still detected at 10 days prior to an interest payment date, the Trustee is required to transfer the shortfall amount from the DSRA to the interest payment account. With these additional layers of protection, the interest is always paid on a full-and-timely basis. Any amount drawn from the DSRA is deposited back into the reserve as explained in the flow of funds above. Similar provisions exist for the full-and-timely payment of contributions to

the sinking fund. At 15 days prior to the end of each year, the Trustee checks for any deficiencies in the Sinking Fund Account and notifies the municipality, which has until the end of the year to make up any shortfall.

Additional Bonds: The municipal bonds in India do not have a formal additional bonds test, as is common for revenue bonds in the US and other countries. Instead, the rolling coverage test serves a double duty, by also looking forward at the sufficiency of pledged revenues to cover existing plus planned debt service for any additional bonds. Some municipalities have authorized more than one bond issue, which are to be supported equally by pledged revenues on a *pari passu* basis.

d. Incidence of Municipal Defaults

There is no public record of a direct municipal default; however, it is important to note that there have been only 37 municipal bond issues, and all of these were structured obligations that achieved an AA category rating. HUDCO reports that its nonperforming loan exposure was to power and real estate projects, and not to ULBs. While there is no evidence for a municipal bond default, there is evidence of municipal defaults on other financial obligations. For instance, in 2010, Fitch Ratings downgraded the senior project loan rating of the Madurai Municipal Waste Processing Company to D from BB.²⁶ The project company failed to receive a scheduled payment from the Madurai Municipal Corporation, leaving it unable to make the debt service payment on its loan. In 2012, the ratings agency withdrew its rating on the company's debt, due to what it described as a lack of adequate information.²⁷

Securities & Exchange Board of India (SEBI):

SEBI was created and is governed by the Securities and Exchange Board of India Act, 1992, which provided for the establishment of a Board to protect the interests of investors in securities, and to promote and regulate a securities market in India.²⁸ Its regulatory role entails a number of important functions, including to regulate the securities exchanges, produce and update regulations and guidelines for securities trading (including disclosure rules), and register and regulate financial intermediaries. SEBI published the Municipal Bond Guidelines in 2015 and regularly updates them.

Bombay Stock Exchange (BSE):

BSE was established in 1875.²⁹ It provides an efficient and transparent market for trading in equity, currencies, bonds, derivatives, and mutual funds. BSE is the preferred choice among issuers for listing privately placed debt. In FY2021–22, for instance, corporates raised ₹3.88 trillion (approximately \$51.31 billion) through private placement debt listed on the BSE. In that year, 1,421 instruments totaling ₹4.89 trillion (approximately \$66.23 billion) were listed on the BSE.³⁰ All of the outstanding municipal bonds issued under the SEBI municipal bond guidelines are listed on the BSE.

National Stock Exchange (NSE):

NSE was incorporated in 1992, was recognized as a stock exchange by SEBI in April 1993, and began operations in 1994 by launching a wholesale debt market, which was followed by the launching of a

²⁶ Fitch Ratings. 2010. *Fitch Downgrades Madurai Municipal Waste Processing Co's Bank Loans to 'D'*. www.indiaratings.co.in.

²⁷ Fitch Ratings. 2012. *Fitch Withdraws Madurai Municipal Solid Waste Processing's Rating*. www.indiaratings.co.in.

²⁸ SEBI. 1992. *Securities and Exchange Board of India Act*. www.sebi.gov.in.

²⁹ Company Overview, BSE, www.bseindia.com.

³⁰ BSE. 2022. *BSE Update*. www.bseindia.com.

cash market segment.³¹ Equity and equity-linked products in the cash market include stocks, Indian Deposit Receipts, Exchange Traded Funds (including those benchmarked the NIFTY³² indices), units of closed-ended mutual fund schemes, as well as a segment devoted to the growth of the small and medium-sized enterprises listed on EMERGE.³³ NSE offers derivative contracts on equity, indices, currency, interest rates, and commodities. Debt products include negotiated trade reporting in Government of India bonds, corporate bonds, and other debt securities.

B. Appendix 2: Philippines

1. Part 1: Details Internal Ecosystem for Municipal Bonds

a. Constitution of 1987³⁴

- (i) Sec. 1 establishes the country's territorial and political subdivisions as the provinces, cities, municipalities, and barangays (can be used to refer to a village, district, ward, or metropolitan suburb).
- (ii) Sec. 3 mandates that the Congress shall enact a LGC which creates a system of decentralization with powers, responsibilities, and resources of different local government units.
- (iii) Sec. 4 establishes that the President of the Philippines will exercise general supervision over local governments.
- (iv) Sec. 5 allows that each local government unit shall have the power to create its own sources of revenues, and that such taxes, fees, and charges "shall accrue exclusively to the local governments."
- (v) Sec. 6 allows local governments to have a "just share" of the national taxes.

b. The Local Government Code of the Philippines of 1991

- (i) The Local Government Code (LGC) of 1991 provides for the guiding principles of decentralization in the Philippines.³⁵ It allocates the respective powers, functions, responsibilities, and resources among the various types of local governmental units (LGUs) and establishes an accountable organizational structure for meeting community service requirements.
- (ii) Sec. 287 of the LGC requires that every LGU appropriate no less than 20% of its IRA for development projects.³⁶ They are also required to submit copies of their development plans to the DILG.
- (iii) Sec. 295 governs the power of LGUs to issue debt and to enter into financial transactions.
- (iv) Sec. 296 permits debt issuance or a credit facility to finance local infrastructure and other socio-economic development projects that are included in their approved local development plan and public investment program. An LGU can enter into a credit facility from another government or from a private bank to stabilize its local finances.

³¹ History & Milestones, NSE, www.nseindia.com.

³² NIFTY combines the phrase "National Stock Exchange" and the word "fifty." The NIFTY benchmark includes the 50 top-performing equity stocks.

³³ Our Products, NSE, www.nseindia.com.

³⁴ The 1987 Constitution of the Republic of the Philippines, Article X, Local Government, Local Governments in the Philippines, SEAsite Project at Northern Illinois University, DeKalb, Illinois, USA, and the Center for Southeast Asian Studies, www.seasite.niu.edu.

³⁵ The Local Government Code of the Philippines, General Provisions, 1991, www.dilg.gov.ph.

³⁶ The Local Government Code of the Philippines, General Provisions, 1991, Sec. 287, p. 122; Sec. 295-302, pg. 124-126.

- (v) Sec. 297 allows an LGU to issue debt or contract loans (or other forms of indebtedness with any government or domestic private bank) to finance the “construction, installation, improvement, expansion, operation, or maintenance of public facilities, infrastructure facilities, housing projects, the acquisition of real property, and the implementation of other capital investment projects.” Short-, medium-, or long-term loans can be secured with real estate or other acceptable assets for the “establishment, development, or expansion of agricultural, industrial, commercial, house financing projects, livelihood projects, and other economic enterprises.” Government financial and other lending institutions can grant loans, credits, and other forms of indebtedness to LGUs for these purposes.
- (vi) Sec. 298 allows an LGU to “acquire property, plant, machinery, equipment, and such necessary accessories under a supplier’s credit, deferred payment plan, or other financial scheme.”
- (vii) Sec. 299 allows provinces, cities and municipalities to issue “bonds, debentures, securities, collaterals, notes and other obligations to finance self-liquidating, income-producing development or livelihood projects” according to their approved local development plan or the public investment program. Bond issuance, however, is subject to the rules and regulations of the Central Bank and the Securities and Exchange Commission. The LGU Council (sanggunian) must also pass an ordinance by majority vote, stating the terms and conditions of the bonds and the purpose for which they were issued.
- (viii) Sec. 300 states that LGUs, with Council approval, may extend loans, grants, or subsidies to other LGUs, in amounts not exceeding their surplus funds. LGUs, with Council approval, may also enter into joint and several contract loans, credits, and other forms of indebtedness for purposes that mutually benefit each LGU.
- (ix) Sec. 301 states that the President, or authorized representative, may relend the proceeds of a loan contracted with a foreign financial institution to an LGU for the purpose of financing the “construction, installation, improvement, expansion, operation, or maintenance of public utilities and facilities, infrastructure facilities, or housing projects, the acquisition of real property, and the implementation of other capital investment projects.” The President may also relend to LGUs the proceeds of grants secured from foreign sources. Repayment or amortization of loans including accrued interest may be financed partly from the income of the projects or services and from the regular income of the LGU, as appropriated in its annual budget until the loan is fully paid.
- (x) Sec. 302 allows LGUs to enter contracts with the private sector (public-private partnerships) for the “financing, construction, operation, and maintenance of any financially viable infrastructure facilities,” using a “build-operate-and-transfer agreement,” subject to applicable provisions of Republic Act No. 6957, which authorizes the financing, construction, operation, and maintenance of infrastructure projects by the private sector.

c. Administrative Order No. 270 – Prescribing the implementing Rules and Regulations of the LGC³⁷

- (i) Article 397 stipulates that where a bond of a province, city, or municipality shall bear the guarantee of the National Government, the approval of the Secretary of Finance is required.
- (ii) Article 399 states that the repayment of loans secured by the national government from a foreign source can be made partly from the income of the projects or services and from the regular income of the LGU, as long as it is appropriated regularly in its annual budget until the loan has been fully paid.

³⁷ Administrative Order No. 270 – Prescribing the implementing Rules and Regulations of the Local Government Code, Department of the Interior and Local Government (DILG), <https://car.dilg.gov.ph>.

- (iii) Article 400 requires that an LGU include, in its local development plan and public investment program, priority projects that “may be financed, constructed, operated, and maintained by the private sector.”
- (iv) Article 401 requires that LGUs appropriate in their annual budgets such amounts as are sufficient to pay the loans, or to retire bonds, debentures, securities, notes, and other obligations. Failure to make such appropriations “renders their annual budgets inoperative.” Any LGU, through its local chief executive, and with authorization by its local council (sanggunian), may authorize the National Government to deduct or withhold a portion of its IRA (which following a Supreme Court ruling in 2019 is based on the collections of all national taxes)³⁸ for the payment of its contractual obligation. This is subject to the limitations in Article 419(b), which require for the full provisioning of all statutory and contractual obligations of the LGU; and of course, a debt obligation fits these definitions.

d. Municipal Development Fund Office (MDFO) & Municipal Development Fund:

The Municipal Development Fund (MDF) was created 1984 as a revolving fund to offer LGUs loans and grants for social and economic development projects.³⁹ Since 1998, the fund has been managed by the MDFO in the Department of Finance and is capitalized by international donors and financial institutions. For many LGUs, the Municipal Development Fund constitutes the main source for financing infrastructure projects. The MDFO evaluates project proposals and can also provide technical assistance to support LGUs in selecting and formulating infrastructure projects that are financially sustainable. Through a system of credit monitoring, the MDFO evaluates the creditworthiness of LGUs. As of 20 December 2020, LGUs owed ₱9.6 billion to MDFO (roughly 8.5% of LGU debt outstanding).

Local Government Unit Guarantee Corporation: The LGUGC was incorporated as a private company in March 1998, with 51% ownership by the Bankers Association of the Philippines (BAP), and 49% ownership by the Development Bank of the Philippines.⁴⁰ It began by providing guarantees to LGU loans and bonds. In 2004, it broadened its guarantees, extending them to electric cooperatives with the World Bank and Republic of the Philippines (RoP). In 2006, it began to extend guarantees to Renewable Energy Projects, with the United Nations Development Programme (UNDP) and the RoP. Finally, in 2008, it began to extend coverage to water districts, with the USAID-Philippine Water Revolving Fund Support Program. By December of 2015, LGUGC reported having the peso equivalent of \$185 million in guarantees, which included 17 projects financed by LGU bonds, and 13 projects financed by LGU loans; municipal bonds with guarantees extended to investors, and municipal loans with guarantees extended to lenders represented 47% of its total guarantees.

LGUGC developed its own internal credit screening and ratings system, which incorporated the ability and willingness to pay, operating performance, financial condition, management, debt repayment record, socioeconomic and development capacity, and political risk of the LGU. Only LGUs with a minimum investment grade rating are eligible for guarantees.⁴¹ These factors are like the variables evaluated by the international ratings agencies for their municipal bond ratings. LGUGC was dissolved in December 2019.⁴² There is no public documentation of this on the Government’s websites. Instead, the process for dissolution was described in the recently published report, *The Sustainability of Asia’s Debt*, which described that government finance institution “loans directly compete with the loans and bond market

³⁸ DILG. 2019. DILG Welcomes SC Final Ruling that LGU’s IRA Should Be Based on All National Taxes. www.dilg.gov.ph/.

³⁹ Smoke, *Improving Subnational Government Development*, p. 20.

⁴⁰ LGU Guarantee Corporation, LGUGC, PowerPoint presentation, www.lgugc.com.

⁴¹ Smoke, *Improving Subnational Government Development*, p. 21.

⁴² ADB. 2020. *Green Infrastructure Investment Opportunities, Philippines, 2020 Report*. www.climatebonds.net.

of private financial institutions. With no LGU bond issues to guarantee, the LGUGC...closed at the end of 2019.”⁴³

e. Philippine Guarantee Corporation (PhilGuarantee):

PhilGuarantee was created in 2019 by Executive Order No. 58, which consolidated a number of existing Philippine guarantee programs and agencies (PGPAs), including the Home Guaranty Corporation, the Philippine Export-Import Credit Agency, and the Small Business Corporation, as well as the administration of the Agricultural Guarantee Fund Pool and Industrial Guarantee and Loan Fund.⁴⁴ It also absorbed the Electric Cooperative Partial Credit Guarantee Program portfolio from the LGUGC, but not the municipal debt guarantee function. Its mandate is to provide credit guarantees “in support of trade and investments, exports, infrastructure, energy, tourism, agricultural business/modernization, housing, micro, small, and medium sized enterprises, and other priority sectors of the economy.”⁴⁵ While credit guarantees for LGUs are not specified, the broad wording of its business mandate also does not exclude them.

f. Bureau of Local Government Finance (BLGF):

The BLGF was created under the Department of Finance to improve local government finance.⁴⁶ It conducts policies on local taxation, revenue administration and public financial management, coordination with local treasury offices, monitors plans for resource management, tax collection enforcement and credit financing, and provides technical assistance to local officials.

One of the Bureau’s key activities is to certify the borrowing capacity of LGUs. This process has various steps, as described below:

- (i) The first step is to certify the NDSC of an LGU.⁴⁷ The debt service ceiling (DSC) is the maximum amount that an LGU can appropriate in its annual budget for the “payment of statutory and contractual obligations.” It may not exceed 20% of an LGU’s 3-year average annual regular income. NDSC is derived by subtracting the current amortization amount from the DSC.
- (ii) The second step is to derive an LGU’s borrowing capacity, which is calculated by multiplying the NDSC times the annuity factor (which incorporates an amortization period and interest rate). The borrowing capacity is further adjusted by an internal rating process described below. LGUs are required to provide a full recording of debt outstanding, and any adverse financial conditions being monitored by the Commission on Audit (COA) as part of this certification process.
- (iii) The certification is valid for 1 year but must be renewed if there are any changes to the terms, conditions, or performance on an existing loan.

⁴³ L. Liu, *Subnational Debt: Developing A Sustainable Market*, p. 173.

⁴⁴ Memorandum Circular No. 001-2019, Merger and Consolidation of Philippine Guarantee Programs and Agencies (PGPAs), Department of Finance, Republic of the Philippines, <https://customs.gov.ph>.

⁴⁵ Philippine Guarantee Corporation, Mandate, <https://philguarantee.gov.ph>.

⁴⁶ Bureau of Local Government Finance (BLGF), Mission Statement, <https://blgf.gov.ph>.

⁴⁷ Department Order No. 054.2016, dated 25 October 2016: Streamlining the Certification of Net Debt Service Ceiling and Borrowing Capacity of Local Government Units (LGUs); and Updated Implementing Guidelines of Department Order No. 054.2016, on the Issuance of Certificate of Net Debt Service Ceiling and Borrowing Capacity (NDSC/BC) of Local Government Units (LGUs), Bureau of Local Government Finance, Department of Finance, Republic of the Philippines, 22 January 2018, <https://blgf.gov.ph>.

Table A2: Local Government Certifications for Borrowing 2022
(₱ by region)

Region	Number of LGUs	Loan Requirement	Borrowing Capacity
4A	1	2,000,000	4,188,321
NCR	1	767,364	2,754,602
11	3	323,177	1,721,335
12	1	300,000	1,456,237
10	1	100,000	1,339,584
1	1	200,000	1,197,793
8	1	250,000	1,157,386
4B	1	120,000	1,120,888
6	1	250,000	679,286
CARAGA	1	500,000	644,598
2	1	550,000	442,118
5	1		
3	1		
Grand Total	15	5,360,541	16,702,148

LGU – Local Government Unit; Region designations assigned by the Government of the Philippines

Source: Department of Finance, Bureau of Local Government Finance

Table A2 above shows the certifications which BLGF has completed this year (from January through March of 2022), and posits some important findings:

- (i) The BLGF office is very active, having provided certificates for 73 LGUs so far in the first quarter of 2022 (this includes two provinces, 52 municipalities, 15 cities, and four barangay).
- (ii) Certifications are regionally dispersed, showing borrowing capacity and loan requirements across the country.
- (iii) The BLGF calculations so far this year indicate borrowing capacity in excess of \$500 million, and loan requirements in excess of \$200 million, which suggests a potential pick-up in activity. If realized, this level of borrowing would equal or top that of 2021, which was another heavy year for LGU borrowing for government and private financial institutions.

LGU Creditworthiness Rating Index: The BLGF established a creditworthiness index for all provinces, cities, and municipalities to improve planning and resource mobilization strategies, and measure the fiscal health and credit viability of LGUs.⁴⁸ Debt monitoring and information sourcing and sharing will use electronic data exchanged with both LGUs and their lending institutions (see sections below on Senate Bills 481 and 511). The key areas assessed by the BLGF will be revenue generation, investment and debt capacity, rigidity of expenditures, financial management capacity, and borrowing history. LGUs with AAA to A ratings will be certified with 100% of their borrowing capacity; LGUs rated BBB will be certified with 90%; and LGUs rated BB will be certified with 80%; the lowest LGU rating category in the guidelines is C, whereby the LGU will be certified with 60%.

⁴⁸ ADBI, *The Subnational Debt in the Philippines*, p. 28.

Senate Bill No. 481: This bill will create an accessible database on LGUs' fiscal transactions to include revenues, expenditures, and bond indebtedness.⁴⁹ The Municipal/City Treasurer will be responsible for designing, developing, and maintaining the website, under the supervision of the DILG and Department of Information and Communications Technology (DICT). DICT will give digital governance awards LGUs, recognizing best practices in digital initiatives.

Senate Bill No. 511: This bill will create a local government information system for the collection, processing, storage, presentation, and sharing of local government information. The Local Management Information Office will be created for this purpose.

g. Commission on Audit (COA):

The Philippine Constitution (1987) and the Government Auditing Code of the Philippines (P.D. No. 1445) require that the COA submit to the President and to the Congress an annual report on the financial condition of the "Government, its subdivisions, agencies and instrumentalities."⁵⁰ COA Resolution No. 2013-021 extended this mandate to the finances of LGUs. The most recent audit published near the end of 2020, included the finances of 1,653 LGUs: 79 provinces, 144 cities, and 1,430 municipalities for FY2018–2019. COA Resolution No. 2020-001, an accounting standards resolution, adopted the International Public Sector Accounting Standards, for LGUs.⁵¹ The Government Accounting Manual for LGUs was published in 2014.

2. Part 2: Details External Ecosystem for Municipal Bonds

a. Securities and Exchange Commission (SEC):

The SEC was created in 1936 under the Commonwealth Act No. 83 (Securities Act). It was either replaced or reorganized several times, including during the Japanese occupation of World War II, and during the regime of President Ferdinand Marcos in 1975. Its most recent reorganization was in 2000, when the Securities Regulation Code was adopted. Its many functions include jurisdiction over the granting of franchises, licenses, and permits by the Government, the formulation of policies concerning the securities market, advising the Government on securities market legislation, supervision, and monitoring of exchanges, and clearing agencies, as well as issuing opinions and providing guidance on compliance issues. Among the documents required to be filed for listing a bond issue are the Prospectus, Statement of Management Responsibility on the Financial Statements, Consolidated Audited Financial Statements, organizational chart, website template, and underwriting agreement; various regulations mandate the information requirements of each of these documents.

b. PDS Group:

The Philippine Dealing System Holdings Company (PDS Group) manages or operates electronic trading and settlement platforms for debt securities in the Philippines, including post-settlement functions for the debt markets through its electronic Depository, Registry and Custody services. Its various subsidiaries include its trading services arm, the Philippine Dealing & Exchange Corp. (PDEX); its securities services arm, the Philippine Depository & Trust Corp.; its payment and transfer services arm, the Philippine

⁴⁹ Discussion Paper on Senate Bill Nos. 481 and 511 Promoting Transparency in Government by Establishing a Local Government Finance Website and Establishing the Local Management Information System, The League of Cities of the Philippines, <https://lcp.org.ph>.

⁵⁰ The Local Government Code of the Philippines, p. 146, <https://ppp.gov.ph>.

⁵¹ Government Accounting Manual for Local Government Units, The Accounting Policies, 2019, www.coursehero.com.

Securities Settlement Corp.; and its market education and development arm, PDS Academy for Market Development Corp.

This architecture for the listing of bonds, however, is relatively new. In 2001, the first government bonds were listed and traded on the Philippines Stock Exchange. In 2008, the Securities and Exchange Commission of the Philippines (SEC Philippines) gave PDEX authority to operate an over-the-counter market for bonds, as a self-regulatory organization. PDEX prescribes that an issuer or trading participant send the application for listing or enrollment, as well as documents and disclosure items stipulated in the applicable checklist. The PDEX checklist, however, is password protected, and could not be examined for purposes of this study. There are currently no disclosure or listing guidelines posted for LGU bonds, and the directory of listed bonds, which includes government, corporate and bank bonds, does not include a category for them.

c. **League of Cities of the Philippines:**

In 1987, President Corazon Aquino issued Executive Order No. 262, which mandated the creation of the Leagues of Provinces, Cities and Municipalities of the Philippines (LCMP). The League of Cities of the Philippines (LCP) was organized as an offshoot of the LCMP the following year to “foster collaboration, unity, and cooperation among the country’s cities.” The passage of the Local Government Code in 1991 institutionalized the LCP (Sec. 499); in 1993, it was registered with the SEC Philippines. LCP is comprised of its municipal members and has a National Executive Board (the Board) for policymaking. In partnership with the World Bank and the Cities Alliance, the LCP implemented the City Development Strategies Project to provide cities with tools to prepare comprehensive long-term development strategies, beginning in 1999. LCP later launched the Best Practices Award to recognize cities with outstanding governance practices. The Board envisages the creation of a municipal database that would consolidate and make available online local government data, including “demographics, economic activities, local revenue, education, environment and natural resources, peace and security, and local best practices.”

Ratings: Peso-denominated corporate bonds in the Philippines are mostly rated AAA in the national scale. Rated property, industrial, and holding companies currently have an AAA rating, whereas half of rated financial companies have an AAA rating, while the other half are rated AA.⁵² The investment guidelines of major investor groups suggest a lower acceptable investment threshold rating for corporate bonds;⁵³ however, investor conventions favor securities at the highest rating category. PhilRatings is the lead ratings agency for domestic market corporate bond ratings. It does not have any rated LGU bonds.⁵⁴ Foreign currency denominated bonds (primarily in US dollars) for government and corporate issuers are rated by the three large international ratings agencies – Moody’s Investors Service, Standard & Poor’s, and Fitch Ratings.

⁵² CGIF. 2020. *Philippine Corporate Bond Market Research 2020*. www.cgif-abmi.org. p. 17.

⁵³ CGIF, *Philippine Corporate Bond Market Research*, p. 18.

⁵⁴ PhilRatings, www.philratings.com.

C. Appendix 3: Viet Nam

1. Part 1: Details Internal Ecosystem for Municipal Bonds

a. Constitution 2013:

Article 70.4: The National Assembly decides on the separation of incomes and expenditures between the central budget and local budgets. It also decides on the safety limit of public sector debts.

Article 74.7: The Standing Committee of the National Assembly has the power to exercise supervision and control over activities of the People's Councils, including to repeal improper resolutions of provinces and cities under its direct central rule, and to disband the People's Councils of provinces and cities whenever they cause serious harm to the interests of the People.

Article 98: The Prime Minister is elected by the National Assembly to direct and to be accountable for the activities of the national administration from the central to the local levels, ensuring unity and thoroughness of the national administration. This can include suspending or annulling decisions of the People's Committees of provinces and cities.

Article 110.1: The administrative units of the Socialist Republic of Viet Nam are divided into provinces and cities under direct central rule; a province is divided into districts, provincial cities, and towns; a city under direct central rule is divided into urban districts, rural districts, towns, and units of similar level.

Article 114.1: The People's Committee elected by the People's Council is the latter's executive body, which is accountable to the People's Council and superior state bodies.

Article 114.2: The People's Committee must implement laws at local level, and to exercise duties assigned by the superior state bodies.

b. Law on Organization of the Local Governments, 2015:

Article 11: Describes how local governments must “cooperate with centrally and locally-controlled state organs in enhancing economic connections between regions and implement the regional planning and ensure the consistency of the national economy.” A local government has a People's Council and a People's Committee. Duties of local governments at all levels are based on the delegation of powers between centrally governed state organs and local ones.

Article 12: The powers of local governments are delegated and stipulated by laws. The superior-level state organs are responsible for “examining and inspecting the constitutionality and legality” of powers delegated to local governments at different levels.

Article 14: When a superior-level government agency authorizes an inferior-level People's Committee or other organization, it must ensure that the necessary resources and conditions are provided to the inferior-level organization to carry out its delegated responsibilities. The superior level of government must also inspect and provide guidance to the inferior level of government on its “implementation result.”

Circular No. 100/2015/TT-BTC dated June 29, 2015, guidance on issuance of municipal bonds in domestic market: This circular governs the process and terms of provincial bond issues, which is as follows:⁵⁵

⁵⁵ Ministry of Finance, Socialist Republic of Viet Nam. 2015. *Guidance on Issuance of Municipal Bonds in the Domestic Market*. <https://vanbanphapluat.co> (Circular No. 100/2015/TT-BTC).

- (i) Municipal bonds must be approved by the Provincial-level People's Council.
- (ii) Subsequently, the Council will submit the application for issuance of municipal bonds to the Ministry of Finance, which has ultimate authority to approve or reject the bond issuance.
- (iii) Municipal bonds are issued with a term of 1 year or more.
- (iv) The interest rate is decided by the issuer but must be within the interest rate bracket imposed by the Ministry of Finance.
- (v) Bonds must be used to invest in social/economic development projects that are eligible for funding through the provincial-government budget, or that are capable of capital recovery.
- (vi) The Provincial People's Committee must include a plan for bond issuance in each budget year and submit that budget to the People's Council for approval. The plan must include the following elements:
 - a) 3 years of budget history showing funds raised and repayment of principal and interests of outstanding loans;
 - b) the opening balance, total capital raised during the year, payment of principal and interest for those years, and year-end balance of loans outstanding;
 - c) the debt limit as regulated by the budget law and the law on public debt management; and
 - d) the plan for amortizing the debt.
- (vii) The People's Committee will annually publish the following disclosure on its website, or the Provincial Department of Finance website, or on the Stock Exchange:
 - a) a budget estimate approved by the People's Council within 60 days of when it is approved; and
 - b) financial results of the preceding year, within 60 days of when they are approved.

Decree No. 01/2011/ND-CP of 5 January 2011, on issuance of government bonds, government-guaranteed bonds, and local government bonds: "Government-guaranteed bonds" means bonds issued by enterprises, financial and credit institutions, and banks for social policy of the state subject to the provisions of Article 32 of the Law on Public Debt Management, and which are guaranteed by the government.⁵⁶ "Local government bonds" means bonds issued by People's Committees of centrally affiliated provinces and cities.

- (i) "Issuance guarantee contract" is the agreement signed between the issuing and guarantee organizations.
- (ii) The bond issuing entity sends a dossier of requested information to the Ministry of Finance for the government guarantee appraisal.
- (iii) If approved, the Ministry of Finance notifies the issuing entity in writing to organize the bond issuance.
- (iv) The issuing entity pays a fee on the government guarantee.
- (v) The maximum payment guarantee is 100% of the principal and interest on the bonds.
- (vi) The issuing entity is responsible for payment of the principal and interest on the bonds.
- (vii) Should the issuing entity fail to perform or adequately perform this payment obligation, the Ministry of Finance will pay.
- (viii) The issuing entity is responsible for repaying the Ministry of Finance.

⁵⁶ Ministry of Finance, Socialist Republic of Viet Nam. 2011. *Government-Guaranteed Bonds and Local Government Bonds*. <https://vanbanphapluat.co> (Decree No. 01/2011/ND-CP).

Decree No. 79/2010/ND-CP of 14 July 2010, on public debt management operations: Article 18 of the decree establishes the following borrowing limits for local administrations:⁵⁷

- (i) Provincial-level People's Committees set borrowing limits for local budgets. These are reported to provincial-level People's Councils and submitted to the Prime Minister for approval.
- (ii) Loans/bonds issued by local administrations must be within the approved borrowing limits.
- (iii) The provincial-level People's Committee annual detailed plan for borrowing shall include available funding sources, use of proceeds (including borrowing for socioeconomic development projects and investment in projects capable of capital recovery), and a debt payment plan from the budget.
- (iv) Once the detailed plan is approved by the provincial-level People's Council, the provincial-level People's Committee will send it to the Ministry of Finance "for summarization."
- (v) For foreign loans, the provincial-level People's Committee shall coordinate with ministries and functional sectors to put together projects to be financed with foreign loans. These ministries and functional sectors will negotiate and sign agreements with the foreign loan providers, which allows them to be lent to local administrations.
- (vi) These loans and their debt service payments shall be audited by the State Audit Office of Vietnam under the audit law.
- (vii) The Ministry of Finance will collect data on loans and domestic and overseas bond issues of the Government, its enterprises, financial and credit institutions, and local administrations, which are guaranteed by the Government and report them to the National Assembly.

In addition to these general provisions, UNESCAP reports that the loan balance of Ha Noi and Ho Chi Minh City may not exceed 60% of their local government budget, but that for other provinces, the limit ranges from 20% to 30%.⁵⁸

Law on State Audit: Regional state audit offices are units attached to the State Audit Office of Vietnam, which audit entities in localities and perform tasks as assigned by the State Auditor General.⁵⁹ Audits are used for the People's Councils to "consider and decide on local budget estimates and allocation; ratify final accounts of local budgets; supervise the management and use of public finance and public assets and perform their tasks and exercise their powers." The audit includes a financial audit, a compliance audit, and an operational audit (evaluates the economic nature, efficiency and effectiveness in the management and use of public finance and public assets).

2. Part 2: Details External Ecosystem for Municipal Bonds

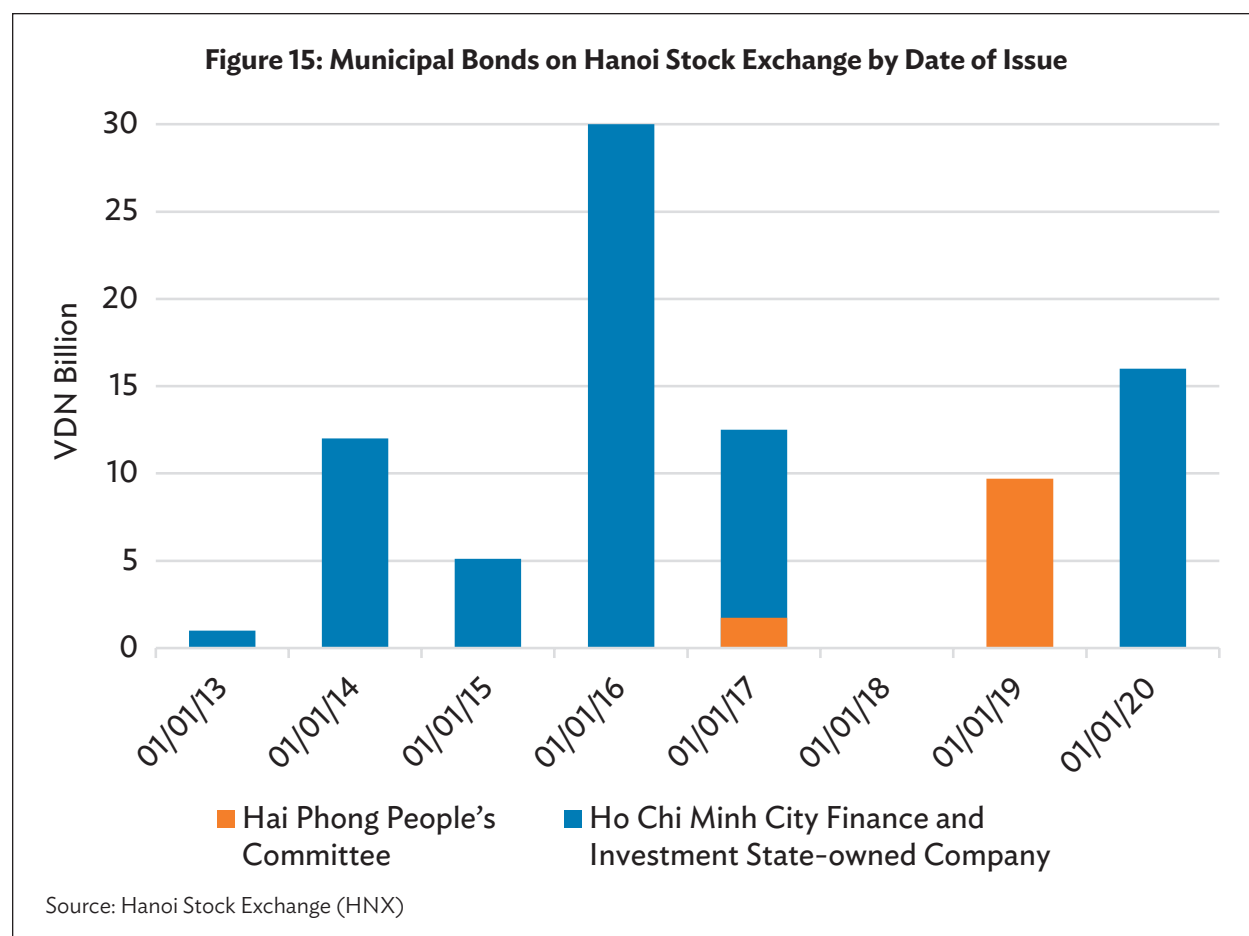
Municipal bond issuance in the last 8 years has been limited to two local governments: the Ho Chi Minh City Finance and Investment State-Owned Company and the Hai Phong People's Committee (see Figure 15 below).⁶⁰ Because of the government oversight and controls over local government budgeting and debt issuance, the municipal bonds price as if they were guaranteed, with coupon rates at a modest spread over central government bond yields for the same time period.

⁵⁷ Ministry of Finance, Socialist Republic of Viet Nam. 2010. *Public Debt Management Operations*. <https://vanbanphapluat.co> (Decree No. 79/2010/ND-CP).

⁵⁸ Thuan and Binh, *Workshop on Municipal Public Finance*, slide 8.

⁵⁹ Law of the State Audit, Socialist Republic of Viet Nam, www.sav.gov.vn.

⁶⁰ Bond List, Hanoi Stock Exchange, www.hnx.vn/en-gb.



Ho Chi Minh City Stock Exchange (HOSE): Equities are listed and traded on the HOSE, which has market capitalization of \$97.68 billion (D2.3 quadrillion) as of March 2020. It was formed in 2007, with the conversion of the Ho Chi Minh City Securities Trading Centre into HOSE.

Hanoi Stock Exchange (HNX): Bonds are listed and traded on the HNX, which has market capitalization of \$7.45 billion (D176 trillion) as of March 2020.⁶¹ HNX was formed in 2009, with the conversion of the Hanoi Securities Trading Centre into HNX. As of 20 July 2021, HNX will receive all new bond listing applications. The remaining bond listings on HOSE will be transferred over to HNX by the end of 2022.

State Securities Commission (SSC): The SSC is the statutory body responsible for the development and regulation of the securities markets in Viet Nam. It was established by the government in November 1996, taking over from the Ad hoc Committee on Preparation of ordinances for Securities Market under the SBV. The Commission is under the control of the MOF. Listing requirements for municipal bonds do not exist, but they do for corporate bonds. The latter include an audited financial statement for the past financial year, the board of directors' approval of the proposed bond issue, and a 3-year history of no defaults on the principal or interest of past bond issues.⁶² Privately placed bonds must be reported to HNX within 5 business days of issuance and registered with the Vietnam Securities Depository within 10 business days of issuance. Only a simple offering document is required for listing purposes, in addition to the documents and disclosures listed above.

⁶¹ Market Profiles VIET NAM, Investor and Treasury Services, Royal Bank of Canada (RBC), 4 August 2021.

⁶² Kathpalia, et al., *Domestic Credit Rating Agency*, pp. 4–5.

Vietnam Bond Market Association: Vietnam Bond Market Association was established in 2009, as a nonprofit forum to develop the bond market.⁶³ It is a major forum for bond market data.

Ratings: International bonds of the government and of select SOEs are rated by Moody's, S&P, and Fitch Ratings. Ratings of domestic bond transactions are new. FiinRatings, part of FiinGroup, was licensed by the Ministry of Finance to operate as a credit rating agency in Viet Nam on 20 March 2020.⁶⁴ Its website shows that it has interest in rating various corporate sector bonds. Prior to becoming a ratings agency, FiinGroup was known in Viet Nam as an independent financial markets' information provider, providing market research for domestic and foreign institutional investors. FiinRatings began issuing credit ratings in May 2021 and has benefited from an agreement with S&P Global Ratings to receive technical training through an ADB TA project funded by Australia's Department of Foreign Affairs and Trade.

D. Appendix 4: Indonesia

1. Part 1: Details Internal Ecosystem for Municipal Bonds

a. Constitution of 1945:

The Constitution of 1945, which was reinstated in 1959,⁶⁵ states that the Republic of Indonesia shall be divided into provinces, which shall be further divided into regencies (kabupaten) and municipalities (kota), each of which shall have its own regional authority (Article 18) to administer and manage its own affairs according to the "principles of regional autonomy and the duty of assistance (tugas pembantuan)." Each province shall have an elected Governor, each regency an elected Regent (bupati), and each municipality an elected Mayor (walikota); each level of subnational government shall also have an elected regional People's House of Representatives (DPRD). The Constitution recognizes that the regional authorities shall exercise wide-ranging autonomy, except in matters of the central government.

b. Law Concerning Financial Relations Between the Central Government and Local Governments

The Law Concerning Financial Relations Between the Central Government and Local Governments (Intergovernmental Relations Law) was enacted in January 2022, to carry out the Constitutional mandate of balancing financial relations between levels of government.⁶⁶ The Act is new, and this report provides an overview and limited analysis, highlighting key provisions that pertain to local government debt issuance and financial disclosure (two of the mandates of this report). Further analysis will be required, as the law stipulates, once additional requirements, procedures, and mechanisms are published through government regulations; the new regulations should consolidate several existing regulations governing local government debt. The timing for these complementary regulations is unclear.

This law replaces Law Number 33 of 2004 concerning Financial Balance between the Central Government and Regional Governments, and Law Number 28 of 2009 concerning Regional Taxes and Regional Levies; both are revoked and declared invalid. The new law consolidates various and previously fragmented laws into a comprehensive framework governing the activities of regional and

⁶³ Vietnam Bond Market Association, www.vbma.org.vn.

⁶⁴ <https://fiingroup.vn/FiinRatings>.

⁶⁵ Indonesia's Constitution of 1945, reinstated in 1959, with amendments through 2002, www.constituteproject.org.

⁶⁶ Law Concerning Financial Relations Between the Central Government and Local Governments. Enacted in Jakarta, 5 January 2022, President of the Republic of Indonesia; English translation provided by Commercial Law Development Program, Office of the General Counsel, US Department of Commerce.

local governments. It bases intergovernmental financial relations between the Central Government and regional and local governments on four pillars:

- (i) developing a tax system that supports the efficient allocation of national resources;
- (ii) minimizing what the government calls “vertical and horizontal inequality” through transfers to regions and through greater use of regional debt financing;
- (iii) improving the quality of regional expenditures and budgeting (this includes provisions for a regional mid-term spending framework, and performance-based budgeting); and
- (iv) harmonizing the “fiscal policy (coordination) between the Government and the Regions for optimal public service delivery and fiscal sustainability.”

c. **Key Articles of the New Municipal Law:**

- (i) **Article 154** includes provisions for regional debt in the forms of loans (which can be sourced from the Central Government, other regional governments, banks, or nonbank financial institutions), conventional bonds or Sukuk. It specifies that the Central Government does not provide guarantees of regional debt financing, and that regional governments cannot receive direct financing from foreign parties (this provision effectively prohibits foreign banks or DFIs from considering direct lending to a local government). The regional or local DPRD is to set the maximum borrowing ceiling each year at the time of budget deliberations.
- (ii) **Article 155** states that regional loans from the Central Government are approved by the Minister of Finance after receiving considerations from the minister in charge of domestic government affairs, and the minister in charge of national development planning. They can also be provisioned through assignments to bank and nonbank financial institutions and can be either conventional or sharia loans.
- (iii) **Article 156** discusses authorized purposes of regional and local government loans, including for cash management (requires approval from the DPRD, and must be paid off in the fiscal year that they were provided), the financing of regional infrastructure development, the management of a regional debt portfolio, and the forwarding of loans and/or equity participation to a regionally owned enterprise.
- (iv) **Article 157** discusses the issuance of regional bonds or Sukuk. This type of debt is authorized for the financing of regional infrastructure development, the management of a regional debt portfolio, and for the forwarding of loans and/or equity participation to a regionally owned enterprise. Regional Bonds and Sukuk can only be issued in the domestic capital market and can only be denominated in rupiah. Approval by the Minister of Finance, after receiving considerations from the minister in charge of domestic government affairs is required prior to a bond or Sukuk issuance. The issuance of Sukuk also requires a statement of compliance of the issue with sharia principles from experts in the sharia capital market.
- (v) **Article 158** defines regional assets that can be financed through bonds or Sukuk. These can include land, buildings, and other types of assets. Sukuk assets cannot be transferred or written off until the maturity date of the Regional Sukuk.
- (vi) **Article 159** establishes that the administrative head of a region is responsible for debt management.
- (vii) **Articles 160** prohibits local governments from guaranteeing the debt financing of other parties. It also prohibits pledging regional property (a mortgage lien) as collateral to obtain regional debt financing.
- (viii) **Article 161** stipulates that the funds to pay debt service on a debt financing must be included in the budget for the life of the debt obligation (standing budgetary authority), and that regional governments are required to pay their debt obligations on their maturity date. If the regional government does not budget for debt service, then the head of the

region and the DPRD are subject to administrative sanctions, which the law describes as “nonpayment of financial rights” for a period of 6 months.

- (ix) **Article 162** states that if a regional government fails to pay debt service on loans from the Central Government (or to an institution assigned by the Government on its behalf), then, after coordinating with the Minister in charge of Domestic Affairs, the Finance Minister may deduct transfer payments that are not already dedicated to other uses (this is a limited intercept mechanism, since it only applies to unencumbered or non-dedicated transfer payments).
- (x) **Article 164** allows regions to establish a Regional Endowment Fund, if they have met mandatory public service requirements and have a budgetary surplus. Like a sovereign wealth fund, the endowment fund can be used to obtain economic and social benefits, contribute when needed to regional revenues, or ensure public benefits across generations.
- (xi) **Article 170** requires that regional governments synergize their development policies and plans with related Central Government plans and policies.
- (xii) **Article 172** establishes regional government deficit and debt limits. The cumulative deficit limit for the following fiscal year is to be calculated by the Finance Minister no later than August of the current fiscal year. The cumulative deficit for the local government and central government budgets cannot exceed 3% of the estimated GDP for the relevant fiscal year. The cumulative regional debt cannot exceed 60% of the estimated GDP of the relevant fiscal year.
- (xiii) **Article 173** provides Central Government controls over regional and local governments during “emergency conditions” (which is not yet a defined term). This can include prioritization of local government budget allocations for certain activities (what the law refers to as refocusing), as well adjustments in the deficit and debt limits mentioned above.
- (xiv) **Article 175** states that the Central Government can impose sanctions in the form of halting or withholding transfer payments if a regional government does not carry out its duties with respect to harmonizing with national development plans, maintaining budgetary deficit and aggregate debt limits, and complying with controls during emergency conditions (performance budget provisions).
- (xv) **Article 177** states that the Central Government intends to build a digital Regional Development and Financial Management Information System that is interconnected with the “national consolidation information system for fiscal policies.”
- (xvi) **Article 178** requires that regional governments provide their financial information digitally through an online platform.
- (xvii) **Article 179** provides that the Central Government will conduct periodic monitoring of the implementation of transfer payments and budget implementation, for the purposes of making national fiscal policies, future transfer payments, and for providing sanctions and/or incentives to regional governments.

Law 32 (2004) states that the local government financial statement is to be audited by the State Audit Board (the Indonesian Supreme Audit Institution, or BPK, is a governmental entity).⁶⁷ The financial and accountability reports at the Indonesian sub-national government levels are to be prepared and presented based on standard government accounting principles. The financial report consists of four components: a regional budget realization report, a balance sheet, a cash flow report (revenues, expenditures, deficit/surplus, and any financing), and notes of financial statements. Financing is classified by instruments and currencies.⁶⁸ To carry out its audit function, the BPK created representative

⁶⁷ Akbar & Akbar, Law Office. 2004. *Law of the Republic of Indonesia, Number 32, Concerning Regional Administration*. <https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/77116/81604/F1362665533/IDN77116%20Eng.pdf>.

⁶⁸ M. Mir and W. Sutiyono. 2013. Public Sector Financial Management Reform: A Case Study of Local Government Agencies in Indonesia. *Australasian Accounting, Business and Finance Journal*. 7(4), Article 7.

offices in all provincial capital cities.⁶⁹ After the data on provincial and local governments are audited by the Supreme Audit Board, they are submitted to the Regional Parliament 6 months after the end of the fiscal year. Since FY2001, final data for the provincial and local governments are published at <http://www.djpk.kemenkeu.go.id>.⁷⁰

2. Part 2: Details External Ecosystem for Municipal Bonds

a. Snapshot of Indonesia's Bond Market⁷¹

Table A4: Composition of Indonesia's Bond Market

Composition of the Bond Market (1)	Central Government Bonds	Corporate Bonds
IDR (billions)	4,489,539	422,711
USD (billions)	310	29
% of Total Bond Market	91%	9%
% of Bonds Outstanding by Rating Category (2)		
AAA	100%	49%
AA		24%
A		21%
BBB		6%
NIG		1%
Bond Investor Groups (1)		
Central Bank	14.9%	0.0%
Commercial Banks	33.7%	20.7%
Insurance / Pension Funds	13.3%	37.4%
Mutual Funds	3.3%	26.8%
Retail	4.9%	4.3%
Offshore Investors	21.6%	5.2%
Other	8.3%	5.7%
Total	100.0%	100.0%

Sources: Asia Bond Monitor, ADB; Indonesia Bond Market Directory

Indonesia's bond market is small. Total market capitalization is Rp4,912,250 billion, which is about \$339 billion; on a relative scale, it is equal to 29% of GDP. The market is also shallow. Government of Indonesia bonds comprise 91% of bonds outstanding; corporate bonds make up 9%, but as in many Asian countries, much of what gets classified as a corporate is an SOE (see Table A4 above for information about the bond market). While the market is growing overall, most of this growth is in government debt. Corporate debt outstanding has grown very little since 2019, according to statistics provided by Asian Bonds Online.⁷²

⁶⁹ ADBI, *Government Decentralization Program in Indonesia*, p. 285.

⁷⁰ Special Data Dissemination Standard, General Government Operations, Indonesia, IMF, last updated January 2022, <https://dsbb.imf.org>.

⁷¹ (1): ADB, *Asia Bond Monitor*, p. 56 & 59; (2): PT. Penilai Harga Efek. 2021. *Indonesia Bond Market Directory 2021*. www.phei.co.id. p. 26.

⁷² Indonesia, <https://asianbondsonline.adb.org>.

The bond market is developing a positive mix of institutional investors, which includes banks, pension and insurance funds, mutual funds, and offshore investors. While the largest holders of government bonds are the Central Bank, commercial banks, and offshore investors, the largest holders of corporate bonds are commercial banks, as well as insurance, pension and mutual funds. While investors show a preference for AAA- and AA-rated corporate bonds on the national scale, they have begun to accept A-rated corporate bonds. Both the government and corporate bond sectors have a small and emerging retail sector, which is more developed for government bonds. Offshore Central Government bonds include foreign currency and local currency bonds held by international institutional investors, as well as domestic investors with accounts in Singapore.

As in many emerging market countries, Indonesian banks and financial institutions represent over half of all corporate bond issuance. Infrastructure, utility, and construction are growing corporate bond sectors. Corporate bond maturities are largely medium-term, with only 16% having maturities longer than 7 years, 49% with maturities of 5-to-7 years, and 35% with maturities under 5 years.

The government bond yield curve is steep through 10-year maturities, and then flattens after 15-year maturities, even though the government is active with up to 30-year bonds, according to recent data by Penilai Harga Efek Indonesia (PHEI), which provides weekly bond market updates.⁷³ Corporate bond spreads against the government benchmark bond vary widely by rating. As of 5 April 2022, the spreads for 5-year corporate bonds over the comparable government bond were 96 bps for an AAA-rated corporate, 172 bps for an AA-rated corporate, 353 bps for an A-rated corporate and 572 bps for a BBB-rated corporate.⁷⁴ This means that for a BBB-rated corporate bond, the nominal interest rate would be almost 12%, which represents a high risk for repayment, and a yield that approaches an equity return. Not surprisingly, BBB-rated corporate bonds only represent 6% of outstanding corporate bonds.

b. Indonesia Stock Exchange (IDX)

In November of 2007, the Surabaya Stock Exchange (BES) and the Jakarta Stock Exchange (JSX) were merged into the IDX.⁷⁵ The exchange lists and trades conventional bonds and Sukuk on 1-year maturity or greater, in all of the major asset classes, including Sovereign Debt Instruments (SUN) in rupiah or in a foreign currency, corporate bonds, Green Bonds, municipal bonds (although none have as yet been issued), and asset-backed securities. In 2015, IDX introduced a retail investment campaign in both sovereign and corporate bonds.

E. Appendix 5: Mexico

1. Part 1: Internal Ecosystem for Municipal Debt Issuance

National and State Constitutions: The legal authority for Mexican states and cities to issue debt comes from the Mexican Constitution. States and municipalities may only enter into liabilities or loans when their purpose is “intended for productive public investments.”⁷⁶ The Constitution forbids states from issuing debt outside of Mexico or in a foreign currency. This provision also applies to the loans

⁷³ Weekly Pricing Notes, Indonesia Bond Market Under Pressure as Triggered by Increasing Global Oil Prices, Penilai Harga Efek Indonesia, Period 28 February–4 March 2022, www.phei.co.id.

⁷⁴ Corporate Bond Yield Curves by Tenor, as of 5 April 2022, PT Penilai Harga Efek Indonesia (PHEI), www.phei.co.id.

⁷⁵ Indonesian Stock Exchange (IDX), www.idx.co.id.

⁷⁶ Constitution of Mexico, Organization of Mexican States, http://www.oas.org/juridico/mla/en/mex/en_mex-int-text-const.pdf.

and liabilities of government-controlled corporations or agencies.⁷⁷ In addition, loans and liabilities are subject to the limits established by the state legislatures and annually appropriated in their respective budgets. Although borrowing to finance budgetary deficits is not specifically allowed by the Constitution, it is accommodated indirectly by state laws which set borrowing limits. The Federal District, which is the nation's capital, is an exception, since the President of the United Mexican States is required to submit to the Congress of the Union the annual amounts of borrowing necessary for the Federal District to finance its expenditure.

The coordination and cooperation between levels of government are somewhat higher in Mexico than in other emerging market countries, but bank and bond market access is only available for the states and the larger municipalities. The Constitution (Article 115) provides that the states shall adopt the "free Municipality as the basis of their territorial division and political and administrative organization." Each state enacts laws that provide jurisdiction to organize a public municipal administration and regulate municipal affairs, procedures, public functions and services. Delegated municipal services include drinking water, drainage, sewage treatment, solid waste collection and disposal, street lighting, markets and supply centers, cemeteries, slaughterhouses, streets, parks and gardens, as well as public security. Finally, municipalities are free to administer their finances.

The National Fiscal Coordination Law (NFCL) (Ley de Coordinación Fiscal): This law establishes the funding relationships and formulas for distributions between levels of government, and how the various revenue distributions may be used. Article 9 of the NFCL 1980, allows subnational governments to borrow from commercial and development banks to finance investment projects, subject to limits authorized by state law.⁷⁸

The states and the Federal District were allowed under the law to pledge federal transfers as collateral. Until 1997, when the law was amended, in case of arrears or the threat of default, the federal government would deduct payments from the pledged transfer payments for the benefit of lenders, before they were transferred to the states. In an event of default, the banks often considered this debt as being the responsibility of the federal government rather than of the states.⁷⁹ In 1997, Article 9 was reformed, continuing to allow state and local governments to use federal transfers as collateral for debt, but no longer allowing banks the ability to ask the Treasury Department to intercept transfer payments from the delinquent or defaulting state.

Article 9 of the NFCL allows states and municipalities to use shared revenues (*participaciones*) as a security for their obligations as long as they have legislative authorization to do so and have provided notice (submitted a "registered petition") to the Secretary of Finance and the Public Credit Register of State and Municipal Government Obligations and Loans.⁸⁰ Finally, if a state wants to guarantee the debt of a municipality, it must ensure that it has sufficient *participaciones* to fulfill this obligation.

Participaciones: The primary sources of security for state and municipal debt are *participaciones* and dedicated appropriated funds from the federal government, as well as locally generated revenues. *Participaciones* are distributed to states under a formula based upon population, collection effort for local taxes, and a compensatory subsidy for poorer states. A portion of *participaciones* is passed down from the states to the municipalities. Transfer payments from the federal government are the largest revenue source for both states and municipalities.

⁷⁷ Political Constitution of the United Mexican States, ELECTORAL TRIBUNAL OF THE FEDERAL JUDICIAL BRANCH, <http://portal.te.gob.mx>.

⁷⁸ Trillo, et al., *Fiscal Decentralization in Mexico*.

⁷⁹ Fitch Ratings. 2002. *Financing of Mexican States, Municipalities, and Agencies: Alternatives and Strategies*. www.fitchratings.com.

⁸⁰ Artículo 9 and Artículo 47, Ley de Coordinación Fiscal, 11/8/2014, www.sat.gob.mx.

Aportaciones: After the 1995 fiscal crisis in Mexico, the distribution of spending responsibilities was shifted between the federal and state governments. The federal government increased dedicated appropriated funds (aportaciones) to states and municipalities for these spending responsibilities. Article 47 of the NFCL states that the aportaciones (which under Article 25 are dedicated for specific services, such as education or health) can be used for investment in the construction, reconstruction, expansion, maintenance, and repair of infrastructure.

Subnational Disclosure: The IMF, in an evaluation of disclosure in Mexico, noted that a weak link was financial disclosure within the subnational sector, which was not covered by a consolidated fiscal report or by internationally recognized accounting standards. They note that quarterly reports on subnational expenditures financed through federal government transfers were an exception. Since financial statements are not consolidated, it is difficult to analyze the public sector's financial position. The federal government does post subnational government debt statistics, including sources of financing, as well as transfer payments.

Financial Discipline Law of the States and Municipalities (la Ley de Disciplina Financiera de las Entidades Federativas y los Municipios): The Mexican government enacted the Law of Financial Discipline to States and Municipalities (FD Law) in 2016, to monitor and restrict the rise in subnational debt that occurred after the GFC in 2008–2009 (see default section above).⁸¹ The law established three indicators to monitor the financial health of subnational governments, and set up an alert system to categorize those governments according to their level of risk. The indicators are public debt obligations to free income, debt service to free income, and short-term obligations to total revenues. Since April 2017, these debt classifications have been used to determine how much debt a subnational government can borrow. For instance, subnational governments with a sustainable categorization can borrow up to 15% of free income, while those under watch can only borrow up to 5% of free income. Highly indebted subnational governments, however, are prohibited from borrowing.

2. Part 2: External Ecosystem for Municipal Debt Issuance

Characteristics of the Mexican Domestic Bond Market: The Mexican bond market is one of the most developed among the emerging markets, although in terms of issuers, it is characteristically weighted toward federal government bonds. The composition of holdings is 64.5% government bonds, 21.4% public financial institutions, 6.5% private financial institutions, and 7.5% nonfinancial corporations.⁸² About half of the debt is fixed rate and the other half is floating rate; most is long-term debt, and if the federal government bonds are excluded, 90% are rated AAA, 4% are rated AA, and 6% are rated BBB.⁸³ Like most emerging market countries, investor appetite skews to the highest ratings category, which makes the market shallow. In addition to traditional government, financial institution, and corporate bonds, Mexico has an active securitization bond market. In terms of investors, the Mexican bond market has significant resident (22% of holdings) and nonresident (25% of holdings) components.⁸⁴ Institutional investors, comprise smaller components of total holdings, with insurance companies at 5%, pension funds at 17%, and investment funds at 15%. The banking sector holds 8%.

⁸¹ Ley de Disciplina Financiera de las Entidades Federativas y Los Municipios, publicada en el Diario Oficial de la Federación el 27 de abril de 2016, www.diputados.gob.mx.

⁸² S&P Dow Jones Indices. 2015. *Mexico's Bond Market: An Introduction*. www.spglobal.com. p. 2.

⁸³ Classification of debt securities issued in local markets, <https://www.banxico.org.mx>.

⁸⁴ S&P Dow Jones Indices, *Mexico's Bond Market*, p. 5.

a. **History of Defaults of Subnational Debt**

During periods of financial crisis, circumstances sometimes resulted in the restructuring or “rescuing” of state debt by the Mexican federal government. When the financial crisis (the Tequila crisis) gripped Mexico at the end of 1994, interest rates skyrocketed (the 1-month Cetes rate, for instance, was reported to have gone from 13.8% in November of 1994 to 74.8% by April of 1995),⁸⁵ making it difficult for subnational governments to service their debt. Bank liquidity, upon which the states relied, also became problematic during the financial crisis. A special study by the Bank of Mexico published in 1997 stated that, after 8 years of accumulated state debt, the states came to the brink of bankruptcy in 1995 with the increase in interest rates.⁸⁶

Beginning in 1995, the states were required to restructure their debt into Unidades de Inversion or UDIs, which is an inflation-indexed debt instrument. UDIs were created in 1995 in order to protect the banks. Their initial focus was on mortgage loans.⁸⁷ The Banco de México publishes the value of UDIs each day of the month in the Official Federal Gazette. In recent years, some subnational governments have refinanced their UDI debt back into peso debt. The restructuring allowed for the states to extend the maturity of the UDIs 10–15 years longer than the debt that it replaced, and it granted a subsidized interest rate and a 2-year grace period for principal payment. In return, the states had to sign a “convenio” (letter of intent) that committed them to a series of financial reforms, including uniform financial statements, efforts toward a balanced budget, reduction of current expenditures, an increase of locally generated revenues, and the privatization of certain public enterprises. By the end of 1995, all states reportedly signed the convenio. The need for some of these reforms, however, continues.

Since the broad state debt restructuring in 1995, there have been occasional incidences of state debt restructuring on a more limited scale. One such period was in 2006, when the Secretary of Finance, in a special report on the states, reported that three states restructured their bank debt,⁸⁸ although this was not a period of economic or financial stress in the country. The State of Guerrero refinanced its outstanding debt with new bank loans, which allowed it to have a longer tenor and a lower interest rate. The State of Tabasco replaced its UDI bank loans with a peso bank loan with a lower interest rate. In return, it reformed its State Law of Public Debt, paid for a fiduciary trust to manage its debt servicing obligations, and obtained a debt rating. The State of Queretaro refinanced its outstanding bank debt obtaining longer tenors for its new debt. None of these debt refinancings appear to have been distressed debt exchanges.

Following the GFC, there were some notable municipal debt defaults. Fitch Ratings Mexico, in a recent special report on the subnational government sector, noted with some concern the rise in subnational government debt from 2008 to 2013, increased debt servicing costs and the relative lack of effective financial controls.⁸⁹ Fitch also recorded cases of default by municipalities under short-term lines of credit. A list of recent municipal defaults can be seen in Table A5 below, which shows the municipality, when it defaulted, its Fitch rating (if rated) during default, and its current rating:⁹⁰

⁸⁵ Trillo, et al., *Fiscal Decentralization in Mexico*.

⁸⁶ Direccion General de Investigacion Economica, Banco de Mexico. 1997. *El Rescate Financiero de Los Gobiernos Estatales por el Gobierno Federal: Comparacion de los Casos de Estados Unidos, Brasil y Mexico*. www.banxico.org.mx (Documento de Investigacion No. 9704).

⁸⁷ UDIS (Mexico’s Investment Units), Banco de Mexico, <http://www.banxico.org.mx>.

⁸⁸ Capitulo 3. Financiamiento para Entidades Federativas y Municipios, Unidad de Coordinacion con Entidades Federativas, Diagnostico 2007, Secretaria de Hacienda y Credito Publico, www.disciplinafinanciera.hacienda.gob.mx.

⁸⁹ Reformas al Sector Subnacional, Marzo 2014, Fitch Ratings, www.fitchmexico.com.

⁹⁰ Casos de Incumplimiento Recientes en Mexico, FitchRatings, www.fitchratings.com.

Table A5: Short-Term Municipal Debt Defaults in Mexico

Municipality	Default Date	Rating During Default	Current Rating (as of 31 March 2015)
Zamora	9-Feb-12	RD (mex)	BBB- (mex)
Santa Catarina	28-Feb-12	RD (mex)	BBB- (mex)
Cuernavaca	6-Jul-12	RD (mex)	not rated
Guadalupe	25-Sep-12	RD (mex)	BBB- (mex)
San Luis Potosi	31-Oct-12	RD (mex)	BB (mex)
Jalisco	24-Dec-12	RD (mex)	A- (mex)
Acapulco	28-Dec-12	RD (mex)	BBB- (mex)
Naucalpan	8-Jan-13	not rated	BBB- (mex)
Chetumal	14-Jan-13	RD (mex)	BB (mex)
Coacalco	22-Feb-13	not rated	not rated
Guadalupe	13-May-13	RD (mex)	BB (mex)
Bahia de Banderas	5-Mar-15	RD (mex)	RD (mex)

Source: Fitch Ratings, www.fitchratings.com.

A pattern emerged in 2012–13 of municipal defaults on short-term lines of credit from banks, but there were no recorded events of default on long-term debt, especially debt which was secured under a fiduciary trust structure. A careful examination of successive ratings reports during these turbulent months reinforces this view. Below are presented details of the defaults and remedies for the municipalities of Zamora and Acapulco, which are indicative of the experience of other municipalities that defaulted on short-term debt.

Zamora: On 9 February 2012, Fitch Ratings reported a downgrade of the rating for the municipality of Zamora in the State of Michoacan to “D(mex)” from its previous rating of “BBB+(mex).”⁹¹ A D rating signifies default. The (mex) designation after the rating signifies that this is a Mexican national scale rating. Fitch was able to verify that the city had defaulted on a P14.5 million short-term LOC in October of that year. The city considered this a delay in payment since some of its scheduled transfers from the state were also late. Due to this liquidity problem, the city was only able to make a partial payment, and the bank was willing to renegotiate the retirement of the LOC. In a follow-up report on 13 February, Fitch noted that the bank line had been retired, and it raised the city’s rating to “BB+(mex)” from “D(mex).”⁹² Although the default situation was over, and the credit line was retired, Fitch did not reinstate the original investment-grade rating of the city, noting the weak administrative practices that lead to the default.

Acapulco: On 28 December 2012, Fitch Ratings lowered the rating on the Municipality of Acapulco, in the State of Guerrero, to “D(mex)” from “A(mex).”⁹³ The city had defaulted on a P51 million commercial bank line. It put other debt of the city on a negative outlook but did not lower any long-term debt ratings. On 30 November 2012, the agency lowered the rating on the structured long-term bank loan to “BBB(mex)” from “AA-(mex),” removing the negative outlook.⁹⁴ Although the city made timely deposits of federal participaciones into the debt service account for the long-term loan, and although

⁹¹ Fitch Ratings. 2012. *Fitch Ratings Modifico a ‘D(mex)’ la Calificacion de Zamora, Michoacan*. www.fitchmexico.com.

⁹² Fitch Ratings. 2012. *Fitch Ratings Modifico a ‘BBB+(mex)’ la Calificacion de Zamora, Michoacan*. www.fitchmexico.com.

⁹³ Fitch Ratings. 2012. *Fitch Modifico a ‘D(mex)’ la Calificacion del Municipio de Acapulco, Guerrero*. www.fitchmexico.com.

⁹⁴ Fitch Ratings. 2013. *Fitch Modifica a ‘BB(mex)’ la Calificacion del Municipio de Acapulco de Juarez, Guerrero*. www.fitchmexico.com.

debt service coverage by pledged revenues remained strong, there was some concern about the risk posed by cross-default clauses that were present in the long-term loan documents, which the agency felt posed an existential threat to the municipal credit, since they allowed the bank to accelerate the loan. On 28 January 2013, the agency reported that the municipality's rating was modified to "BB(mex)" from "D(mex)," reflecting the fact that the short-term bank line had been retired.

Ratings: Very little of the subnational debt is rated, since most of it is provided by commercial and development banks. Moody's Investors Service, S&P, Fitch Ratings, and HR Ratings are the major ratings agencies in Mexico. Fitch Ratings and HR Ratings have the largest shares of subnational debt ratings. As mentioned above, Mexican investors prefer government bonds followed by AAA-rated corporate bonds. Fitch ratings of municipal debt cover a full ratings spectrum from AAA(mex) to BB(mex).

Fiduciary Stock Exchange Certificates (certificados bursátiles): Beginning in April of 2000, Treasury regulations required that banks, as a prerequisite to lending to states and municipalities, set aside risk-weighted capital reserves, and allowed them to use independent ratings to determine the appropriate risk weight for these borrowers. In initial discussions with banks on these reforms, they expressed reluctance to lend to subnational governments without the implicit federal guarantee (the ability to intercept participaciones as described above). Now, they are the largest source of capital for states and municipalities.

Mexico Securities Market Law Amendment 2001: In 2001, the Mexico Securities Market Law (Ley del Mercado de Valores) was amended in order to allow states, state enterprises, municipalities, and municipal enterprises to enter into fiduciary trusts that could issue fiduciary stock exchange certificates (certificados bursátiles).⁹⁵ The law allowed for a trust vehicle to issue certificates that offer investors a beneficial interest in pledged revenues of the trust, and allowed credit institutions and exchanges to act as fiduciary trustees. These changes allowed subnational governments to offer secured debt, with payment of debt service to be made either from a carve out of transfer payments or own source revenues. Under the trust scheme, the subnational government pledges a percentage of its pledged revenue stream to the account of the trust.

b. Major Strengths of the Certificate Program:

- (i) the creation of a separate trust for debt service payments outside of the subnational government's treasury, with the Mexican Treasury depositing the participaciones directly into the Master Trust, by-passing the State Treasury.
- (ii) Trustee manages debt service, on irrevocable orders of the state. This allows the rating of certificates in the trust to be rated higher than the underlying government.
- (iii) The state determines the percentage of the participaciones to be pledged, based upon outstanding debt being serviced by the trust, the sustainability of the debt and capacity for additional debt, and the credit profile desired by the state for certificates under the trust.
- (iv) Each loan is managed through a subaccount, with pledged revenues collected in advance of when they are needed for debt service (advance segregation), and with pledged revenues providing more than sum sufficient coverage of an upcoming debt service payment (overcollateralization). After a debt service payment, excess revenues are released back to the state.

⁹⁵ SE REFORMAN, ADICIONAN Y DEROGAN DIVERSAS DISPOSICIONES DE LA LEY DEL MERCADO DE VALORES Y DE LA LEY DE LA COMISION NACIONAL BANCARIA Y DE VALORES, 01/06/2001, <http://dof.gob.mx>.

The process for issuing fiduciary certificates requires that the state or municipality request authorization from the local legislature to issue securitized debt through a trust.⁹⁶ The securities are listed on the Mexican Stock Exchange (Bolsa Mexicana de Valores). Since the trust is the obligor, bondholders have no recourse against the underlying state or municipality. The revenue deposited into the trust is used to pay debt service on the securities. In structured finance, this is called a special obligation, since the trust can only make payments from the revenues deposited into the trust. It has no independent means to generate income.

c. Major Weaknesses of the Certificate Program:

- (i) Due to prevailing economic conditions, revenue collections in the trust may fall short of expectations. Indeed, when the price of oil has been depressed, budgetary revenues of the federal government were similarly depressed, and shortfalls in transfer payments to state and municipal governments contributed to some of the short-term debt defaults noted above.
- (ii) There may be delays in transfer payments, from the central government to the trustee.

Risk Mitigation Structures: Revenue risk was mitigated with debt service reserves, and by managing the degree to which pledged revenue streams are leveraged by debt. The advance segregation and overcollateralization, described above, also protect the certificates. Finally, it should be noted that the newly imposed debt limits will make these certificate structures more robust. Earlier certificates had informal debt limits, as they were negotiated between the state and investors in order to achieve a desired rating level. The newer certificates also have government-imposed debt limits that should strengthen investor confidence in these securities. Below-market lending by the banks to subnational governments, however, is not expected to stop, so it is unlikely that there will be a resurgence of new money certificates or refinancing certificates in the domestic bond market.

F. Appendix 6: Argentina

1. Part 1: Internal Ecosystem for Municipal Debt Issuance

The 1994 Constitution of Argentina: The 1994 Constitution of Argentina allows provinces to have their own constitutions and laws, with powers not reserved for the central government in the Constitution. This grants the provinces a considerable degree of autonomy. Under provincial constitutions, the provinces have the authority to issue debt.

Constitution, Chapter IV, Section 75: Congress is empowered to levy direct and indirect taxes, subject to joint participation with the provinces, under “agreement-law” with the provinces.⁹⁷ The federal government and the provinces are required to establish a system of “joint participation” for certain shared taxes, which also guarantees automatic remittance of funds to the provinces.

Constitution, Title II Provincial Governments, Section 121: The provinces reserve to themselves all the powers not delegated to the Federal Government by the Constitution.⁹⁸

Constitution, Section 129: The City of Buenos Aires is an autonomous system of government, with its own legislature, judiciary, and executive.

⁹⁶ Project Finance Newswire. 2008. *Securitizations of Tax Revenues in Mexico*. www.projectfinance.law.

⁹⁷ Constitution of the Argentine Nation, Chapter IV, Section 75, <http://www.biblioteca.jus.gov.ar>.

⁹⁸ Constitution of the Argentine Nation, Title II Provincial Governments, Section 121. <http://www.biblioteca.jus.gov.ar>.

Co-Participation Law 23548 (1988): This law, which is periodically updated, stipulates the process by which taxes collected by the national government are apportioned to the provinces. The federal government retained 42.4% of the shared taxes, set aside 1% for a provincial budgetary stabilization fund, and distributed the remainder (net of some offsets) to the provinces.⁹⁹

Argentinean Provincial Debt Secured by Federal Co-participation Payments: In the 1990s, the foreign currency debt of the provinces had a pledge of the co-participation payments granted by the Constitution to the provinces. Foreign investors felt that this was the most secure revenue stream at the provincial level. Locally generated taxes were not considered to be a viable revenue stream. Debt issued to foreign investors during that period used structured finance techniques to strengthen the security around the co-participation payments. The co-participation law provided a proportional allocation to the provinces, after certain shared costs (such as social security) were taken out.¹⁰⁰ A larger province, such as Buenos Aires, received a larger share (proportion) of the revenues than a smaller province like Tucuman. In 1998, for instance, Buenos Aires received 19.93% of the allocations, while Tucuman received 4.94% of the allocations.

The co-participation payments consisted of two parts. The first part was a fixed guaranteed allocation, expressed as a monthly peso amount, irrespective of how well the country's economy, and therefore its tax collections, fared. The second part floated with the economic fortunes of the country; when the economy was strong, tax collections were more robust, and the opposite when the economy was weak. This tax-sharing scheme was adjusted several times while the foreign currency debt was outstanding, which was a risk to the secured bond program. At the time that the foreign currency bonds were issued (1993–1999), Argentina maintained parity with the US dollar under its currency convertibility plan.

Strengths of the provincial co-participation debt program:

- (i) The debt was secured by the co-participation payments, which were a broad pool of shared taxes with a long history of collections and constitutional provisions for their allocation. The presence of a fixed guaranteed payment under the scheme provided a revenue floor, which allowed for structured bond issuances to evolve.
- (ii) The debt service on the US dollar bonds issued by the provinces were sized relative to the fixed guaranteed portion, whereby the fixed guaranteed portion provided a certain calculated coverage ratio of annual projected debt service payments. In this sense, this debt service coverage test provided a negotiated methodology for investors and provinces to back into the size of a debt issuance once the interest rate and maturity profile for the bonds were determined. Investors felt that, by fixing debt service as a percentage of the fixed guaranteed portion, full-and-timely payment on the bonds could withstand considerable slippage in co-participation allocations to the province.
- (iii) Since the co-participation payments were legal revenues of the province, the federal government could not send those revenues directly to a bond trustee. The international investors did not want to take provincial credit risk on these payments by having them go first to the provincial treasury before flowing to them, so they required that the provinces with US dollar debt execute an assignment agreement, whereby the province assigned its right to receive those revenues to a trustee for the bonds. In this way, the federal government was allowed to directly send co-participation payments to the domestic trustee (an Argentina-based trustee called a collection agent). Each day, the Banco Nacion would automatically transfer co-participation revenues to the Argentina-based collection agent, by-passing the provincial treasury.

⁹⁹ Argentine Tax Law Guide for International Tax Dialogue – Year 2008, <http://estudiocatinot.com.ar>.

¹⁰⁰ W. Streeter, E. D'Orazio, G. Torres, and F. Mayorga. 1998. *Argentinean Provincial Debt Secured by Federal Coparticipation Payments*. www.fitchibca.com.

- (iv) On a weekly basis, the collection agent would transfer pledged revenues to a New York-based collateral trustee in US dollars, under the terms of a trust indenture that defined the debt security, payment instructions to investors, and investor recourse in the event of default. The collateral trustee was instructed how and when to make scheduled debt service payments to investors, usually on a quarterly basis.
- (v) Cash flow coverage was overcollateralized at 1.25X the upcoming debt service payment. Once the debt service payment was made, the remaining funds were returned to the province. This overcollateralization is called “rolling coverage” in structured finance.
- (vi) The trust indenture also prevented the issuing province from creating a subsequent debt lien that was senior to the lien of the secured bonds on the co-participation revenues. Pari passu debt issuance was allowed under the indenture, and several provinces created medium-term note programs in the US to accommodate subsequent issuances under the same resolution and trust indenture.
- (vii) The trustee also maintained a fully funded debt service reserve fund (DSRF), usually funded at 6 months of debt service.

Weaknesses of the provincial debt program:

- (i) The Argentinean government had the authority to amend the tax-sharing program, including the mix of revenues that comprise the program, or the amount reserved for other shared programs (such as social security). A change in the mix of revenues pledged under the co-participation program could have affected debt service coverage on the bonds. The government also had the authority to change the minimum guaranteed payment amount, upon which the debt offerings were sized.
- (ii) The country was subject to pronounced economic and financial cycles, which increased the expected and realized volatility in the collection and remittance of these revenues to provinces.
- (iii) In the most severe of these cycles, the country had already shown a propensity to default. Under pronounced economic downcycles, the federal government’s ability to remit to the provinces would be tested.
- (iv) Argentina would eventually lose its ability to maintain currency convertibility, meaning that its currency would be subject to severe depreciation during economic downcycles.
- (v) The co-participation scheme had no expressed limits on how much of the revenue allocation could be used for debt service. Sizing debt service to the guaranteed payment amount was a convention created on behalf of bondholders, and in order to achieve a higher bond rating.
- (vi) The provinces did not have debt management policies in place that restricted their ability to issue debt. Because of this, the trust indentures for the foreign currency bonds did not have a debt limit or additional bonds test.
- (vii) The provincial bond structures had provisions for cross-default with other provincial obligations, not part of the co-participation trust structure. Acceleration of a bond secured by co-participation revenues, but outside of the trust indenture could impair the province’s ability to meet debt service payments on bonds inside of the trust indenture.
- (viii) The provinces, under the Constitution, had the right to declare an economic emergency, which would not change their legal obligation to pay debt service, but which granted them the authority to change the terms of outstanding bonds, such as maturity date and interest rate. A province’s history of declaring an economic emergency, and whether they changed the terms of their prior debt obligations during such an emergency were major credit considerations. If a province declared an economic emergency and changed the terms of the bonds, this put investors in a position of having to accept a “forced exchange.”

Legacy of the shared tax secured bonds: The history of Argentina's repeated bond defaults constrained investor confidence in and appetite for federal and provincial debt of that country. Periodic provincial debt restructurings and new debt issues occurred, but the provinces ceased to issue bonds with the structured finance covenants. Later provincial bond issuances still had trust indentures with a dedicated trustee account. Nevertheless, subsequent bonds were basically general obligations of the issuing province, and did not have the revenue assignment, overcollateralization, and debt service reserve account of the earlier structured bonds.

What the structured bonds of Argentina's provinces demonstrated, however, is that if investor confidence was lacking in a local government's own source revenues but was present for transfer payments from the central government, then a debt security could be made by assigning the rights of these transfer payments to a trustee for the bonds. With other structural features, such as rolling coverage, and a fully funded debt service reserve fund (DSRF), the structures could withstand a significant amount of stress. Ultimately, the strength of the sovereign becomes an issue for debt secured by transfer payments. In Argentina's case, the sovereign turned out to be a financially volatile partner for investors, so the robust debt structures alone could not withstand repeated debt service payment stresses that were to come. Mexico, a larger and more financially stable country, would provide a more viable test case for securing subnational debt with government transfer payments.

2. Part 2: Argentina's Default History and Investor Relations

Argentina has a history of sovereign debt defaults that have been exacerbated by cycles of deep economic and financial stress. It defaulted in 1951, 1956, 1982, 1989, and 2001.¹⁰¹ It had a selective default by failing to meet debt service payments on certain debt securities in 2014 and 2020. In the most recent debt restructuring, it was able to reach an accord with its biggest investors on 4 August 2020. With the benchmark government bonds in and out of default, this has stymied development of bond issuance by corporates and by subnational governments.

The IMF, in a statement released on March 2020, stated that "Argentina's public debt is unsustainable... Since July 2019, the peso has depreciated by over 40 percent, sovereign spreads have risen by over 2700 basis points, net international reserves fell by half, and real GDP contracted more than previously anticipated. As a result, gross public debt rose to nearly 90 percent of GDP at end-2019...In addition, as market access became severely curtailed, Argentina unilaterally extended maturities on some of its domestic-law debt and adopted capital flow management measures."¹⁰² As of 27 October 2021, 1-year Government or Argentina secondary market bond yield is 48%, down from a high of 69% in 2018, but up since early August of 2021, when the yield was 36%.¹⁰³ There is no secondary market for the bonds.

The government also put pressure on its provinces to restructure their external debt obligations. Many provinces defaulted on their debt service payments. The CAPB was formed by a group of international asset managers that have over \$3 billion in Argentinean provincial bonds under investment.¹⁰⁴ It is the advocacy group for institutional and retail investors in the Argentine provincial bond market and has been in active debt restructuring negotiations with several provinces. The CAPB issued a statement of Basic Principles that they hope will govern provincial debt restructurings, on the "basis of transparency and good faith with non-interference by third parties."

¹⁰¹ C. Reinhart, and K. Rogoff. 2009. *This Time is Different, Eight Centuries of Financial Folly*. Princeton: Princeton University Press. p. 96.

¹⁰² IMF, *Argentina, Staff Technical Note*, p.1.

¹⁰³ Argentina, www.worldgovernmentbonds.com.

¹⁰⁴ Coalition of Argentine Provincial Bondholders, www.arg-prov-coalition.org.

Negotiations with investors have had success in some provinces but have hit a snag in other provinces. For instance, this year, the Ad Hoc Bondholder Group that holds \$1.2 billion of debt issued by the Province of Buenos Aires released a statement on its debt restructuring negotiations.¹⁰⁵ The group formally made a debt exchange offer on 6 August 2021, but the province ignored inputs from the Ad Hoc Group, and instead decided to negotiate separately with one of the minority investors. The Group declared in its statement that it found the province's approach was "deeply flawed and (that it) does not represent a good-faith negotiation."

G. Appendix 7: Brazil

1. Part 1 – Internal Ecosystem for Municipal Debt Issuance

a. Constitution of Brazil 1988:

Chapter III: The Federated States, Art 25: The States are organized and governed by their own Constitutions. Any powers not restricted by the Brazilian Constitution are reserved to the States.¹⁰⁶ The States can create by law metropolitan regions, urban clusters, and micro-regions.

Chapter VI: Intervention, Art 34: The Union shall not intervene in the affairs of the States "except to maintain national integrity, repel a foreign invasion...guarantee the unimpeded functioning of any of the Branches of Government in the units of the Federation, reorganize the finances of a unit of the Federation (this power includes of the States) that suspends payment of a debt guaranteed by government instruments or securities for more than two consecutive years, except for reasons of force majeure."¹⁰⁷

b. Fiscal Responsibility Law 2000:

Arts. 11–13. Public Revenues. "States and municipalities which do not institute all the taxes allowed by the Constitution would not be entitled to receive voluntary transfers from the Federal government (many smaller cities didn't bother to collect Predial Taxes, preferring to rely only on Federal funds)..."¹⁰⁸

Articles 18–20. Expenditures, "[establish] limits for personnel expenditures; different limits are imposed for the Union, States and Municipalities, as well as for the Executive..."

Arts. 29–31. Debts. The interpretation of debt is broad, and includes bonds, short-term debt, contingent liabilities, and counterparty funding (interpreted as obligations under PPP contracts, etc.). Total debt is limited to 200% of current revenue, and debt service is limited to 13% of current revenue.¹⁰⁹ The federal government gives itself the power to guarantee debt in Art. 29.

Fiscal Recovery Regime 2017: The Fiscal Recovery Regime was introduced more recently to help highly indebted states that agree to undertake a fiscal adjustment plan.¹¹⁰ The plan can include rescheduling of debt service payments, guaranteeing indebtedness under the program, and new voluntary federal

¹⁰⁵ Statement of Majority Members of Buenos Aires Ad Hoc Bondholder Group, 17 August 2021, www.einpressire.com.

¹⁰⁶ Brazil's Constitution of 1988, with Amendments through 2014, Article 25, www.constituteproject.org. p. 28.

¹⁰⁷ Brazil's Constitution, Article 34, p. 36.

¹⁰⁸ Fiscal Responsibility Law, 2000, www.v-brazil.com.

¹⁰⁹ R. Bahl, J. Linn, and D. Wetzel (eds.). 2013. *Financing Metropolitan Governments in Developing Countries*. www.lincolninst.edu. p. 320.

¹¹⁰ P. Medas, R. Perrelli, and F. González. 2020. *Brazil, Strengthening Fiscal Responsibility at the Subnational Level*. Technical Report. www.imf.org. p. 11.

transfers. Restructuring of debt often imposed caps on annual debt service at 11.5% of net current revenues for the life of a restructured loan.¹¹¹

Direct Government Lending to LGUs: According to a report by the IMF, roughly 90% of outstanding state debt is loans either directly from the federal government, through federally owned banks, or federal debt guarantees.¹¹² The IMF believes that this system provides a ripe atmosphere for “strategic defaults” by subnational governments, and that their financial performance might improve from the added accountability necessary if they were given the freedom to issue debt in the bond market. For a brief period, federally guaranteed state loans were allowed to be issued in the market, but in 2013, the Brazilian Treasury rescinded this authority, after several states were provided loans by international banks, which were then repacked and sold as securitizations for what the government thought was a large markup.¹¹³ Credit Suisse Group AG and Bank of America Corp. reportedly earned \$140 million in fees from offerings by the State of Minas Gerais and the State of Maranhao.

According to a recent report from the University of Toronto, the sources of debt for the State of Rio de Janeiro are the federal government (74%), federally owned banks (14.3%) and other non-guaranteed creditors (17.3%). Other states have similar lender compositions. Municipal debt is much smaller but follows a similar pattern, with 62% lent by the federal government, and 35% by government-owned banks.¹¹⁴

c. **Federal Guarantees System:**

The federal government established a Federal Guarantees System for the restructured debt and for certain loans of the states, municipalities, federal banks and SOEs and other controlled entities.¹¹⁵ The government sees it as a way to “ensure fiscal equilibrium” and to provide legal enforcement of obligations by public entities. The constant prospect of economic and financial volatility in Brazil makes this system of growing national importance. The growing contingent liabilities, however, have contributed to the country’s declining credit fundamentals. To the extent that a guarantee is triggered, payment to creditors becomes a responsibility of the National Treasury. Draws under the guarantee contracts are repayable by the borrower that benefits from the guarantee. The guarantee contracts provide a period for remedy and repayment. Table A7 below shows the debtors and creditors who benefit from the guarantees.

¹¹¹ Medas, Perrelli, and González, *Brazil, Strengthening Fiscal Responsibility*, p. 12.

¹¹² Medas, Perrelli, and González, *Brazil, Strengthening Fiscal Responsibility*, p. 29.

¹¹³ B. Korby, R. Colitt, and F. Marcelino. 2013. *Brazil Halts Muni Market as Banks Collect \$140 Mln Fees*. www.bloomberg.com.

¹¹⁴ Brazil Country Analysis. 2019. *Final Report: Brazilian Subnational Debt*. <https://munkschool.utoronto.ca>. p. 9.

¹¹⁵ Guaranteed Debt Report, September – December 2020, Ministry of Economy, Special Secretariat of Finance, National Treasury Secretariat, www.gov.br/tesouronacional.

Table A7: Government Guaranteed Debt
(Real mill.)

Debtors	Amount	%
States	232,516.84	79%
Municipalities	26,076.94	9%
Other	37,403.60	12%
Total	295,997.38	100%
Creditors	Amount	%
Domestic	114,063.00	39%
Federal Banks	111,796.73	
Foreign	181,934.35	62%
Multilateral Institutions	162,535.82	
Total	295,997.38	100%

Source: Guaranteed Debt Report, September – December 2020, Ministry of Economy.

Most of the guaranteed debt is owed by state governments to a mix of domestic banks (such as BB, BNDES, and CAIXA), and multilateral institutions (such as IBRD, and IADB). With the economic cycles and lack of fiscal discipline in some states (despite budgetary and debt controls as described above), the amount of guaranteed debt has risen over the years. It was R71.23 billion in 2012 but had risen to R296 billion by 2020.

Financial Reporting: The Fiscal Responsibility Legislation contains a section (Chapter IX) that is devoted to financial transparency, control, and audit for all levels of government.¹¹⁶ It also creates an obligation for different levels of government to submit public accounts that have been audited to the Courts of Accounts, and the legislative body, but in practice, financial reporting is inconsistent across the states and municipalities, according to the IMF. Little information is publicly available on the state and municipalities, although the Secretaria do Tesouro Nacional (Brazilian National Treasury) regularly reports on the public debt outstanding and the level of guaranteed debt, including state and municipal guaranteed debt.

2. Part 2 – External Ecosystem for Municipal Debt Issuance

a. Characteristics of the Domestic Bond Market:

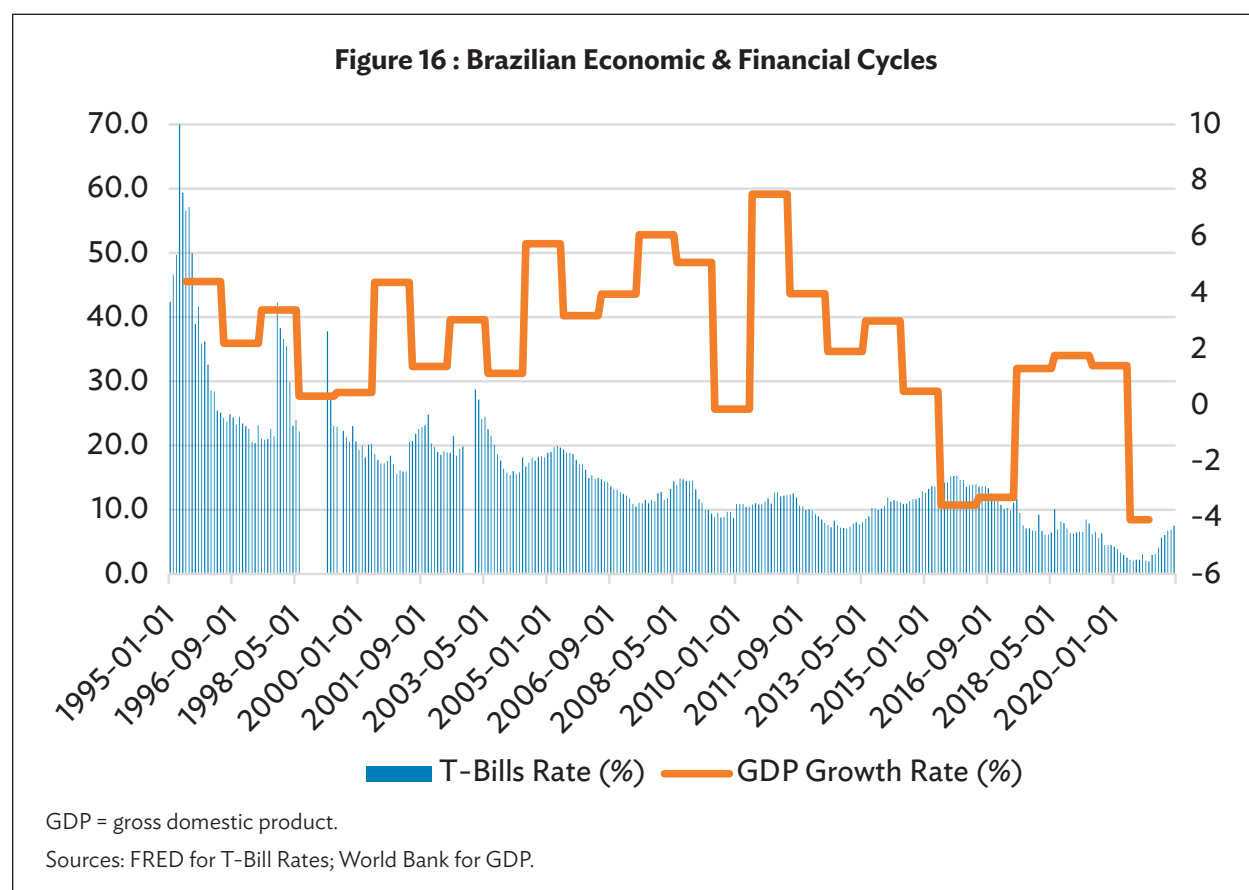
Brazil's bond market is capitalized at R\$2.5 trillion (approximately \$500 billion; or on a relative scale, equal roughly 35% of GDP) as of August 2021.¹¹⁷ Government debt dominates investments in the country's capital market, comprising 68% of assets under management as of August 2021. Other major investment categories include corporate debentures and various forms of money market and securitization investments.

The relative concentration and lack of diversity in the bond market can be partially explained by Brazil's frequent economic and financial cycles, many of which have been recent as well as extreme. Figure 16 below shows the negative correlation between government 10-year bond interest rates and

¹¹⁶ Brazil Country Analysis, *Final Report: Brazilian Subnational Debt*, p. 17.

¹¹⁷ ANBIMA. 2021. *Investment Funds Reports, Assets Under Management*. www.anbima.com.br.

percent change in GDP. As the economic performance of the country dips, the cost of capital goes up. This volatility has hampered economic and financial market growth and is a major factor behind the prevalence of government debt guarantees.



Investors: There is a surprising diversity of investor classes in Brazil, including retail investors, who hold 25% of fixed income assets. Other major investor classes by percent of assets under management include pension funds (20%), insurance companies (7%), investment funds (15%), and government (12%).

Ratings: The Brazilian Securities Commission monitors and accredits ratings agencies in Brazil.¹¹⁸ The National Monetary Council Resolution 2.383 (1997) was the first regulatory reference “accrediting and authorizing overseas credit transactions for States, the Federal District, Municipalities” and state-owned banks. National Monetary Council Resolution 2829 formally recognized rating services. This was updated by Resolution 3121 in 2003. SR Rating Regulação das Agências de Rating is a domestic ratings agency that began operating in 1993, primarily to rate domestic structured finance transactions.¹¹⁹ The international ratings agencies, Moody’s Investors Service, S&P and Fitch Ratings, rate international market transactions emanating from Brazil. This includes issuer-level ratings of Brazilian provinces in the international ratings scale. Fitch has the largest share of provincial ratings among the international ratings agencies.

On 5 May 2020, Fitch revised the Outlook of the Brazilian sovereign to negative. It maintains an Issuer Default Rating (IDR) of BB- on the country. On 11 May 2020, Fitch revised the Rating Outlooks of six

¹¹⁸ P. de Castro. 2004. *Rating Agency Regulation in Brazil*. www.cnmv.es. p. 3.

¹¹⁹ SR Ratings, www.srrating.com.br.

Local and Regional Governments (LRGs) in Brazil to negative from stable, while affirming the BB- IDR of these issuers: State of Sao Paulo, Municipality of Sao Paulo, State of Maranhao, State of Santa Catarina, State of Parana and State of Rio de Janeiro.¹²⁰ Fitch caps the IDRs of these six LRGs by the sovereign rating, reflecting the high degree of control of the Federal Government. Some of these governments, such as the State of Maranhao and the Municipality of Sao Paulo, have a standalone credit profile that is higher than the sovereign (BB and BBB-, respectively).

The Government maintains an internal ratings system (Capacidade de Pagamento) for subnational entities that apply to the National Treasury for credit guarantees.¹²¹ The first version was created in 1997, and was subsequently updated in 2012, with a focus of the weighted average ranking of a subnational government on eight financial and economic indicators, and its indebtedness and debt service burden.

H. Appendix 8: United States

1. Part 1: Internal Ecosystem for Debt Issuance

State Constitutions and Statutes: State constitutions and statutes determine the rights of states, as well as of local governments, to issue and support bonds. The “public purpose doctrine,” whereby bond proceeds should be used for public purposes, is engrained in state statutes.¹²² While this doctrine is easily interpreted for public facilities, such as schools and libraries, case law has broadened that interpretation to include investments that lead to job creation and tax base growth as fitting of a public purpose, even if there are also incidental private beneficiaries, such as with PPPs. In response to this broadening definition of public purpose, however, the Internal Revenue Code has also evolved to limit the issuance of tax-exempt securities for what it deems as a “private activity,” even if it has a public purpose. State statutes authorize the issuance of a variety of municipal bonds, but there are three primary types:

- (i) **General Obligation Bonds:** General Obligation bonds are bonds issued by a state, county, municipality, or school district (essentially, entities that have legal authority to generate and collect taxes), which are secured by their tax revenues. Tax-supported bonds that have the “full faith and credit” pledge of the issuing entity will increase tax rates if necessary to honor debt service obligations on their bonds. This is known as an unlimited tax pledge.¹²³ If the bonds are supported by a portion of a tax, such as by a specific mill rate on the property tax levy, this constitutes a limited tax pledge. State and local government debt limitations can include debt service limited to the revenues generated by a certain mill rate, or to a minimum debt service coverage by that mill rate, or to debt outstanding as a percentage of the value of taxable assessed properties.
- (ii) **Revenue Bonds:** Revenue bonds are issued by state and local authorities and by municipalities and are backed by a pledge of the “net revenues” (user fees) generated by a project or by a system, such as a solid waste incinerator plant in the first instance, or a water utility system in the second instance. The net revenue pledge means that the municipal utility’s user fees must first cover operation and maintenance (O&M) costs before they can be used to cover debt service on its bonds. This net revenue pledge concept was later adopted by project finance. Generally, there are no debt limits for revenue bonds; however, the financing documents (trust indentures) for the bonds provide financial covenants for

¹²⁰ Fitch Ratings. 2020. *Fitch Revises Rating Outlooks of Six Brazilian LRGs to Negative; Affirms IDRs at ‘BB-’*. www.fitchratings.com.

¹²¹ International Monetary Fund. 2019. *Brazil Strengthening the Framework for Subnational Borrowing*. Technical Report. www.imf.org. p. 25.

¹²² General Law, Fundamentals of Municipal Bond Law, National Association of Bond Lawyers, p. 7.

¹²³ General Law, Fundamentals of Municipal Bond Law, National Association of Bond Lawyers, p. 18.

debt service coverage, rate increases, capitalizing and replenishing debt service reserves, etc. These covenants are often adjusted in order for the issuing entity to achieve a desired rating on its bonds. In this way, covenants act as an informal debt limit.

- (iii) **Lease Revenue Bonds:** Lease Revenue Bonds are issued by state and local governments with income from land or public facility leases.¹²⁴ They are sometimes issued by a conduit special purpose authority. The bonds are used to construct a facility that is then leased to a government entity, with the lease payments providing security for retirement of the lease revenue bond. An example of a conduit issuer is the Oklahoma Development Finance Authority, which issued lease revenue bonds to finance the acquisition and installation of equipment for certain Oklahoma colleges and universities that are members of the Oklahoma State System of Higher Education.¹²⁵ Since the conduit is a special purpose entity with no taxing power of its own, the bonds are “limited special obligations” of the Authority; in this case, they are secured by annual state appropriations for the State Board of Regents for Higher Education.

Role of Subnational Governments: Decentralization is very advanced in the US. In large part, it is due to Constitutional arrangements, such as the Tenth Amendment, which was confirmed at the time that the Constitution was adopted. The Amendment stated that powers not granted to the federal government were reserved for the states and the people.¹²⁶ In contrast to most of the world, infrastructure investments are primarily the responsibility of state and local governments, and these are financed through the issuance of municipal bonds, as well as on a “pay-as-you-go” basis through budgetary appropriations. Table A8 below shows that public investment in infrastructure is skewed toward state and local governments in the US.¹²⁷ Public investment in infrastructure increased in 2009–2010, as a collective government response to the GFC, peaking at 1.6% of GDP in 2015. Nominal levels of public investment have continued to grow, although they have flattened relative to GDP.

Table A8: Public Sector Investment in Infrastructure

Variable	2010	2015	2020
Federal Construction (\$ mill.)	31,133	22,858	26,756
State and Local Construction (\$ mill.)	272,833	268,643	324,894
Public Investment as % of GDP	1.1%	1.6%	1.5%
20-Year Bond Buyer Municipal Bond Index (%)	4.30%	3.65%	2.13%

GDP = gross domestic product.

Sources: BEA, National Income and Product Accounts, FRED, Bond Buyer GO 20 Yr Municipal Bond Index.

Tax Exemption: Under the Internal Revenue Code, Section 103, subnational governments are allowed to issue tax-exempt debt. This includes the states, Native American tribes, political subdivisions (local governments, special assessment and tax increment districts and public authorities created by local governments), and possessions (such as Puerto Rico, the US Virgin Islands, American Samoa, and Guam). Some states have authorized the creation of nonprofit corporations, such as for toll road projects or private airport terminal projects through PPP agreements that are allowed to issue tax-exempt debt,

¹²⁴ *Lease Revenue Bonds – Everything You Need to Know*, www.cfajournal.org.

¹²⁵ Fitch Ratings. 2021. *Fitch Rates Oklahoma DFA's \$1.8MM Lease Rev Bonds 'AA-'; Outlook Stable*. www.fitchratings.com.

¹²⁶ Tenth Amendment: Historical Background, Constitution Annotated, <https://constitution.congress.gov>.

¹²⁷ National Income and Product Accounts Tables: Table 1.1.5. Nominal GDP, US Bureau of Economic Analysis (BEA), www.bea.gov; Value of Construction Put in Place at a Glance, US Census Bureau, www.census.gov; Bond Buyer GO 20 Yr Municipal Bond Index, Federal Reserve Bank of St. Louis (FRED), <https://research.stlouisfed.org>.

even though they operate as private corporations.¹²⁸ Once the debt is retired, the corporation hands over full title of the financed property to the governmental entity that authorized the PPP (“authorizing governmental entity”).

Many states also exempt in-state resident holders of municipal debt.¹²⁹ Because of the reciprocal immunity principle between the federal government and state and local governments, the latter are prohibited from taxing the interest on bonds issued by the former.

Tax exemption provides municipal bond issuers with a lower effective interest rate than comparably rated corporate bonds. This significantly lowers debt service costs of tax-exempt municipal bonds. Corporate bonds maintain a spread above the benchmark US Treasury yield that is narrower for more highly rated corporate securities, and wider for lower rated securities. This relationship is evident in all other bond markets where there are government treasury bonds that serve as a benchmark for types of other securities. US municipal bonds, because of their tax exemption, often trade at a spread below or near the benchmark Treasury bond. As of early December 2021, A-rated municipal bonds, for instance, trade practically even with the US Treasury. AAA-rated municipal bonds, however, trade at a negative spread below the 10-year Treasuries. This creates a subsidy to municipal bonds, but that effect is a consequence rather than an intended design of tax exemption, since the design was more about maintaining the separation of powers.

The Revenue Act of 1913: This landmark revenue act created the federal income tax, but also codified the exemption of interest on municipal bonds from federal income tax.¹³⁰ This tax exemption was backed by regulation under Section 103(a) of the Internal Revenue Code of 1954.

The Tax Reform Act of 1986: This tax reform act specified limitations on the tax-exempt status of state and municipal bonds to “governmental purpose bonds.”¹³¹ Bonds not deemed to fit a governmental purpose are designated as “private activity bonds.”¹³² States are allocated a maximum amount (a volume cap) of private activity bonds (such as for private hospitals, universities, convention facilities and public-private-partnerships, etc.), which can be issued each year on a tax-exempt basis. This amount is based on the state’s population. States are required to allocate and report on the amount of private activity bond issuance each year.

The Tax Cut and Jobs Act of 2017: This act affected several tax-exempt activities. For issuers of tax-exempt municipal bonds, however, its most far-reaching provision eliminated the ability to claim tax exemption for “advance refunding” of existing tax-exempt bonds.¹³³ A later section in this report will show how implementation of this act impaired refinancing bond activity.

Municipal Bankruptcy Law (Chapter 9): The US is the only country that has bankruptcy law for municipal bonds. A public agency or instrumentality of a state can seek the remedy of a debt adjustment by filing for bankruptcy through Chapter 9 of the US Bankruptcy Reform Act of 1978.¹³⁴ This law was amended in 1994 to provide that state law must specifically authorize a municipality to file for bankruptcy. As part of the bankruptcy process, a municipality must file a financial plan and disclosure statement with the court.

¹²⁸ M. Cullers. 2018. Combining Tax-Exempt Bonds with Public-Private Partnerships under Current Law. www.publicfinancetaxblog.com.

¹²⁹ National Association of State Auditors, Comptrollers, and Treasurers (NASACT). 2020. *State and Local Fiscal Facts – 2020, The Fiscal Condition of State and Local Governments*. www.nasact.org. p. 4.

¹³⁰ Internal Revenue Service. *Introduction to Tax-Exempt Bonds*. www.irs.gov.

¹³¹ Internal Revenue Service. *Federal Tax Aspects of Municipal Bonds*. www.irs.gov. p. 1.

¹³² Internal Revenue Service. *General Rules for Private Activity Bonds*. www.irs.gov.

¹³³ JD Supra. 2018. *2017 Tax Reform Legislation: Impact on Tax-Exempt Organizations, including Educational and Health Care Institutions*. www.jdsupra.com.

¹³⁴ Nuveen. 2022. *Municipal Bankruptcy: A Primer on Chapter 9*. <https://documents.nuveen.com>. p. 2.

Bankruptcy is not a legal option for states, which the Constitution treats as sovereign entities.¹³⁵ So far, only 12 states have authorized local governments with the option to file for bankruptcy under Chapter 9. Bankruptcies remain rare.

Since 2010, there have been 51 bankruptcy filings, only nine of which were by general purpose governments. Most filings have been by utility authorities and other special districts, although since the GFC, there were several high-profile municipal bond defaults that resulted in bankruptcy filings, including Detroit, Michigan and Puerto Rico. Under Chapter 9, the court works with investors and issuers to reach a debt adjustment, which could affect the quantum of outstanding debt, the interest rates on replacement debt and/or the term of the debt. Changes in these terms of a bond is known as a “forced exchange” of a bond with old terms for a bond with new terms. The remedy for debt adjustment is because local governments are not subject to wind-up or liquidation, like what can happen in a bankruptcy proceeding for a private corporation. In addition, local governments continue to assess and collect taxes in perpetuity, although the revenue-generating capabilities of some local entities (such as Detroit and Puerto Rico) have been severely stressed by decades of population losses and lack of economic investment. Chapter 9 does not contain any provisions for federal financial assistance (a bailout) because of a bankruptcy.

Local Government Disclosure:

Local governments complete their financial reports according to the standards set by the Governmental Accounting Standards Board (GASB).¹³⁶ The types of entities covered by the GASB standards include states, cities, towns, counties and villages, public authorities, public colleges and universities, school districts, public employee retirement systems and public hospitals. The first municipal accounting standards were issued by the National Council on Governmental Accounting in 1934 and became known as the “blue book.”¹³⁷ Revisions have continued to be issued since then. The uses of financial reporting by municipal governments center around their economic, political, and social decisions, as well as transparency to investors, and accountability to taxpayers. Actual financial results are compared to the budget, the financial performance (operating statement) and financial position (balance sheet) are reported, these are compared to the previous year’s results, compliance to budget controls and financial covenants under bond trust indentures are also demonstrated in these reports. Ample audit notes describe debt and lease obligations, use of financial derivatives and information on investments and other financial disclosure. Finally, the accounts of the various funds are shown separately, but are also reported on a consolidated basis.

2. Part 2: External Ecosystem for Debt Issuance

The US capital markets are huge. In 2020, the US capital markets totaled \$116 trillion, 56% of which represented corporate equities, 43% of which represented bonds and other debt securities, and 1% of which represented money market (short-term) securities.¹³⁸ Of outstanding debt securities, US treasuries represented 42%, mortgage- and asset-backed securities represented 26%, corporate bonds represented 21%, and municipal bonds only represented 8%, or \$4 trillion. As mentioned above, the US for decades had the largest municipal bond market in the world but was recently surpassed by the PRC municipal bond market on a nominal basis.

¹³⁵ NASACT. *State and Local Fiscal Facts – 2020*. p. 3.

¹³⁶ GAAP for Governments. 2004. *Interpretation and Application of Generally Accepted Accounting Principles for State and Local Governments*. www.wiley.com. p. 3.

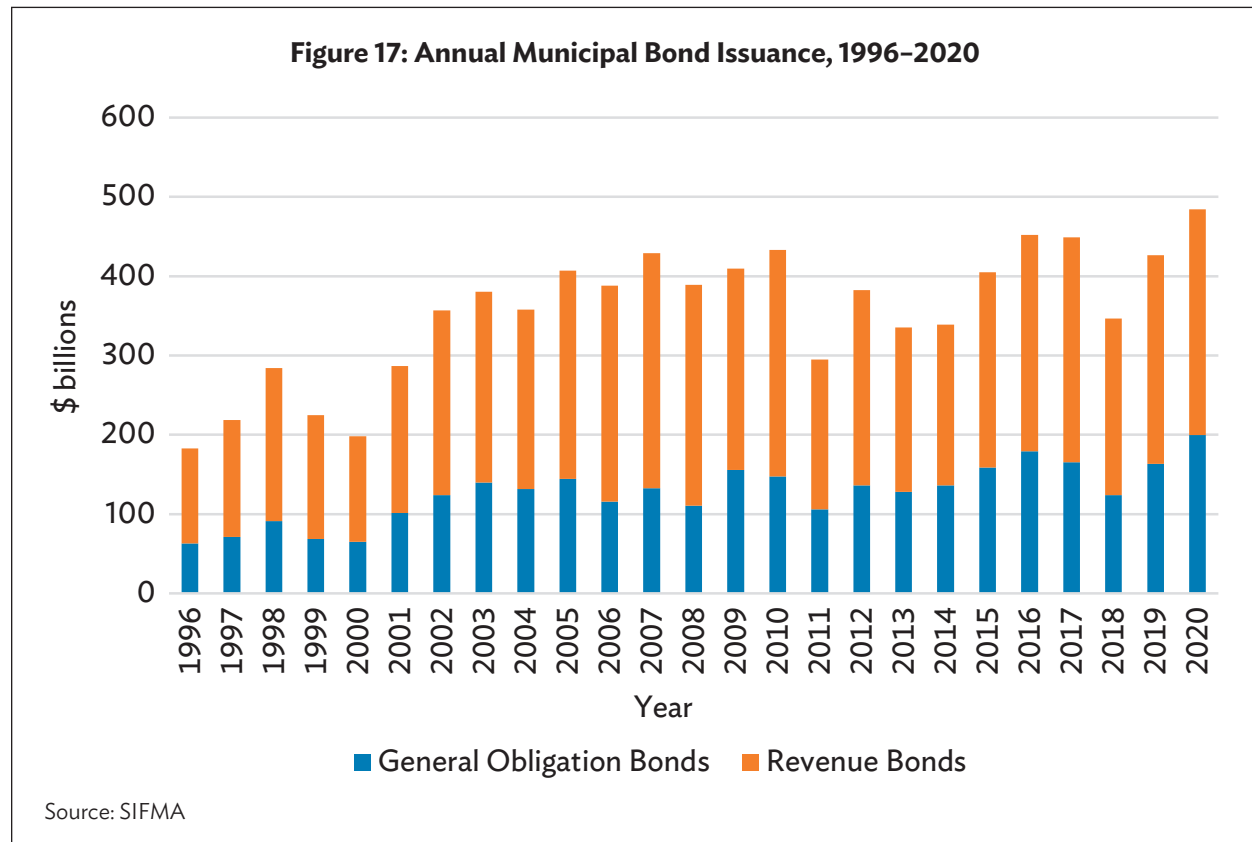
¹³⁷ GAAP for Governments, *Interpretation and Application*, p. 34.

¹³⁸ SIFMA Research. 2021. *U.S. Equity and Debt Outstanding, 2021 Capital Markets Fact Book*. www.sifma.org. p. 21.

Over the last 5 years, the fastest-growing debt issuer has been the US government, whose Treasury issues experienced 9.7% 5-year cumulative annual growth. The growth in treasuries reflects the high levels of deficit financing by the federal government, including financing for tax cuts as well as conflicts in parts of the Middle East. The second-fastest growth came from US corporate bonds, which experienced 5% 5-year cumulative annual growth. The growth in corporate bonds reflects debt accumulation under very favorable borrowing conditions, as the Federal Reserve continues to keep low policy rates. Some of this borrowing has been for capital improvements, but a large proportion was leveraged financing (stock buybacks), which were made attractive due to low interest rates. The third-fastest growth sector was for mortgage-backed securities, which experienced 4.7% 5-year cumulative annual growth. The growth in mortgage-backed securities reflects a resurgence in this activity after a temporary pause during and immediately following the GFC. Despite the favorable borrowing environment, municipal bonds grew slowly since the GFC. This reflects reluctance to accumulate a large debt service burden during a period of suboptimal economic and tax revenue growth, and a hesitancy to increase tax rates in support of debt issuance.

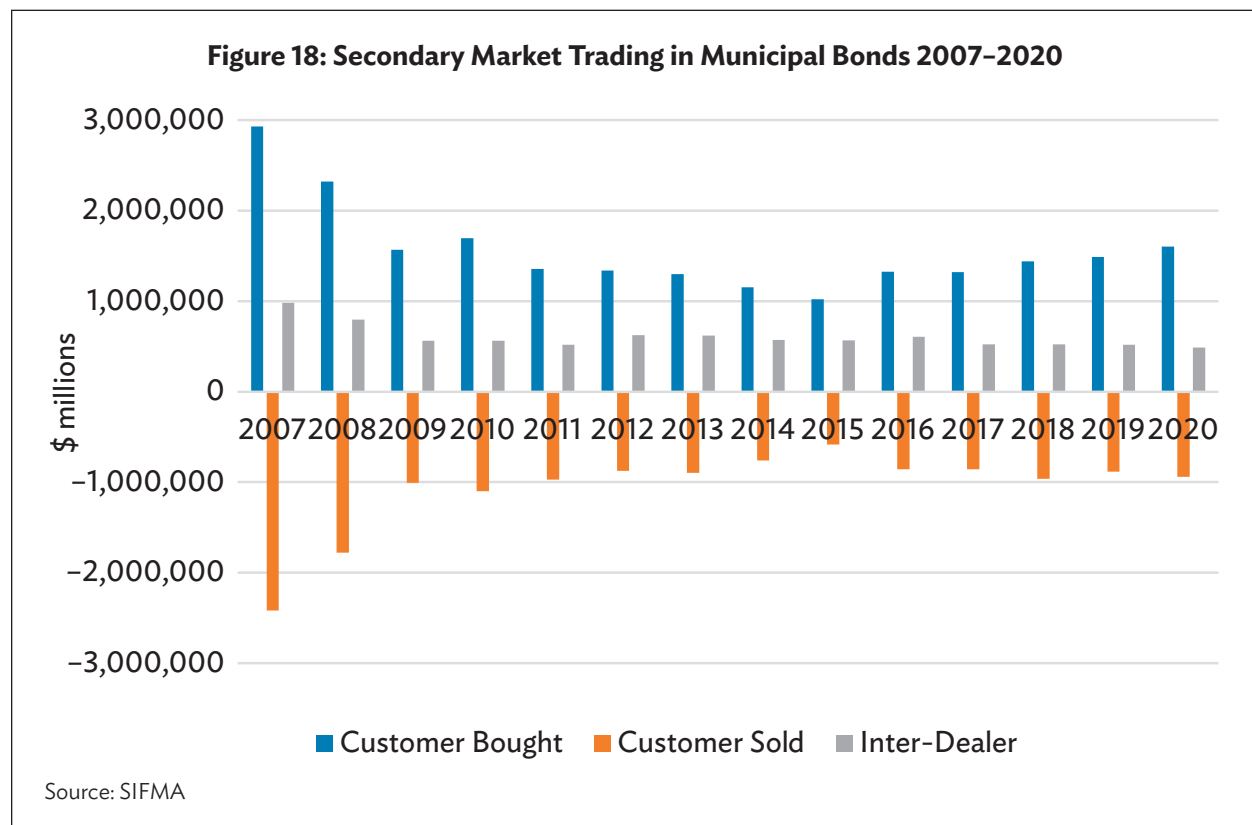
a. Primary and Secondary Municipal Bond Activity:

The US municipal bond market is very active. The median annual municipal bond issuance was \$388 billion for the last 2 decades covering 2000–2020. While there was a trend of slow growth in municipal bond issuance, it was not an even trend, with dips in 2000 for the dotcom-related recession, in 2011 in a delayed dip after federal assistance ran out in response to the GFC, and again in 2018 with the passage of tax reform, the latter of which ended the ability of subnational governments to use tax-exempt financing for refinancing bonds. Since the GFC, economic growth and revenue growth for local governments has been suboptimal, and this has resulted in slow growth of municipal bond issuance despite historically low interest rates.



In most countries, municipal bonds are almost entirely supported by tax revenues or transfer payments from a higher level of government. Uniquely, however, US municipal bond issuance consistently favors bonds backed by user fees, given the proliferation of public enterprises, and a recognition that the benefitted user of a public service should pay for it (thus, the concept of “user pay”). The public mood against increasing property taxes since the 1980s has resulted in a huge increase in revenue bond issuance for public improvements. The median ratio of revenue bond issuance to total municipal bond issuance is almost two-thirds. Figure 17 above shows annual general obligation and revenue bond issuance for 1996–2020.¹³⁹

While one measure of a bond market’s liquidity is the level of primary market issuance (discussed above), another measure of its liquidity is secondary market trading. The US municipal bond market is very liquid by most accounts. Recall that the amount of outstanding municipal bonds is roughly \$4 trillion. Before the GFC, purchases and sales of municipal bonds in the secondary market was over \$6 trillion, which demonstrates a high degree of turnover (purchases and sales) for these very liquid assets. Secondary market trading declined after the GFC and has not been as active since 2010, with a median annual amount of trading at \$2.8 trillion over the last decade. While this level of activity still represents a large degree of asset turnover relative to debt outstanding, it is a significant dip from pre-GFC levels. Figure 18 below shows secondary market trading activity at for 2007–2020. Customer purchases are shown as positive, while customer sales are shown as negative. Inter-dealer sales are a net positive number.



There are several reasons for the decline in secondary market trading. One is the greater frequency of major market disruptions, such as the economic declines associated with the GFC and with the more recent COVID-19 pandemic. The second is greater market volatility associated with external events, such as international trade disputes, other geopolitical pressures, and the increasing frequency and

¹³⁹ SIFMA. *US Municipal Bonds: Issuance, Trading Volume, Outstanding, Holders, US-Municipal-Bonds-Statistics*, www.sifma.org.

severity of climate change-induced disruptions (fires, floods, freezes, etc.). Finally, the US municipal bond market has experienced some major defaults and bankruptcy proceedings in recent years, eroding the perception of this asset class as being very secure. Despite the decline in trading activity, the main observation is that the US municipal bond market remains very liquid.

b. Municipal Securities Market Regulation

The Securities and Exchange Commission (SEC): The SEC regulates bond market transactions but does not regulate state and municipal issuers. As with tax exemption, this is part of the separation of powers argument. Therefore, issuer disclosure requirements are part of the regulatory framework of municipal bond intermediaries, such as investment bankers and financial advisers, that must be satisfied at the time of a transaction. A major revision of these regulations, **Rule 15c2-12** occurred in 1989, when the SEC required that underwriters maintain ongoing disclosure of information originally provided in a municipal bond offering document.¹⁴⁰ Thus, if the offering document provided information about the municipal budget, capital plans, litigation, or the use of financial derivatives, this information needed to be updated in continuing disclosure filings. It also required the filing of material events notices. The SEC can bring legal actions against municipal issuers who violate securities antifraud provisions. Brokers, dealers, underwriters, and municipal advisors must register with the SEC and comply with its rules.

Material Events: The filing of “Material Events” is a standard component of continuing disclosure requirements. Typical material events can include the following:¹⁴¹

- (i) An event of default on debt service payments
- (ii) The filing of bankruptcy
- (iii) An adverse tax opinion, or event that changes a bond’s tax-exempt status
- (iv) Any modification to the rights of bond holders
- (v) A redemption or pre-refunding (this can be an option to refinance a bond at a future date) of a bond maturity
- (vi) A change in the rating for a debt security.

The Municipal Securities Rulemaking Board (MSRB): The MSRB is a self-regulatory organization created under the Securities Acts Amendments of 1975.¹⁴² It is governed by an independent Board of Directors with deep expertise in the municipal bond market. The MSRB’s initial role was to regulate the activities of broker-dealers and banks that buy, sell, and underwrite municipal securities. This role was expanded by Congress in 2010 to include the regulation of independent municipal advisory firms that provide advice to state and local governments about the issuance of bonds. Like the SEC, the MSRB cannot regulate state and local government issuers. The MSRB is overseen by Congress and by the SEC.

The Financial Industry Regulatory Authority (FINRA): FINRA is an independent, nongovernmental, self-regulatory organization that writes and enforces rules governing registered brokers and broker-dealer firms across the US bond market.¹⁴³ Its mission is “to safeguard the investing public against fraud and bad practices.” FINRA was created in 2007 through the consolidation of the National Association of Securities Dealers and the member regulation, enforcement, and arbitration operations of the New York Stock Exchange. The consolidation was able to reduce regulatory overlap and costs.

¹⁴⁰ SIFMA, *Securities Laws*, p. 82, 84.

¹⁴¹ Subject: Material Events, LPL, www.LPL.com.

¹⁴² The Role and Jurisdiction of the MSRB, MSRB, www.msrb.org.

¹⁴³ J. Kagan. 2020. *Financial Industry Regulatory Authority (FINRA)*. www.investopedia.com.

Electronic Municipal Market Access (EMMA): The MSRB provides market transparency through its repository website, EMMA. This became functional in 2009 and stores the following information:

- (i) Official statements (the prospectus for a municipal bond)
- (ii) Trade prices and yields with respect to a bond's trading history
- (iii) Financial disclosure documents of issuers
- (iv) Continuing disclosure documents of issuers
- (v) Market-wide information
- (vi) Calendar of municipal securities scheduled to be offered
- (vii) Calendar of upcoming economic reports and events of interest to the municipal bond market
- (viii) Market statistics, including trading patterns and most actively traded securities.

Ratings: Municipal bond ratings help with price discovery (interest rate) in the primary and secondary markets by providing an independent opinion on the default risk of an issuer under a particular bond structure. Credit ratings were invented in the US, with Moody's Investors Service beginning its operations in 1900.¹⁴⁴ Standard Statistics (which later became Standard and Poor's, or S&P) started in 1906. Fitch started in 1913. In 1975, commercial banks and securities broker-dealers sought to invest in more highly rated securities to satisfy their capital requirements. This resulted in the SEC designating the major ratings agencies as nationally recognized statistical ratings organizations (NRSROs). It also resulted in the rapid expansion of the ratings industry that continues to this day.

The SEC began to formally regulate NRSROs in 2006 with the passage of the Credit Rating Agency Reform Act.¹⁴⁵ The Act allowed the SEC to partially regulate the internal processes, record-keeping, and certain business practices of the NRSROs. In 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act increased the regulatory scope of the SEC and required that the NRSROs disclose their credit rating methodologies.¹⁴⁶

The SEC recognizes the following NRSROs: A.M. Best Rating Services, Inc., DBRS, Inc., Egan-Jones Ratings Company, Fitch Ratings, Inc., HR Ratings de México, S.A., Japan Credit Rating Agency, Ltd., Kroll Bond Rating Agency, Inc., Moody's Investors Service, Inc., and S&P Global Ratings. Of these, the most active ratings agencies in the municipal bond market are S&P, Moody's, and Fitch. According to a recent report by the SEC, the number of government sector (federal, state, and municipal) bond issue ratings by S&P are 901,312; Moody's has 571,308, and Fitch has 195,667. The large number of bond ratings reflects the large number of issuers within the municipal bond market (over 50,000 issuers), the frequency of issuance for many these issuers, the mostly long-term nature of the debt, which means that the ratings remain active for a longer period of time, and the fact that most municipal bond issuers seek more than one rating for their issue.

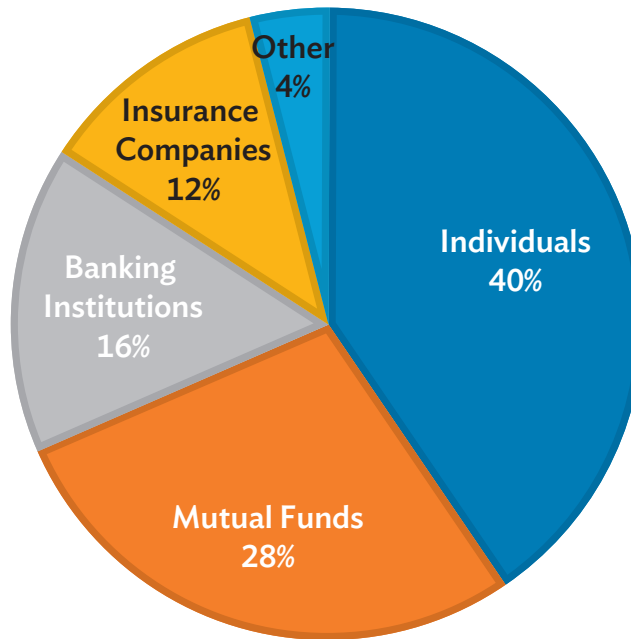
Investors: Most bond markets are dominated by the presence of commercial banks, especially for their holdings of central government bonds and SOE bonds. The US municipal bond market is unique in that the largest group of holdings is by individuals, which hold roughly 44% of all outstanding municipal bonds.¹⁴⁷ This means that the US municipal bond market has a large retail investor component, as well as a large institutional investor component.

¹⁴⁴ D. Finney. 2021. *A Brief History Of Credit Rating Agencies*. www.investopedia.com.

¹⁴⁵ SEC. 2020. *Annual Report on Nationally Recognized Statistical Rating Organizations, As Required by Section 6 of the Credit Rating Agency Reform Act of 2006*. www.sec.gov. p. 1.

¹⁴⁶ SEC, *Annual Report*, p. 4.

¹⁴⁷ SEC, *Annual Report*, p. 5.

Figure 19: US Municipal Bond Holders

Source: SIFMA

Figure 19 above shows the distribution of municipal bond holdings by type of investor. The retail component is understated, since much of the mutual fund category (28% of outstanding municipal bonds) represent shares owned by individual investors who prefer to purchase shares in a fund that has a “beneficial interest” in the cash flows of many municipal issuers rather than purchase individual municipal bonds. Insurance companies, which like long-term annuity-style investments, are also large holders of municipal bonds. Pension funds, which are already tax-exempt, do not benefit from holding tax-exempt municipal bonds. The large retail component reflects individual investor comfort in the disclosure by municipal bond issuers, comfort in the bond ratings, tax advantages to own municipal bonds in one’s state of residence, and a desire by many people to invest in their local school district or community college, etc. The retail component would not be possible without the ample secondary market liquidity enjoyed by the municipal bond market. Over the last 20 years, while the municipal bond market has grown threefold, the amount of individual municipal bond holdings has grown fourfold.¹⁴⁸

¹⁴⁸ SIFMA. Municipal Bond Holders, US-Municipal-Bonds-Statistics. www.sifma.org.

I. Appendix 9: People's Republic of China (PRC)

1. Part 1: Internal Ecosystem for Municipal Debt Issuance

History of Local Government Debt Authority and Issuance:

- (i) **1994 Budget Law, Article 28:** This budget law required local governments to keep expenditures within the limits of their revenues and prohibited both the ability to have a deficit or to issue bonds.¹⁴⁹ Thus, local governments did not have the legal authority to issue debt on their own credit.
- (ii) **Establishment of Early Local Government Financing Vehicles:** In 1992, the Shanghai Municipal Construction Investment and Development General Company was established as the first LGFV, whose purpose was to construct water supplies, roads, and sewers.¹⁵⁰ LGFVs are organized as limited liability corporates, which allow the local governments to circumvent the central government's ban on local government borrowing.¹⁵¹ Banks and the shadow banking sector are the largest lenders to the LGFVs, but the short-term nature of the loans (1–5-year maturities) creates an asset-liability mismatch for the local governments, given the long useful life of the infrastructure assets. It also creates refinancing risk for local governments since the revenues from supported projects are subject to economic and real estate development cycles. They also reportedly subjected local governments to higher borrowing costs than was available in the corporate bond market.
- (iii) **Proliferation of LGFVs with 2009 Reforms:** On 18 March 2009, in response to the GFC, the People's Bank of China and the PRC Banking Regulatory Commission promulgated "Guiding Opinions on Further Adjusting the Credit Structure to Promote the Rapid yet Steady Development of the National Economy."¹⁵² The PRC government reportedly announced a CNY4 trillion stimulus program, much of which was funded by local government borrowing through LGFVs. Authority to create LGFVs were given to 31 provinces; prefectures (333 LGFVs); and counties (2,859 LGFVs). By mid-2013, LGFV debt outstanding was CNY6.97 trillion. As mentioned above, by the end of 2020, Nomura estimated that LGFV debt totaled CNY45 trillion (\$7 trillion); Goldman Sachs put that figure at CNY53 trillion (\$8.2 trillion).
- (iv) **Local Government Bond Pilot Programs:** In 2011, the MoF selected Shanghai, Zhejiang, Guangdong, and Shenzhen as a pilot program whereby the central government would issue bonds on behalf of these local governments, but the bonds would be payable by the central government.¹⁵³
- (v) **Authority to Refinance LGFV Debt with Bonds:** On 31 December 2013, the National Development and Reform Commission (NDRC) gave local governments authority to begin rolling over (refinancing) short-term LGFV debt through longer-term LGFV bonds.¹⁵⁴ In fact, an IMF report records the amount of annual local governments bond issuance under this swap program: CNY3.2 trillion in 2015, CNY4.9 trillion in 2016, and CNY2.8 trillion in 2017.¹⁵⁵
- (vi) **Amendment of the 1994 Budget Law in 2014:** The Standing Committee of the National People's Congress of the People's Republic of China amended Art. 28 of the 1994 Budget Law on 31 August 2014, allowing provincial governments to issue bonds for themselves and

¹⁴⁹ D. Clarke. 2016. *The Law of China's Local Government Debt Crisis: Local Government Financing Vehicles and Their Bonds*. <https://scholarship.law.gwu.edu>. p. 10.

¹⁵⁰ Clarke, *The Law of China's Local Government Debt Crisis*, p. 13.

¹⁵¹ L. Xia and J. Dong. 2014. *China's Budget Law Is Amended To Allow For Municipal Bond Issuance*. www.bbva.com.

¹⁵² Clarke, *The Law of China's Local Government Debt Crisis*, p. 14.

¹⁵³ Xia and Dong, *China's Budget Law Is Amended*.

¹⁵⁴ Clarke, *The Law of China's Local Government Debt Crisis*, p. 18. October 2014, the State Council issued its famous Document 43.

¹⁵⁵ W. Lam and J. Wang. 2018. *China's Local Government Bond Market*. *IMF Working Paper*. www.imf.org. p. 5.

for municipal governments effective January 2015, with approval from the State Council (the PRC's cabinet).¹⁵⁶

- (vii) **Broadened Provincial Bond Pilot Program in 2014:** That same year, the State Council, through the MoF, selected 10 provinces to pilot what it described as a “self-issue, self-repay” bond scheme, under the amended Budget Law. It also created a mechanism for rating bonds, which provided an early warning system of financial problems, and procedures for holding bond issuers accountable.¹⁵⁷ Annual bond issuance became restricted by an annual debt ceiling approved by the National People's Congress,¹⁵⁸ when it meets in March of each year. Bond issuance quotas are set based on the funding needs of a local government, its capacity to service debt, and the economic priorities of the central government.¹⁵⁹ For instance, in recent years, a government priority has been infrastructure investment, and this has resulted in an increase in “special bonds” by local governments, which are issued for infrastructure investment. See Appendix 1 for a complete accounting of local government reforms from 1994 through 2018, as prepared by the IMF.
- (viii) **Additional MoF regulations in 2021:** Several guidance circulars were issued last year, which are designed to guide institutional investors in local government debt. The Guiding Opinions for Banking and Insurance Institutions to Preventing and Resolving Hidden Debt Risks of Local Governments, or Circular 15, stated that financial institutions should not add new “hidden debts” to local governments.¹⁶⁰ This guidance establishes a preference for banking and insurance investors to purchase local government bonds through the open capital markets, rather than of LGFV debt through shadow loans, and requires local banking and insurance regulators to create “emergency risk response plans” where they find hidden debts. A separate guidance note prohibits banking and insurance companies from providing working capital loans or financing for special bond issuance by local governments. In the Local Government Special Bond Project Fund Performance Management Measures, the MoF is requiring that local special purpose bonds be linked to performance targets for the related bond projects, before obtaining authorization to issue the special purpose bonds.

General versus Special Bond Issuance: Local governments are allowed to issue two types of bonds, as described below:

- (i) **General bonds:** Bonds issued to finance infrastructure investments which “produce public benefits but no revenues,” and for which the debt is serviced by general revenue.¹⁶¹
- (ii) **Special Bonds:** Bonds issued to finance infrastructure investments which produce public benefits, and which are also “capable of producing some revenue.” These bonds are also considered as “project bonds” and are serviced through government funds and project revenues.

Local Government Financial Reporting: The legal framework for accounting is provided by the Ministry of Finance with advice from the PRC Accounting Standards Committee, which has a subcommittee on government and nonprofit accounting.¹⁶² These standards apply to both public and private sector

¹⁵⁶ Y. Xu and Q. Yang. 2015. New Development: China's Budget Law And Local Debt. In *Public Money & Management*. www.researchgate.net. p. 12.

¹⁵⁷ Xu and Yang, *Public Money & Management*, p. 3.

¹⁵⁸ Lam and Wang, *China's Local Government Bond Market*, p. 3.

¹⁵⁹ A. Holmes and D. Lancaster. 2019. *China's Local Government Bond Market*. www.rba.gov.au. p. 182.

¹⁶⁰ S. Hsu. 2021. *China's 'Circular 15' Addresses Local Governments' Hidden Debts*. <https://thediplomat.com>.

¹⁶¹ Xu and Yang, *Public Money & Management*, p. 3.

¹⁶² J. Chan and Q. Zhang. 2012. *Government Accounting Standards and Policies*. <http://jameslchan.com>.

entities. The National Audit Office performs all audits of public sector entities. The contents of a local government audit reportedly include six key aspects:¹⁶³

- (i) The role that local government debt plays in supporting the local economy and social development, as well as the measures that the local government has taken toward debt management.
- (ii) The scale, structure, balance, and sources of debt on a yearly basis, including direct and implicit debt.
- (iii) The overall risk profile of annual debt service for which the local government has repayment responsibility. This includes the risks of industries, departments, and financing platform companies with large-scale debt. Metrics analyzed include a debt ratio (the ratio of debt by the end of the year to the available financial resources), debt service ratio (the ratio of principal and interest that year to available financial resources), overdue debt ratio (the ratio of overdue debt by the end of the year to total debt outstanding), and the debt service ratio through refinancing (principal and interest paid through refinancing to the total amount of principal and interest paid that year). The insolvency risks include of major industries supported by debt, such as transportation, municipal construction, colleges and universities, hospitals, financing platform companies, etc.
- (iv) Soundness of the local government debt management system; whether the use of local government debt complies with standards, including whether any illegal guarantees exist in local government departments and agencies; compliance of financing platform companies; presence of illegal fund raising.
- (v) Analysis of the reasons for local government debt formation.
- (vi) Audit recommendations.

2. **Part 2: External Ecosystem for Municipal Debt Issuance**

Rapid Evolution in the PRC's Bond Market Framework and Institutions:

- (i) **Modern PRC Government Bond Issuance Started in 1981:** The first issuance of PRC government bonds occurred in 1950, but issuances were terminated in 1958, and not resumed until 1981, so that the central government could accelerate funding for strategic construction projects.¹⁶⁴
- (ii) **The PRC's Modern Stock Exchanges Established in 1990:** The Shanghai Stock Exchange was established in November 1990.¹⁶⁵ It has grown into comprehensive and open exchange, with trading of stocks, bonds, funds and derivatives, with a current market capitalization of the CNY equivalent of \$7 trillion. The Shenzhen Stock Exchange (SZSE) was established in December of 1990.¹⁶⁶ SZSE's products include equities, mutual funds and bonds, and its current market capitalization is CNY38 trillion (\$6 trillion).
- (iii) **Auction System for PRC Government Bonds Began in 1996:** Government bonds began to be issued through an auction system in 1996.
- (iv) **China Central Depository & Clearing Co., Ltd. Founded in 1996:** China Central Depository & Clearing Co., Ltd. (CCDC) was founded in December 1996 as a central financial SOE.¹⁶⁷ CCDC provides a full set of life-cycle services for CNY-denominated bonds and provides a

¹⁶³ National Audit Office of the People's Republic of China. 2013. *Introduction on Audit of Local Government Debt in China*. www.audit.gov.cn.

¹⁶⁴ J. Bai, M. Fleming, and C. Horan. 2013. *The Microstructure of China's Government Bond Market*. www.newyorkfed.org. p. 3. (Staff Report No. 622)

¹⁶⁵ History and Development, Shanghai Stock Exchange, <http://english.sse.com.cn>.

¹⁶⁶ Overview, Shenzhen Stock Exchange (SZSE), www.szse.cn.

¹⁶⁷ China Central Depository & Clearing Co., Ltd. (CCDC), www.ccdc.com.cn.

regulatory support function for the China Banking and Insurance Regulatory Commission and the NDRC. At year-end 2020, it had a total of CNY125 trillion of various assets under registration and management, of which CNY87 trillion were bonds. Its wholly owned subsidiaries include China Wealth Management Registration & Custody Co., Ltd., China Bond Pricing Center Co., Ltd., China Bond Finance & Information Technology Co., Ltd., and CCDC Goldstone Property Management Co., Ltd.

- (v) **China Government Securities Depository Trust & Clearing Co., Ltd. Created in 1997:** The year after the first auction took place, a centralized securities depository, the PRC Government Securities Depository Trust & Clearing Co., Ltd., was created.
- (vi) **The PRC created the China Interbank Bond Market in 1997:** Also in 1997, the PRC created the PRC Interbank Bond Market (CIBM), an interbank electronic trading system, in response to a People's Bank of China mandate that commercial banks move their repo and bond trading activities out of the stock exchanges and into an interbank trading market.¹⁶⁸
- (vii) **Financial Markets Regulator Created in 1998:** The PRC Securities Regulatory Commission (CSRC) was created in 1998 with the passage of the PRC's securities law.¹⁶⁹ The CSRC is the functional equivalent of the SEC in the US. It reports directly to the PRC's State Council, and regulates the country's securities markets, with a focus on standardization of operations, enhancement of market supervision, control of excessive speculation, manipulative trading and other fraudulent practices, enhanced disclosure, and stable growth.
- (viii) **Enterprise Bankruptcy Law introduced in 2007:** The PRC's bankruptcy law, the Enterprise Bankruptcy Law, was introduced in 2007, and applies to all companies incorporated under PRC laws and subject to PRC regulations.¹⁷⁰ According to a report by the US Department of State, the PRC now has more than 90 US-style specialized bankruptcy courts; nationwide, 19,000 liquidation and bankruptcy cases were recorded in 2019. The PRC government is gradually allowing some companies to fail, even some local SOEs, but some companies are reportedly avoiding a formal bankruptcy proceeding for fear of potential local government interference in the process.
- (ix) **National Association of Financial Market Institutional Investors (NAFMII) founded in 2007:** NAFMII is a self-regulatory organization founded on 3 September 2007, under the approval of the PRC State Council.¹⁷¹ It promotes the development of the PRC's over-the-counter financial market, which is composed of the interbank bond market, inter-bank lending market, foreign exchange market, commercial paper market, and gold market. Its membership includes policy banks, commercial banks, credit cooperative banks, insurance companies, securities houses, fund management companies, trust and investment companies, finance companies affiliated with corporations, credit rating agencies, accounting firms, and companies in nonfinancial sectors. It admits and administers active market participants and intermediaries into the CIBM and facilitates the registration of nonfinancial enterprise bonds.
- (x) **National Development and Reform Commission (NDRC):** The NDRC is a ministerial-level department of the State Council. The NDRC implements the CPC Central Committee's policies and decisions on development and reform. Its Department of Fixed Asset Investment is charged with the following:
 - a) Make recommendations for deepening the reform of investment and financing systems.
 - b) Draft relevant laws and regulations on fixed asset investment management.

¹⁶⁸ Deutsche Borse Group. 2019. *Investment Regulation – China – China Interbank Bond Market*. www.clearstream.com.

¹⁶⁹ J. Chen. 2020. *China Securities Regulatory Commission*. www.investopedia.com.

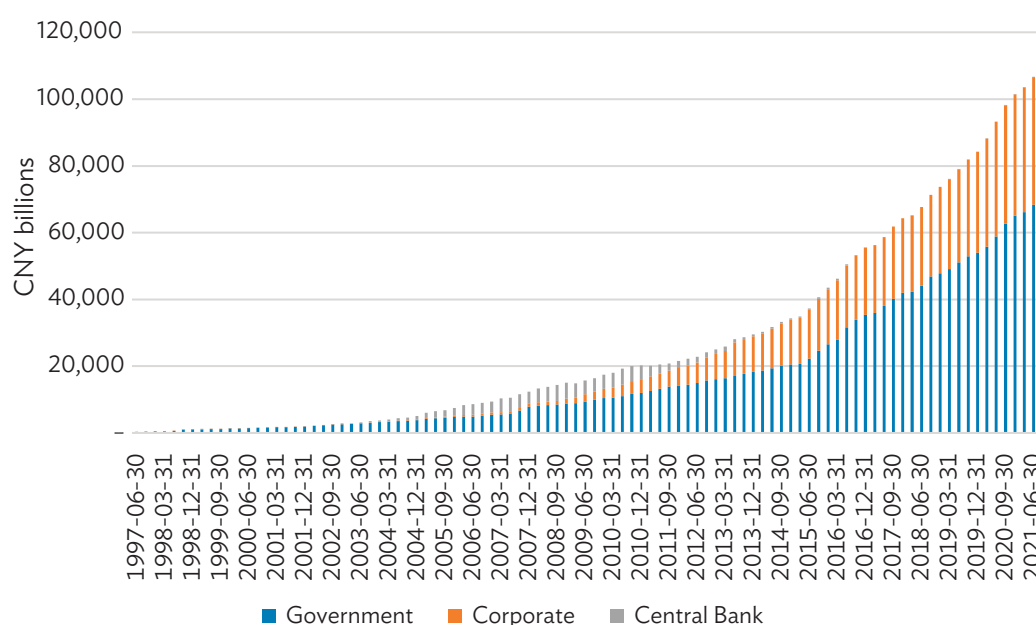
¹⁷⁰ US Department of State. 2021. *2021 Investment Climate Statements: China* (webpage). www.state.gov.

¹⁷¹ About NAFMII, National Association of Financial Market Institutional Investors, www.nafmii.org.cn.

- c) Make recommendations with respect to the approval of government investment projects and the catalogue of fixed asset investment projects approved by the government.
- d) Arrange fiscal development funds from the central government and review major projects.
- e) Coordinate and advance the reform of the approval system of investment projects.
- f) Formulate policies to flourish private investment.
- g) Organize and promote the cooperation between the government and social capital.
- h) Guide the development of the engineering consulting industry.¹⁷²

The Issuance and Use of Ratings: According to a report by Fitch Ratings, the PRC has nine local ratings agencies that are qualified by a variety of regulators to issue ratings on the bonds of certain asset classes, and for the benefit of certain classes of investors. Three of these local ratings agencies have a combined market share of over 60% of the outstanding ratings: China Chengxin International, Dagong Global Credit Rating, and China Lianhe Credit Rating.¹⁷³ PRC regulators have allowed S&P and Fitch Ratings to rate PRC corporate and SOE bonds; however, the market cannot accept international ratings for domestic bonds, so the effect is that they rate only bonds issued in the international markets. A report by Bloomberg shows that most domestic market bonds are rated AAA by the domestic ratings agencies, irrespective of asset class or credit fundamentals.¹⁷⁴ AAA and AA category ratings reportedly account for 99% of all bond ratings in the PRC domestic market. An IMF report detailed how credit ratings in the PRC do not seem to differentiate credit quality among the provinces, with most local governments achieving an AAA rating. This results in bond spreads not being correlated to measures of provincial growth, debt ratios, or fiscal balances.¹⁷⁵

Figure 20: Size & Composition of the PRC's Bond Market 1997–2021



Note: PRC – People's Republic of China

Source: Asian Bonds Online

¹⁷² National Development and Reform Commission (NDRC), <https://en.ndrc.gov.cn>.

¹⁷³ Fitch Ratings. 2019. *China Corporate Bond Market Blue Book*. www.fitchratings.com.

¹⁷⁴ Bloomberg Buy-Side Solutions. 2021. *China Bond Market Insight 2021*. <https://assets.bbhub.io>. Slide 29.

¹⁷⁵ International Monetary Fund. 2019. *The Future of China's Bond Market*. www.imf.org. p. 126.

Growth in the PRC's Bond Market: By June of 1997, the country's bond market had only CNY296.5 billion (\$32.5 billion) outstanding,¹⁷⁶ all of which was issued by either the government or by the Central Bank. Meaningful amounts of corporate sector debt do not appear until 1998. By June of 2021 (only 24 years later), the country's bond market had grown to CNY111 trillion (\$16.5 trillion), of which 64% was government sector bonds and 36% was corporate sector bonds (see Figure 20 above "Size & Composition of the PRC's Bond Market"). The PRC currently has the world's second-largest bond market, with outstanding bonds equal to 97.5% of its GDP. Government bonds include obligations of the central government, local governments, and the central bank. Corporates comprise both public and private companies, including financial institutions. Further clarification on how local government debt factors both into government sector and corporate sector debt is provided below. Financial institutions comprise both private and public sector banks, and other financial institutions. In the PRC, bonds are defined as long-term bonds and notes, Treasury bills, commercial paper, and other short-term notes; short-term debt is not defined as bonds in the US. Although public sector debt has grown extensively over the last 20 years, as of 29 May 2020, over 98% was held onshore, so that the PRC, like Japan, faces little exposure to foreign financial markets.¹⁷⁷ Periods of growth in public sector debt include a government stimulus program that followed the GFC (it was put into place to boost domestic demand and reduce the economy's dependence on exports), and during the COVID-19 pandemic.¹⁷⁸

In most countries, central government debt is the largest component of the bond market. In the PRC, local government bonds are the largest share of outstanding bonds (23% of bonds outstanding, according to Bloomberg), while central government bonds represent 18% of outstanding bonds (see graph above for the distribution of bonds outstanding by type of issuer).¹⁷⁹ Nevertheless, this is an incomplete picture. If central policy bank bonds are included, then the central government share rises to 35%. If LGFV bonds, which are often reported as corporate bonds, then the local government share rises. Shadow banking (in the PRC's case, higher interest off-balance sheet funds, or loans by banks, instead of securitizations, as in the US) grew rapidly in 2010, as banks "sought to evade credit restrictions and regulatory controls on Deposit rates."¹⁸⁰ Much of this lending was for SOEs and LGFV.

J. Appendix 10: Japan

1. Part 1: Internal Ecosystem for Municipal Debt Issuance

Constitution (effective 3 May 1947): Chapter VIII Local Self-Government established the rights and responsibilities of local governmental entities.¹⁸¹

- (i) **Article 92:** Requires that regulations concerning the organization and operations of local public entities shall be fixed by local law.
- (ii) **Article 94:** Gives local public entities the right to manage their "property, affairs and administration and to enact their own regulations."
- (iii) **Article 95:** States that if a special law is passed by the Government of Japan, which is applicable to only one local public entity, the Diet cannot enact that law without the consent of a majority of the voters of the affected local public entity.

¹⁷⁶ AsianBondsOnline, Data Portal, China, <https://asianbondsonline.adb.org>.

¹⁷⁷ Marshall and Yang, *Chinese Bond Market – Evolution and Characteristics*, p. 3.

¹⁷⁸ Marshall and Yang, *Chinese Bond Market – Evolution and Characteristics*, p. 13.

¹⁷⁹ Bloomberg Buy-Side Solutions, *China Bond Market Insight 2021*, slide 7.

¹⁸⁰ Marshall and Yang, *Chinese Bond Market – Evolution and Characteristics*, p. 14.

¹⁸¹ Constitution of Japan, <https://japan.kantei.go.jp>.

Local Autonomy Law (Law No. 67 of 1947): The Act established most of Japan's contemporary local government structures and administrative divisions, including for prefectures and municipalities.

- (i) **Article 221 (Investigation):** The chief executive of a local body may conduct investigations or demand reports on the state of revenues and expenditures from commissions or commissioners, on contractors of public works, suppliers of goods.¹⁸² These provisions also apply to any corporation in which the ordinary local public body has made an investment, or obligates itself by guaranteeing the corporation's debt, or to any fiduciary of a trust specified in a cabinet order where the local public body has the right to receive benefits.
- (ii) **Article 230 (Local Public Bonds):** Local public bodies may issue local public bonds, as provided in their respective budgets. The purpose of the issuance, the maximum amount, the method of issuance, the interest rate, and the method of repayment will be disclosed in the budget.
- (iii) **Article 233 (Statement of Accounts):** The chief accountant or treasurer shall prepare a statement of accounts for each fiscal year to submit to the chief executive within 3 months after the closing of accounts. This statement shall also be referred to the audit commissioners. The chief executive shall submit the statement to the assembly for certification once audited prior to the next budget. The chief executive shall submit the statement of accounts, the assembly's approval resolution and comments of the audit commissioners to the Minister of Home Affairs or to the prefecture governor (depends upon the level of government), and make the finances public.
- (iv) **Article 235-3 (Floating Debt):** The chief executive may issue floating rate debt to make an expenditure payment within the budget, which shall also fix the maximum amount of floating rate debt and shall redeem the debt with revenues of the current fiscal year.

Local Government Reforms: Since the 1950s, after enactment of the new postwar Constitution and the Local Autonomy Law, Japan passed and enacted a series of decentralization reforms with the aim of decreasing the number of local governmental entities, while increasing their responsibility, accountability, and financial performance.

Municipality Merger Promotion Law (1953) and the New Municipality Creation Promotion Law (1956): Municipal mergers were implemented following passage of these acts, so that, by 1961, the number of municipalities fell from 9,868 to 3,975.¹⁸³

The Great Heisei Consolidation (1999–2010): This period of consolidation saw another decrease in the number of municipalities to 1,821 by 2006.¹⁸⁴ Whereas previous merger periods dealt with urbanization and the merger of suburban towns around major cities, the more recent mergers had the purpose of dealing with the demographic effects of an aging and declining population, and the deteriorating financial situation of local governments.

Ongoing Local Government Reforms and Consultations: Since the 1990s, a variety of committees, councils, and institutes have been considering and promulgating local government reform measures and plans for consideration by the Japanese government. While these efforts resulted in some administrative changes in the roles between the central and local governments, this comprehensive process did not result in meaningful changes to local autonomy and to local finances, including for local government debt issuance. This process appears to continue to the present day.

¹⁸² Local Autonomy Law, Chapter IX Finance, p. 3-4 & 6, www.chihousai.or.jp.

¹⁸³ K. Yokomichi. 2007. *The Development of Municipal Mergers in Japan*. www.clair.or.jp

¹⁸⁴ Yokomichi, *Municipal Mergers*, p. 5.

According to the MIC, however, since 2006, there is a consultative process that must be followed prior to a local government debt issuance.¹⁸⁵

- (i) Prefectures and government designated cities must consult with the MIC prior to a debt issue. Municipalities must consult with their prefectural governor.
- (ii) Only local governments with the consent of the MIC or the prefectural governor can borrow public funds (from the central government or from the JFM).
- (iii) If a local government wants to issue a bond without consent, the head of the local government must report the issuance to the local government's assembly.
- (iv) The MIC releases the standard for consent every fiscal year.
- (v) Issuers with a high real-debt-payment ratio, and public enterprises with a high deficit must obtain approval from the MIC or prefecture governor to issue debt. In certain cases, the local government must also draft a debt management plan (also called a financial soundness plan or a financial rebuilding plan) for approval by the MIC. In certain extreme cases, the local government can be prohibited from issuing debt. Key financial indicators monitored by the local governments and by the MIC, which are used to determine debt consent or approval include the 1) real deficit ratio, 2) consolidated real deficit ratio, 3) real debt service payment ratio (to general revenue), 4) future debt burden ratio (outstanding plus new bonds of the government and/or its enterprises), and 5) the funding shortfall ratio of public enterprises (to total spending; a measure of contingent borrowing requirements).¹⁸⁶

Article 36. Special Case for Overseas Local Government Bonds: This provision allows for local governments to issue Yen-denominated bonds in overseas bond markets.

Local Finance Law, Articles 5-7, Joint Issuance of Local Government Bonds: This amendment to the local finance law allows two or more local governments to jointly offer a single bond issue to the market. A joint bond offering is legally a joint and several obligation of each issuer.

Japan Finance Organization for Municipalities: JFM is a nonprofit organization, wholly owned by Japanese local governments, and authorized under the Japan Finance Organization for Municipalities Law (Act No. 64 of 2007).¹⁸⁷ JFM issues bonds directly into the bond market and uses the proceeds to make long-term and low-interest loans to Japanese local governments. In order to borrow from JFM, local governments must receive the consent or approval from their respective prefecture governor and from the Minister for Internal Affairs and Communications. JFM was established on 1 August 2008, and capitalized by prefectures, cities, special wards of Tokyo, government-designated cities, towns and villages, and some local government associations. It commenced operations on 1 October 2008.

JFM's initial capitalization of the equivalent of \$150 million and its outstanding bonds and bank loans of ¥20.6 trillion (\$187 billion) allows it to support a municipal loan portfolio of ¥23.1 trillion (\$209 billion), as of 31 March 2021. JFM's bonds are supported internally by a ¥2.8 trillion (\$26 billion) interest reserve, and, externally, by a Government of Japan guarantee covering 90% of its bonds; only 10% are not guaranteed. Therefore, JFM has become a benchmark bond issuer in the domestic bond market. JFM's bonds are rated A1 by Moody's / A+ by S&P / AA+ by R&I. JFM's municipal loan book represents approximately 12% of the local government debt outstanding.

¹⁸⁵ JLGB European Road Show. 2010. *Local Government Bond System and Market in Japan*. www.soumu.go.jp. p. 27–28.

¹⁸⁶ JLGB European Road Show, *Local Government Bond System*, p. 31.

¹⁸⁷ About JFM, Lending and Funding Operations, Japan Finance Organization for Municipalities, www.jfm.go.jp.

2. Part 2: External Ecosystem for Municipal Debt Issuance

Financial Instruments and Exchange Act (Act No. 25 of 1948; amendments in 2007): Financial Instruments and Exchange Act is the primary act governing the debt securities markets in Japan.¹⁸⁸ Amendments to the act enhance investor protections, disclosure requirements, the self-regulatory operations of the exchanges, and provide for strict countermeasures against unfair trading.

Financial Services Agency of Japan (FSA): The FSA is the regulator responsible for Japan's debt securities markets. The FSA's role is to ensure the stability of Japan's financial system, including the protection of depositors, insurance policyholders and securities investors.¹⁸⁹ It supervises private sector financial institutions and surveillance over securities transactions.

Tokyo Stock Exchange: In addition to the over-the-counter market, the primary debt securities exchange in Japan is the TSE, although the number of listed bonds is small in comparison to listed equities.¹⁹⁰ Currently, only the Japanese Government lists bonds on the TSE. As of 31 December 2019, the total listed face value of bonds was ¥913.6 trillion.

TOKYOPRO-BOND Market: In 2011, the TOKYOPRO-BOND Market (TPBM) commenced operations as an electronic platform with speed of execution, and with simplified disclosure documentation (including in English) and issuance procedures. It also accommodates listings in other than Japanese Yen. An issuer can list a bond program, such as an Medium-Term Note program or an individual bond issue. As of 9 July 2020, TPBM lists 30 bond programs and the bonds of 22 issuers. Listing requirements include a rating by Moody's, Standard & Poor's and Fitch, and underwriters and securities companies for the bonds must be recognized by the TSE. Issuers listed on TPBM must also file annual financial statements with the TSE. Other material events disclosure requirements also apply for listing.

Financial Instruments and Exchange Act Disclosure requirements: Listing requirements for debt securities on the TSE include the following:¹⁹¹

- (i) Companies listing debt securities must file with the local finance bureau through the Electronic Disclosure for Investors' NETwork.
- (ii) The company must file annual securities reports within 3 months after the end of the fiscal year, for both the company and the corporate group, if applicable.
- (iii) The company is required to file quarterly securities reports within 45 days after the end of each quarter (again, for the company and for the group).
- (iv) A company that is required to file extraordinary reports to disclose important decisions and events that may significantly affect a company's business or financial results.

Primary Documents for Issuance and Listing:¹⁹²

- (i) Terms and conditions of the debt securities
- (ii) Shelf registration statement and supplement if filing a debt program
- (iii) Prospectus
- (iv) Press releases
- (v) Underwriting agreement, and agreement between managers and the agency
- (vi) Listing application to be submitted to the TSE.

¹⁸⁸ Financial Instruments and Exchange Act, Financial Services Agency, www.fsa.go.jp.

¹⁸⁹ Financial Services Agency, www.fsa.go.jp.

¹⁹⁰ K. Yoshii, et al. 2020. *Debt Capital Markets in Japan: Regulatory Overview*. www.amt-law.com. pp. 4–5.

¹⁹¹ Yoshii, et al., *Debt Capital Markets in Japan*, p. 7.

¹⁹² Yoshii, et al., *Debt Capital Markets in Japan*, p. 9.

Ratings Requirements: As noted above, debt programs, corporate bonds, and notes that are listed on the TPBM must have a rating from a credit ratings agency that is recognized by Japanese and international investors.¹⁹³ Bonds issued by a local government or guaranteed by a national or local government do not require a rating. Recognized ratings agencies in Japan include Standard & Poor's, Moody's, Fitch Ratings, Rating and Investment Information (R&I), Japan Credit Rating Agency, and RAM Rating Services. Although municipal bonds are not required to be rated, many of the bond issues carry ratings by either R&I or Moody's.

Article 5-2 Act on Special Measures Concerning Taxation: This Act allows nonresidents and foreign corporations to apply for tax exemption when they invest in local government bodies (LGBs).¹⁹⁴ Before this act was enacted, a 15% withholding tax rate applied to foreign investors of LGBs.

Municipal Bond Issuance: For FY2018, the last year for which detailed figures are available from the Government of Japan, municipal debt issuance totaled ¥7.4 trillion (\$66.5 billion), which was allocated in the following way:¹⁹⁵

- (i) Direct LGBs (public and private placement) into the debt market totaled ¥5.1 trillion (\$46 billion), all of which was issued in the Japanese market and denominated in Yen, except for a \$500 million issue, which was issued overseas.
- (ii) Joint LGB issuance totaled ¥1.2 trillion (\$10.9 billion).
- (iii) JFM issued ¥1.1 trillion (\$9.6 billion) and used the proceeds to make loans to municipalities.

Municipal bond issuance represents a small proportion of total bonds issued in Japan. The Japan Securities Dealers Association, which also follows debt issuance in Japan, reported that municipal issuance for calendar year 2020 was ¥7 trillion, which includes direct and joint LGBs.¹⁹⁶ Municipal bonds only represented 3% of total bonds issued in 2020. Government of Japan bonds and government guaranteed bonds, by contrast, collectively represented 86% of total bond issuance in 2020; corporate bonds represented 7%; Japan also has a structured finance bond market. While total bond issuance has grown over the last 10 years, the relative weights of the central and municipal government issuance have remained the same, whereas the relative weight of corporate bond issuance has grown in recent years.

The vast majority of LGBs are issued in Japan in Yen; however, Tokyo has on several occasions issued foreign currency bonds through private placement. In 2017, for instance, it issued a \$500 million, 5-year bond.¹⁹⁷ Tokyo issued a second \$500 million 5-year bond in 2018, and in 2019, a \$1 billion 5-year bond. All three issues were listed in both London and Tokyo (the latter for secondary trading).

The maturity profile of LGBs has broadened over the last 20 years. In the 1990s, bonds with 10-year maturities were common. Beginning in 2000, some municipalities began to issue 2-to-7-year bonds, and by 2003, they began to issue 12-to-30-year bonds. By 2018, the last year for which detailed issuance information is available, the mix of bonds issued by maturity was 17% 2-to-7-year bonds, 56% 10-year bonds, and 27% 12-to-30-year bonds.¹⁹⁸

¹⁹³ ADB. 2016. ASEAN+3 BOND MARKET GUIDE 2016, JAPAN. www.adb.org. p. 91.

¹⁹⁴ JLGB European Road Show, *Local Government Bond System*, p. 38.

¹⁹⁵ Japan Local Government Bond Association. 2019. Local Government Bond Market and Public Offering Joint Local Government Bond. www.chihousai.or.jp. p. 5.

¹⁹⁶ Japan Securities Dealers Association. 2021. *The Fact Book 2021*. www.jsda.or.jp. p. 36.

¹⁹⁷ Tokyo Metropolitan Government (TMG). 2019. *Budget Division, Bureau of Finance Tokyo Metropolitan Government, Japan*. www.zaimu.metro.tokyo.jp. p. 15.

¹⁹⁸ Japan Local Government Bond Association, *Local Government Bond Market 2019*, p. 6.

The spread of most bonds in Japan relative to the benchmark Government of Japan bond are tight in comparison to other Asian markets. Asset-backed securities, for instance, trade at an average spread of 54 bps over the benchmark government bond.¹⁹⁹ The average corporate bond trades at a 34-bps spread. LGBs trade at only a 20-bps spread, which is favorable given that the average spread for government guaranteed bonds is only 15 bps. In 2019, the Joint-LGBs traded at spreads of 15 bps. JFM-issued bonds trade at similarly favorable spreads to the benchmark JGBs.

Issuance of Joint-LGBs: Issuers of Joint-LGBs now include 36 local governments, including 24 prefectures and 12 cities.²⁰⁰ As discussed above, these bonds carry a joint-and-several obligation, so that each city that enters into a joint bond arrangement is liable for the entire bond issue. These bonds are typically issued as 10-year bullet maturities and have a fixed interest rate that resets monthly. They are usually priced shortly after a JGB auction so that pricing inputs are very current. A key feature of the joint-LGBs is a fully funded sinking fund (really a debt service reserve fund [DSRF]), equal to one-tenth of the issuance size. The fund is held by the trustee bank for the bond. One goal of the Joint-LGB was to increase liquidity to the bond market by offering larger sized bond issues. This appears to have been successful. From April 2018 through March 2019, for instance, Joint-LGBs were consistently among the largest bond issues, on par or greater in size than corporate bond issues such as by Fast Retailing, Nomura Holdings, and Central Nippon Expressway. The increased size and frequency of these bonds, as well as their relatively high ratings (there were 12 Joint-LGBs issued during the period above; Moody's rates 15 Joint-LGBs A1) were positives for investors in the Japanese bond market.

Investors in Municipal Bonds: Institutional investors are the primary holders of Japanese municipal bonds. As of Q1 2019, households held only .5% of municipal bonds, in sharp contrast to the US municipal bond market, which is primarily a retail investor market. Key institutional investor holdings are banks (53%), insurance companies (23%), governments (15%), and private pension funds (3%).²⁰¹ Japan offers a tax-exempt status to international investors of Japanese local government bonds, and foreign investor holdings are now 1% of invested municipal bonds. The investor distribution of municipal bonds has changed over the last 10 years. Bank holdings increased from 39% in 2010 to 53% by 2019, while insurance holdings decreased from 29% in 2010 to 23% by 2019.²⁰²

K. Appendix 11: A Survey of Municipal Bonds in India, the Philippines, and Viet Nam

1. Municipal Bond Issuances: India

Issuer	Bond Issue Details	Status
Bangalore Municipal Corporation	INR 1,250 mill. 13% taxable bonds, issued 1997	matured
Ahmedabad Municipal Corporation	INR 1,000 mill. 14% taxable bonds, issued 1998	matured
Ludhiana Municipal Corporation	INR 100 mill. 13.5% taxable bonds, issued 1999	matured
Nashik Municipal Corporation	INR 1,000 mill. 14.75% taxable bonds, issued 1999	matured
Indore Municipal Corporation	INR 100 mill. 13% taxable bonds, issued 2000	matured
Madurai Municipal Corporation	INR 300 mill. 12.25% taxable bonds, issued 2001	matured
Nagpur Municipal Corporation	INR 500 mill. 13% taxable bonds, issued 2001	matured

Continued on next page

¹⁹⁹ Japan Local Government Bond Association, *Local Government Bond Market 2019*, p. 10, p. 31.

²⁰⁰ Japan Local Government Bond Association, *Local Government Bond Market 2019*, p. 16–19.

²⁰¹ Japan Local Government Bond Association, *Local Government Bond Market 2019*, p. 8

²⁰² JLGB European Road Show, *Local Government Bond System*, p. 8.

continued

Issuer	Bond Issue Details	Status
Ahmedabad Municipal Corporation	INR 1,000 mill. tax-free bonds, issued 2002	matured
Water & Sanitation Pooled Fund Trust (WSPF)	INR 12.8 mill. 9.2% bond, issued 12/2002, maturing 12/2017	matured
Hyderabad Municipal Corporation	INR 825 mill. tax-free bonds, issued 2003	matured
Nashik Municipal Corporation	INR 500 mill. tax-free bonds, issued 2002	matured
Hyderabad Metropolitan Water Supply & Sewage Board	INR 500 mill. tax-free bonds, issued 2003	matured
Chennai Metropolitan Water Supply & Sewage Board	INR 420 mill. tax-free bonds, issued 2003	matured
Ahmedabad Municipal Corporation	INR 580 mill. tax-free bonds, issued 2004	matured
Visakhapatnam Municipal Corporation	INR 500 mill. tax-free bonds, issued 2004	matured
Visakhapatnam Municipal Corporation	INR 200 mill. 7.75% taxable bonds, issued 2004	matured
Karnataka Water and Sanitation Pooled Fund (KWSPF)	INR 1,000 mill. 5.95% tax-free bonds, issued 6/2005, maturing 6/2020	matured
Chennai Metropolitan Water Supply & Sewage Board	INR 500 mill. tax-free bonds, issued 2005	matured
Chennai Municipal Corporation	INR 458 mill. tax-free bonds, issued 2005	matured
Ahmedabad Municipal Corporation	INR 1,000 mill. tax-free bonds, issued 2005	matured
Nagpur Municipal Corporation	INR 212 mill. tax-free bonds, issued 2007	matured
Water & Sanitation Pooled Fund Trust (WSPF)	INR 13.4 mill. 7.25% Pooled Finance Development Fund (PFDF) enhanced issue I bonds, issued 4/2008, maturing 4/2018	matured
Water & Sanitation Pooled Fund Trust (WSPF)	INR 433.72 mill. 7.5% Pooled Finance Development Fund (PRDF) enhanced issue II bonds, issued 9/2010, maturing 9/2020	matured
Water & Sanitation Pooled Fund Trust (WSPF)	INR 510 mill. 10.6% MFI-Tranche I bonds, issued 8/2012, maturing 8/2022	matured
Water & Sanitation Pooled Fund Trust (WSPF)	INR 510 mill. 8.71% MFI Tranche II bonds, issued 5/2013, maturing 5/2023	outstanding
Pune Municipal Corporation	INR 200 ₹ 7.59% bonds, issued 6/2017, maturing 6/2027	outstanding
Greater Hyderabad Municipal Corporation	INR 200 ₹ 8.9% bonds, issued 2/2018, maturing 2/2028	outstanding
Indore Municipal Corporation	INR 139.9 ₹ 9.25% bonds, issued 6/2018, maturing 6/2028	outstanding
Andhra Pradesh Capital Region Development Authority	INR 2,000 ₹ 8.68% bonds, issued 8/2018, maturing 8/2028	outstanding
Greater Hyderabad Municipal Corporation	INR 195 ₹ 9.38% bonds, issued 8/2018, maturing 8/2028	outstanding
Bhopal Municipal Corporation	INR 175 ₹ 9.55% bonds, issued 9/2018, maturing 9/2028	outstanding
Visakhapatnam Municipal Corporation	INR 80 ₹ 9.5% bonds, issued 12/2018, maturing 12/2028	outstanding
Ahmedabad Municipal Corporation	INR 200 ₹ 8.7% bonds, issued 1/2019, maturing 1/2024	outstanding
Surat Municipal Corporation	INR 200 ₹ 8.68% bonds, issued 2/2019, maturing 2/2024	outstanding

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continued

Issuer	Bond Issue Details	Status
Greater Hyderabad Municipal Corporation	INR 100 ₹ 10.23% bonds, issued 8/2019, maturing 8/2029	outstanding
Lucknow Municipal Corporation	INR 200 ₹ 8.5% bonds, issued 11/2020, maturing 11/2030	outstanding
Ghaziabad Municipal Corporation	INR 150 mill. 8.1% bonds, issued 3/2021, maturing 3/2031	outstanding
Vadodara Municipal Corporation	INR 100 ₹ 7.15% bonds, issued 3/2022, maturing 2/2027	outstanding

2. **Municipal Bond Issuances: Viet Nam**

Issuer	Bond Issue Details	Status
Ho Chi Minh City Finance / Investment State Owned Company	3.75% 22dec2050, VND	Outstanding
Ho Chi Minh City Finance / Investment State Owned Company	3.53% 22dec2040, VND	Outstanding
Ho Chi Minh City Finance / Investment State Owned Company	11% 2nov2025, VND	Outstanding
Ho Chi Minh City Finance / Investment State Owned Company	6.4% 27dec2048, VND	Outstanding
Ho Chi Minh City Finance / Investment State Owned Company	6.35% 19dec2032, VND	Outstanding
Ho Chi Minh City Finance / Investment State Owned Company	6.5% 19dec2037, VND	Outstanding
Ho Chi Minh City Finance / Investment State Owned Company	7.55% 25oct2031, VND	Outstanding
Ho Chi Minh City Finance / Investment State Owned Company	7.4% 14oct2020, VND	Matured
Ho Chi Minh City Finance / Investment State Owned Company	8.05% 14oct2030, VND	Outstanding
Ho Chi Minh City Finance / Investment State Owned Company	7.25% 17sep2020, VND	Matured
Hanoi State Treasury	7.2% 19aug2019, VND	Matured
Hanoi State Treasury	7.2% 31aug2020, VND	Matured
Hanoi State Treasury	7.4% 23nov2020, VND	Matured
Quang Ninh Province	7.38% 31dec2020, VND	Matured
Hai Phong People's Committee	6% 11dec2022, VND	outstanding
Hai Phong People's Committee	4.3% 17dec2024, VND	outstanding
Hai Phong People's Committee	7.5% 5aug2020, VND	matured
Ho Chi Minh City Finance / Investment State Owned Company	3.75% 22dec2050, VND	Outstanding
Ho Chi Minh City Finance / Investment State Owned Company	3.53% 22dec2040, VND	Outstanding
Ho Chi Minh City Finance / Investment State Owned Company	11% 2nov2025, VND	Outstanding
Ho Chi Minh City Finance / Investment State Owned Company	6.4% 27dec2048, VND	Outstanding

3. Municipal Bond Issuances: the Philippines

Issuer	Bond Issue Details	Status
Urdaneta City	PHP 25 mill. municipal bonds, issued 5/1999, maturing 5/2004	matured
Boracay-Aklan Province	PHP 40 mill. provincial bonds, issued 7/1999, maturing 7/ 2006	matured
Puerto Princesa City	PHP 320 mill. green bonds, issued 2/2000, maturing 2/2007	matured
Caloocan City / Katipunan	PHP 185 mill. Ser. A, PHP 225 mill. Ser. B, PHP 210 mill. Ser. C bonds, issued 12/2000, maturing 12/2007	matured
Tagaytay City	PHP 220 mill. tourism bonds, issued 3.2001, maturing 3/2008	matured
Iloilo City	PHP 130 mill. bonds, issued 4/2001, maturing 4/2004	matured
Albay/Daraga	PHP 75 mill. municipal bonds, issued 5/2002, maturing 5/2009	matured
Pangasinan/Bayambang	PHP 42 mill. bonds, issued 8/2002, maturing 8/2009	matured
Leyte Province	PHP 205 mill. Ser. A bonds, issued 3/2003, maturing 3/2010	matured
San Juan City	PHP 390 mill. bonds, issued 7/2003, maturing 7/2010	matured
Cavite / Carmona	PHP 150 mill. bonds, issued 3/2004, maturing 3/2011	matured
Bulacan / Baliwag	PHP 50 mill. bonds, issued 6/2006, maturing 6/2013	matured
Ifugao / Alfonso Lista	PHP 72.5 mill. water bonds, issued 3/2010, maturing 3/2020	matured
Aklan Province	PHP 260 mill. bonds, issued 4/2010, maturing 4/2020	matured
Pangasinan Infanta	PHP 50 mill. water bonds, issued 10/2011, maturing 10/2021	outstanding
Urdaneta City	PHP 25 mill. municipal bonds, issued 5/1999, maturing 5/2004	Matured
Boracay-Aklan Province	PHP 40 mill. provincial bonds, issued 7/1999, maturing 7/ 2006	matured
Puerto Princesa City	PHP 320 mill. green bonds, issued 2/2000, maturing 2/2007	Matured
Caloocan City / Katipunan	PHP 185 mill. Ser. A, P 225 mill. Ser. B, P 210 mill. Ser. C bonds, issued 12/2000, maturing 12/2007	Matured
Tagaytay City	PHP 220 mill. tourism bonds, issued 3.2001, maturing 3/2008	Matured
Iloilo City	PHP 130 mill. bonds, issued 4/2001, maturing 4/2004	Matured

L. Appendix 12: A Municipal Bond Primer

1. Introduction

Municipal bonds are marketable debt securities issued by municipalities, or by subnational public authorities (such as municipal utilities) to investors. The proceeds of a bond issue are sometimes thought of as a revenue source, but they are not, since bonds are a financing source that represent a contractual obligation that must be repaid to investors. Depending upon the bond market's conditions at the time of issuance, and the credit quality of the bond issuer, a bond creates a promise to repay the borrowed money by a specified maturity date, and at a specified interest rate. For the issuer, the proceeds of municipal bonds are used to finance much-needed infrastructure development projects. For the investor, the bonds provide an asset class, maturity, and interest rate that is beneficial to its investment portfolio. Increasingly, they are also used by investors to demonstrate engagement with environmental, social, and governance values.

Many municipal projects are financed through the grants from central and state governments, as well as through surplus operating cash flows of municipalities. Nevertheless, these cash-based funds are often inadequate relative to the infrastructure development needs of the municipality. To the extent that a municipality has enough surplus cash flow to support debt service, borrowing can be a useful way to advance the economic and social benefits of much-needed infrastructure. A project that may take

10 years to complete on a pay-as-you-go basis through annual government grants could be financed, built, and become operational within a much shorter time frame, such as within 2 years through borrowing. Accelerating the economic and social benefits of infrastructure is particularly important in municipalities where urbanization, population, and economic growth are also accelerated. Debt financing can reduce the time between when infrastructure services are required and when they are delivered. Borrowing, however, is dependent upon the following:

- (i) The legal authorization of a municipality to enter into a debt financing (factors which are explored as part of the Internal Ecosystem for municipal bond issuance in the chapter for each target Developing Member Country [DMC]);
- (ii) The ability of the municipality through surplus own source revenues and intergovernmental transfers to support debt service on the bonds (institutional framework factors that are central to many of the Asian Development Bank [ADB] projects highlighted in this report); and
- (iii) The receptivity of the domestic bond market to invest, list, and trade in the municipal bonds (factors which are explored as part of the external ecosystem for municipal bond issuance in the chapter for each target DMC).

2. The Use and Benefits of Borrowing

Borrowing is a way to accelerate the benefits of an infrastructure project closer to the present (after an immediate period for the financing and construction of the project), while amortizing the payment for the project into the future. This feature of accelerating the benefits of an infrastructure project while spreading its costs to users over a longer period are central arguments for financing infrastructure. Many studies discuss the need to match the terms of the financing with the useful economic life of the infrastructure project. While this is possible in some developed bond markets, such as in the US, Japan, or the PRC, to access long-term financing, it is not possible in most emerging market countries, where available bond maturities are medium-term in nature (1–5 years, for instance). In some emerging market countries, government-owned lending institutions can provide longer-term debt than the bond market. Choosing among sources of financing for the most favorable terms is discussed below.

Where only medium-term debt is available, this exposes the municipal issuer to either having to appropriate for an accelerated debt service schedule in its budget or take refinancing risk in the market when the maturity comes due, hoping to issue a refinancing bond at favorable interest rates in the future. Interest rates, however, can go up or down, which is why this is called “refinancing risk,” and it is equally true for bonds and for loans.

3. The Essentiality of Infrastructure Projects

Many of the municipal debt laws featured for DMCs in this report restrict the use of debt to the financing of infrastructure projects. Some municipal laws even specify the types of assets that can be financed. In municipal finance, an important element is the essentiality of the infrastructure being financed. Investors, who rely on risk-adjusted returns (risks of the asset class, of its operating environment, etc., much of which is reflected in the debt issue’s rating), also look to the essentiality of the project being financed. The financing of a water treatment facility in a growing community has a higher essentiality for the community than a convention center. This does not mean that a city should not have a facility for hosting convention gatherings. It only means that water provision is an essential service for human life, whereas something like a convention facility is discretionary in nature. Investors recognize these

nuances and can factor them into the pricing of the bond. Investors these days are willing to invest in social, environmental, and green projects even at lower returns because of their increased focus on environmental, social, and governance parameters and they prioritize projects that ensure ethical and sustainable investment.

4. Choosing Among Sources of Debt Financing

After the infrastructure project is prioritized for its essentiality and for how it meets the needs of a growing community, and after the decision is made to advance those benefits to the public by financing the project, and after an internal analysis reveals the municipality's capacity to service debt, its next choice is to determine the source of that financing. Financing for infrastructure projects can come from commercial banks, government-owned lending institutions, or from the bond market. The choice of which form of financing to use depends on the available terms of the financing, and the desire of the municipality to create financing options by introducing itself to a variety of lenders and or investors. The latter is especially true if the municipality has financing needs for many years to come. The bond market may be more attractive at one point in time, but the bank market may be more attractive at another point in time. The attractiveness of a financing source can be thought of in the following ways:

- (i) Which source of capital provides the better match between the useful life of the asset and the debt service period for the financing? If the municipality wants to finance police cars, it might desire a shorter debt repayment period than if it wants to finance a water treatment plant. Big gaps can exist in the useful economic life of assets, which can affect the desired terms of financing being sought.
- (ii) Which source of capital provides the lowest interest cost for the infrastructure to be financed? Given that a municipality has limited budgetary capacity to service debt from surplus operating cash flows, it will look to finance the most infrastructure possible for its annual budgetary outlay for debt service. This goal can be achieved if it finds the lowest cost of interest and the longest term of repayment within the market where it operates. At times, banks may be more competitive in these ways; at other times, the bond market may be more competitive.
- (iii) The preconditions for borrowing also need to be considered by a municipality. For banks, this can include conditionality on the terms of the debt, such as borrowing limits, the types and amounts of debt that a municipality can issue in the future, and the collateral package (usually some type of mortgage lien) required for a loan. The terms of bank loans often include provisions where they change if the borrower's financial circumstances change. This can include changes in the loan's financial terms, including the interest rate and amortization of the loan. Some municipal issuers may not appreciate the conditionality imposed by bank lending.
- (iv) For bonds, the terms of the financing are fixed upfront. Investors in a fund do not have the resources to actively renegotiate terms of the bond. If the bond is held by more than one investor, the ability to effect changes in the terms of the bond would require consensus or approval of all the affected investors, which makes changes impractical. For that reason, bond financing requires more onerous financial disclosure upfront and on a continuing basis, including the amounts of all debt outstanding, the existence of leases or other financial contracts and obligations, the materiality of litigation which the municipality may have, and other material events, such as pending changes in governmental funding relationships or regulatory requirements. Banks have similar disclosure requirements, but those of the bond market are usually more onerous, in part due to the nature of securities markets regulations. The bond market is meant to create and maintain investor trust.

- (v) Bond documents also include financial covenants which are designed to anticipate and mitigate payment risks in the future. This can include a debt service reserve for instance and a lien on tax or project revenues. Thus, the terms for a bond issue are fixed upfront, even for investor recourse in the event of a default. This allows for more efficient pricing of the bond.
- (vi) For a municipality with long-term needs to finance infrastructure projects for its growing population and economic base, it may become advantageous to obtain name recognition in more than one market. A loan is usually with one banker. For larger loans, there may be a syndicate of bankers that the municipal borrower gains exposure to. A municipal bond offering creates a platform to invite a wider range of investors by contrast. Another difference is that the bank loan is held by the bank for the full term of the loan unless it is sold in the form of a securitization. Even there, the borrower does not see any changes in the terms of the original loan. In the bond market, bonds are traded between investors in the secondary market. This also does not result in any changes in the term of the bond.
- (vii) Increased fiscal responsibility and accountability is another benefit of debt financing. The municipality in its continuing disclosure is responsible for showing the lending institution or the bond investors that it is capable of servicing its debt. Market trust in a municipality's debt servicing capability brings down its financing costs in the long term. Maintaining a credit rating serves the same purpose since it is an independent assessment of the municipality's ability and willingness to service its debt.

5. The Cautions of Debt Financing

There are some important cautions that need to be considered when a municipality takes on debt financing. Beyond a debt capacity analysis discussed above, a municipality should look at the following costs and benefits:

- (i) Whether the interest cost of a financing is outweighed by the inflationary aspects of a prolonged pay-as-you-go construction period (the alternative to debt financing), and the economic and social advantages of accelerating the benefits of the infrastructure project through debt financing.
- (ii) The extent that debt service will encumber future revenues which could have been utilized for providing other essential services. This is a prioritization exercise and is driven by public policy imperatives.
- (iii) A look at the current and at future planned borrowing needs to make sure that the municipality does not take on too much debt. Excessive borrowing not only runs against debt limits that may be imposed by governmental laws and regulations. Budget requirements for debt service encumber future revenues, as discussed above, and reduce financial flexibility in the future. If the municipality operates in a volatile economic environment, it increases its vulnerability to the financial implications of an economic downturn. This can result in higher default risk and pressure on its credit rating.

M. Appendix 13: Glossaries

1. Municipal Finance Glossary

additional bonds test	An additional bonds test is a covenant within a financing document that requires certain minimum coverages before an issuer is allowed to issue additional bonds under the trust agreement. Coverages by pledged revenues can look both backward (coverage as calculated in financial audits) or forward (coverage as calculated in a financial forecast). In some cases, an additional bonds test may include a debt ratio, either as a percentage of the issuer's earnings before interest, taxes, depreciation, and amortization, or of the taxable revenue base, or of the value of physical assets within a revenue system, such as a water utility.
advanced segregation	Advanced segregation is a technique used in structured finance and in some forms of municipal finance, whereby the payment for debt service is segregated in a debt service account of a trust in advance of when it is needed. The account continues to build additional deposits, so that, by the time a debt service payment is due, the account already has all the receipts needed for that payment and for part of the next payment. Advanced segregation, which is an internal form of credit enhancement, can be achieved by setting the period for collection of a payment in advance of when the payment is due.
amortizing bond	An amortizing bond is a bond that has a schedule of both interest and principal payments in regular intervals for the life of the bond. The repayment schedule is similar to that of a mortgage loan, with the amount outstanding trailing downward as successive principal payments are made. The advantage of an amortizing structure for the issuer is that successive debt retirements create windows for additional debt issuance without changing the amount budgeted for debt service.
assignment agreement	An assignment agreement is a contractual transfer of rights from one individual or party to another individual or party. In municipal finance, where a bond is issued by a local government that pledges as security for that bond, shared revenues that are transferred to it by a higher level of government, an assignment agreement will allow for those shared revenues to be intercepted and go directly to a trust for payment of debt service on those bonds. The assignment allows for the shared revenues to bypass the local government's treasury, and flow directly to the trust. The assignment removes a layer of credit risk from a transaction, allowing the rating on the bond to look toward the security provided by the shared revenues from a higher level of government instead of to the credit risk of the local government.
beneficial interest	A beneficial interest is a right that investors have to receivables pledged in a securitization transaction. For instance, a securitization of a portfolio of municipal loans sells the loans to a trust. Investors do not own the loans, but have a beneficial interest in the loan payments managed by the trust.
bond covenants	Bond covenants are the provisions within a bond financing agreement or trust that specify how the bond's debt service payments will be protected. Positive covenants can include the authority by the obligor or issuing entity to charge and collect taxes or user fees to pay debt service, provisions for excess coverage by pledged revenues, for reserves to be kept under the trust, and an additional bonds test (see separate definition). Negative covenants can include a pledge by the issuer not to sell revenue producing assets while the bonds are outstanding, or a pledge not to create another lien on pledged revenues that is senior to the lien provided by the trust for the bonds.
bullet (or term) bond	A bullet or term bond has a final maturity when all the principal is paid at once. A 10-year term bond, for instance, will make semiannual or annual debt service payments that include current interest payable and an installment contribution into a sinking fund for the future principal payment. The sinking fund contributions accumulate so that the installments collected are sufficient to pay the principal amount on its payment date.
credit enhancement	Credit enhancement is a strategy for improving the credit risk profile of a debt transaction by reducing its risks of default, allowing it to obtain a better credit rating and/or more favorable terms of financing. Credit enhancement to a financial transaction can be internal (within the financial transaction), such as a reserve fund, or through a pledge of excess cash flow. Credit enhancement can also be external (outside of the financial transaction, but contractually connected to it), such as a bank LOC, or a financial guarantee that provide limited support for the debt service repayment of a financial transaction.

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Cross-default	Cross-default is a provision in a financing document whereby a default on a debt obligation outside of the financing agreement can also result in a default of the debt covered by a financing agreement. For example, a trust may be created for a bond issue by a municipality, which also has an outstanding commercial bank loan. If the trust agreement has a cross-default provision, then, a default by the municipality on the bank loan would create a cross-default on the bond. Cross-default provisions work if there is an intercreditor agreement between the trustee for the bonds and the commercial bank that specifies notification procedures and agrees to how the investor and the lender will treat each other in the event of a default or cross-default.
debt service reserve fund	A debt service reserve fund is a covenant in a financing agreement that requires that a certain amount of reserves be segregated in the trust account for the payment of any deficiency in debt service by the issuer. A debt service reserve can be sized as a percentage of the debt issue, such as 10% of principal, or to the maximum annual debt service payment. It is usually fully funded at the time of issue, although in some cases, there may be a schedule to build up the reserve over a period of time. The debt service reserve is also factored in the flow of cash into the trust, since a draw on the debt service reserve for a debt service deficiency must be replenished over a specified time period.
default	An event of default is when an issuer is not able to make a payment of debt service under its financing agreement, which could be for a loan or for a bond. Commercial banks operate under prudential norms which often allow a long period for a default to cure before it is recognized by the bank as a default. Bank loans in India, for example, can be in default for 90 days, before a default is formally recognized. The test of default is immediate in a bond financing, since failure to make full-and-timely payment of debt service on a payment date constitutes an event of default. Some bond documents allow for a limited cure period once there is an event of default, but this is not common.
full-and-timely payment	Debt service on bonds is payable on a full-and-timely basis, which means that it must be paid in full on the payment date specified in a financing agreement. Failure to pay debt service on a full-and-timely basis is considered to be an event of default.
general obligation bonds	General obligation bonds are bonds that are secured by a single tax (such as property taxes) or by general taxes of a municipality. The pledge in some jurisdictions can be unsecured without any particular lien on tax revenues, but with a general pledge to budget for debt service, or it can be secured through a trust or escrow mechanism that captures collected tax revenues and remits them frequently to a dedicated trust for the payment of debt service, thereby creating a lien on those revenues. In the US, there is an additional provision for many tax-supported bonds that they carry the local government's full-faith-and-credit, which means that the local government will use its full taxing authority to pay debt service on the bonds.
intercept mechanism	An intercept mechanism is a provision or set of provisions in a financing document that allows for a trustee of a creditor to intercept future assistance that would normally flow to an issuer from a higher level of government (such as budgeted interventions from a state government to a city government). The trigger for the intercept is proactive when a trustee sees a shortfall in a debt service account prior to a debt service payment date, and triggers the intercept in advance of the payment date, averting an event of default. The trigger for the intercept is reactive when a trustee triggers the intercept after the default on debt service has already occurred.
intercreditor agreement	An Intercreditor Agreement is a contractual document between two or more creditors. It stipulates in advance how the competing interests of the creditors are to be resolved, and how they will work together in the event of a default by the borrower or obligor. An intercreditor agreement can be signed between investors who hold different liens on a pledged revenue, such as between the investors of a senior lien bond and the investors of a subordinate lien bond. An intercreditor agreement can also be signed between creditors of different forms of debt, such as between bond holders and a commercial bank lender; both of which claim a lien on the revenues of a borrower or obligor.
Interest Account	The interest account in a trust structure is the account where monies are transferred in order to make an interest payment on debt.

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joint and several liability	A joint and several liability is where two parties, such as governmental entities, issue debt that is secured proportionately (which includes a base case that divides the debt service responsibility proportionately among the issuing parties) or equally (which includes a base case that divides the debt service responsibility equally among the issuing parties). If, however, one party is unable to make its debt service payment or is deficient in a debt service payment, the other party is automatically responsible to pay the shortfall. Joint and several obligations work best where two entities share a common interest, such as in the financing of a shared infrastructure facility, such as a power plant or a sewage treatment plant.
Lease-revenue bonds	Lease-revenue bonds are bonds issued by a special governmental financing entity that acts as a conduit for an operating governmental entity. The conduit entity (the lessor) issues the bonds, whose proceeds are used to build a facility that is leased by the operating government entity (the lessee). The bonds issued by the conduit are secured solely by these lease payments as the conduit has no independent revenue stream. The governmental financing entity retains title to the facility until all the scheduled lease payments have been made.
municipal bond	A municipal bond is a debt instrument issued by a subnational government (such as a municipality, or an enterprise created by a municipality), or a government-created entity that sells bonds so that it can use the bond proceeds to make loans to municipal governments. The authority that a municipality has for issuing bonds or for entering into a debt obligation derive from government laws at the state or central government level. These laws also specify how the debt is to be serviced through the municipal budget and reported in the municipal audit.
municipal bond resolution	A municipal bond resolution is the legislative authorization provided by a subnational government for the issuance and support of a debt obligation.
municipal bond tenor	A municipal bond's tenor describes the length of time remaining in the life of the bond. This is related to the bond's maturity, which is the initial life of the bond. Thus, if a bond was issued 3 years ago with a 10-year maturity, its current tenor is 7 years. If a bond was issued 3 years ago with multiple maturities of 5 years, 7 years, and 10 years, it has multiple tenors as well, of 2 years, 4 years, and 7 years. The maturity is useful for placing a new bond in the primary market. The tenor is useful for buying or selling a bond in the secondary market.
overcollateralization	Overcollateralization is a technique used in structured finance and in some forms of municipal finance, whereby pledged revenues collected in advance of a debt service payment are designed to exceed the amount needed for that payment. If revenues collected for a debt service payment are required to be equal to the debt service payment, this security has sum-sufficient coverage, or 1X (times) coverage. If revenues collected for a debt service payment are required to be greater than the debt service payment, this excess coverage is expressed as 1X plus the amount of excess coverage. For example, 1.5X coverage means that the amount of required revenues is 150% of the amount needed to make an upcoming debt service payment.
pari passu lien	A pari passu lien references an equal standing between two debt instruments, in terms of payment preference or priority. One example is a trust indenture that allows an issuer to issue different series of debt over a period of years. A pari passu lien means that each series of bonds has the same lien on pledged revenues. Another example is between two debt instruments that were issued under separate indentures, but which share an intercreditor agreement that grants them an equal or pari passu lien on pledged revenues.
pooled or conduit financing	A pooled financing is when a special purpose entity, such as a conduit financing authority, issues bonds whose proceeds are used to provide loans to eligible beneficiaries of the pooled finance entity. Eligible beneficiaries can include municipalities, public utilities, universities, hospitals or public-private partnerships, depending upon the purpose for which the conduit financing authority was established. A pooled finance entity does not have any independent revenue stream, but instead secures its debt with the loan payments made by eligible beneficiaries. In order to achieve a high rating, the pooled finance entity may also have a special reserve fund that acts as an additional collateral securing its bonds. The highly rated entity is able to achieve bond market access, which its eligible beneficiaries might be able to achieve but at a much higher interest cost, or may not be able to achieve without the presence of the pooled finance entity. Thus, the pooled finance entity provides a broader market access to local governmental entities or to public-private partnerships than would be possible if they tried to achieve financing on their own. The benefit for investors is that they are provided access to the cash flows of a pooled group of borrowers and do not have exposure to any one borrower. Investors also benefit from the additional collateral in the form of a funded debt service reserve and from the larger issuance size.

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primary bond market	The primary bond market is the financial exchange through which governments, banks, corporates and municipalities sell new bonds.
principal account	The principal account in a trust structure is the account where monies are transferred in order to make a principal payment on debt. In cases where the principal is payable at the end of the debt term (as in a bullet or term bond), the principal account is called a sinking fund. Contributions are made into the sinking fund and are held there until the final maturity payment is required to be made.
revenue bonds	Revenue bonds are bonds that are secured by a pledge of a particular user fee generated by a project or system of projects that are financed by bonds. For instance, a city may issue bonds to finance a new water treatment plant and support the debt service on the bonds by charging and collecting user fees. The trust agreement describes how the revenues are deposited into the trust account as well as a waterfall or pecking order for use of those escrowed revenues, such as for the payment of operations and maintenance, then for the payment of debt service, then for the replenishment of any reserves in the trust, etc. If operations and maintenance are paid before debt service, which is usually the case, this is known as a net revenue pledge, since revenues available for debt service are those left over after netting for operation and maintenance (O&M) expenses. If debt service is paid before operations and maintenance, this is known as a gross revenue pledge, since the payment of debt service is made by gross revenues before paying for operation and maintenance (O&M) costs.
revolving fund	A revolving fund is a lending vehicle that has strong contractual provisions for reimbursement (with interest) for a loan or for a draw on a LOC within a specified time period. The reimbursements allow for the lending vehicle to make new loans or advances. Its ability to lend and to be reimbursed is a sustainable feature of a revolving fund.
secondary bond market	The secondary bond market is the financial exchange through which investors buy and sell outstanding bonds which were previously issued by governments, banks, corporates or municipalities.
securitization	A securitization is a type of secondary market financial transaction whereby an issuer repackages an asset or group of assets and sells the repackaged assets to investors. Securitization promotes liquidity to both parties in the transaction, since it offers a new investment opportunity to investors, and frees up capital for the issuer. If the issuer is a local government or government enterprise, the securitization can be used to reduce debt or to invest in new infrastructure assets, in exchange for losing access to the pledged cash flows that were carved out for the life of the securitization. The current trend of asset monetization is a form of this type of securitization. If the issuer is a bank or financial institution, the securitization can serve as a means to reduce its concentration risks to certain borrowers or to certain asset classes, in exchange for selling its interest in the remaining loan payments that have been restructured and sold. This form of securitization recapitalizes the financial institution so that it can make new loans.
senior lien bonds	Senior lien bonds provide investors with a senior lien on pledged revenues. Investors with a senior lien pledge get paid ahead of other lenders or creditors of an issuer. This priority of payment is established under the terms of a trust agreement that provides security for the bonds.
standby bond purchase agreement (SBPA)	A standby bond purchase agreement is an agreement between a bond issuer, a trustee (here in the role of tender agent) and a commercial bank, that guarantees the repurchase of Bonds that are subject to a put or short call provisions (such as weekly or monthly) if the bonds tendered by the bondholders cannot be simultaneously remarketed to new bondholders.
standing budgetary authority	Standing budgetary authority is a legislative provision through a resolution or ordinance requiring that a local government make future budgetary appropriations for a given obligation for a specified period of time. This authority is common in resolutions when local governments authorize a debt issuance, and provides lenders and investors with additional certainty that the government will use its standing budgetary authority to make future appropriations for debt service for the life of the debt obligation. This authority can extend beyond the electoral cycle of the current government and is not dependent upon changes in elected or appointed officials. Without standing budgetary authority, the ability of lenders or investors to be paid over the life of a debt obligation, would be dependent upon annual budgetary appropriations risk.

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subordinate (or junior) lien bonds	Subordinate lien bonds provide investors with a subordinate or second lien on pledged revenues. Investors with a subordinate lien pledge get paid after lenders or creditors that have a senior lien. This subordination of payment is established under the terms of a trust agreement that provides security for the bonds.
surplus funds	Surplus funds in a trust structure are the amount of excess coverage by pledged revenues, which is held in the debt service accounts until the debt service payment is made. Once the payment is made, any excess or surplus funds are remitted back to the issuer.
tax exemption	Tax exemption is a tax-free status granted by a government to the investor for interest income earned a certain type of bond. If the bond has a tax-exempt status, the investor benefits from not having to pay taxes on interest income earned on the bond. In turn, the issuer usually benefits from being to offer a lower coupon rate than would be offered for a similarly rated taxable security.
trust agreement	A trust agreement is a contractual agreement that creates a cash collateral security for a debt instrument, such as a bond. The agreement states the purpose for which the trust was created, the security pledged for the bonds (such as dedicated and escrowed taxes or user fees), the representations and warranties of each obligated party to the trust, and the recourse available to investors if the obligated party fails to honor the terms of the agreement.
trust certificates	Trust certificates are debt securities issued by a trust in a securitization. The trust is a special purpose vehicle that has no independent revenue stream. Its certificates are secured solely by the underlying assets that are pledged as part of a securitization transaction. For example, a bank may take a portfolio of loans and restructure them into a trust, which issues certificates to investors that are secured by the underlying loan payments. The securitization benefits investors because it gives them secondary market access to new assets (the loan portfolio) and it benefits the seller of the loans (in this case a bank), since the sale of the loans recapitalizes the bank to make a new generation of loans.
ultimate recovery	Ultimate recovery is the period of time expected for the full recovery of principal and interest. It can extend beyond the expected time frame in a bond document for the scheduled payments of principal and interest. In certain cases, ultimate recovery may be calculated and priced into a bond transaction if the issuer is expected to have intermittent difficulty in meeting scheduled debt service payments, but otherwise has excellent potential to ultimately pay off the debt. The period beyond the scheduled payment period over which full recovery is expected to take place is called the recovery period. In project finance, this is a common concept, where, as an example, the debt is scheduled to retire in 10 years, but the concession continues for an additional five years beyond that. The additional 5 years becomes the recovery period in the event that the issuer experiences a default in its debt service payments.
viability gap financing	Viability gap funding is a scheme usually provided by a higher level of government, to provide a grant or subsidy to a municipality or a PPP as part of the capital raised to finance an infrastructure project. The viability gap funding is intended to reduce the debt load of an issuer, so that its debt can achieve a higher rating and obtain greater investor interest. Without the grant or subsidy, the project would probably not be financially viable. Financial viability is determined by the strength and perceived volatility of a project's cash flows relative to the scheduled debt service repayment period for its debt.
yield curve	A yield curve is a point-in-time graphical representation of the interest rates on debt for a range of maturities, ranging from short-term debt (such as for 1 year or 2 years) to long-term debt (such as for 20 years or 30 years). The yield curve for a central government's domestic bonds is usually considered to be the benchmark for all other domestic bonds issued within that country (for state-owned enterprises, banks, corporates, municipalities, etc.). The yield curves for these other types of issuers are usually expressed as a spread (interest rate margin) above the central government's benchmark yield curve.

2. General Glossary:

ADB	Asian Development Bank
ADBI	Asian Development Bank Institute
AGFP	Agricultural Guarantee Fund Pool; the Philippines
AMRUT	Atal Mission for Rejuvenation and Urban Transformation; India
Aportaciones	dedicated appropriated funds from the federal government to states and municipalities; Mexico
AusAID	Australian Agency for International Development; Australia
BAPPENAS	National Development Planning Agency; Indonesia
barangay	designation used to refer to a village, district, ward or metropolitan suburb; Philippines
BB	Banco do Brasil
BC	borrowing capacity; a ratio used for local government units in Philippines
BLGF	Bureau of Local Government Finance; Philippines
BNDES	Brazilian Development Bank
BPK	State Audit Board; the Indonesian Supreme Audit Institution
BSE	Bombay Stock Exchange; India
bupati	elected head of a regency government; Indonesia
CAIXA	Caixa Econômica Federal; a state-owned Brazilian financial services company
CAPB	coalition of Argentine provincial bondholders; group of international asset managers who hold Argentinean provincial debt
CARE	Credit Analysis and Research Limited; India
CCDC	China Central Depository & Clearing Co., Ltd.
Chapter 9	Municipal Bankruptcy Law; United States
CIBM	China interbank market
COA	Commission on Audit; Philippines
co-participaciones	shared revenues between the Argentinean central government and provincial governments
core investment	one of several types of asset classes that are commonly found and traded in the portfolios of institutional investors
CRISIL	Credit Rating Information Services of India Limited; affiliated with S&P Global; India
CSRC	China Securities Regulatory Commission
decentralization	the process by which governmental responsibilities, taxing authority and borrowing authority is devolved downward from the central government to a subnational government
DILG	Department of Interior and Local Government; Philippines
DMC	developing market country; in this report, refers to ADB member developing market country
DPRD	Regional People's House of Representatives; elected legislative body; Indonesia
DSC	debt service ceiling; a ratio used for local government units in the Philippines
FD Law	Law of Financial Discipline to States and Municipalities; Mexico
FiinRatings	a local ratings agency in Viet Nam
FSA	Financial Services Agency of Japan
GAM	Government Accounting Manual; used by local government units in the Philippines
GASB	Governmental Accounting Standards Board; United States
GDP	gross domestic product
GFC	the Global Financial Crisis of 2007–2008
GFI	government finance institution; Philippines

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HNX	Hanoi Stock Exchange; Viet Nam
HOSE	Ho Chi Minh City Stock Exchange; Viet Nam
HUDCO	Housing and Urban Development Corporation Limited; India
IADB	Inter-American Development Bank
IBRD	International Bank for Reconstruction and Development; the lending arm of World Bank Group
ICRA	Investment Information and Credit Rating Agency; joint venture of Moody's Investors Service and Indian Financial and Banking Service Organization; India
IDX	Indonesia Stock Exchange
IGLF	Industrial Guarantee and Loan Fund; Philippines
IIFCL	India Infrastructure Finance Company Limited
IL&FS	Infrastructure Leasing & Financial Services Limited; an Indian infrastructure development and finance company that went bankrupt in 2019
IRA	internal revenue allotments; a shared revenue designation used in the Philippines
IREDA	Indian Renewable Energy Development Agency Limited; India
IRFC	India Railway Finance Corporation
JFM	Japan Finance Organization of Municipalities
JGB	Japanese government bond
kabupaten	regencies; a unit of local government in Indonesia
kota	municipalities; Indonesia
LCP	League of Cities of the Philippines
LDIF	local development investment fund; Viet Nam
LGB	local government body; designation used in Japan
LGC	local government code; legal framework for local governments in the Philippines
LGFV	local government financing vehicle; People's Republic of China
LGU	local government unit; designation used in the Philippines to describe a local government
LGUGC	Local Government Unit Guarantee Corporation; Philippines
listing requirements	documentation requirements of a stock exchange for the listing of a bond offering
MDFO	Municipal Development Fund Office; a lender to local governments in the Philippines
MIC	Ministry of Internal Affairs and Communications; Japan
MoHUA	Ministry of Housing and Urban Affairs; India
MSRB	Municipal Securities Rulemaking Board; United States
NAFMII	National Association of Financial Market Institutional Investors; People's Republic of China
NCGA	National Council on Governmental Accounting; United States
NDRC	National Development and Reform Commission; People's Republic of China
NDSC	net debt service ceiling; a ratio used for local government units in the Philippines
NFCL	National Fiscal Coordination Law; law that establishes funding relationships between levels of government; Mexico
NHAI	National Highway Authority of India
NMAM	National Municipal Accounting Manual; India
NRSRO	nationally recognized statistical ratings organizations; United States
NSE	National Stock Exchange; India
NTPC	National Thermal Power Corporation Limited; India
OJK	Otoritas Jasa Keuangan; financial markets regulator in Indonesia

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participaciones	shared revenues between the Mexican federal government and state governments; Mexico
PDEx	Philippine Dealing & Exchange Corporation
PDS	Philippine Dealing System Holdings Company; manages electronic trading and settlement platform for debt securities in the Philippines
Pefindo	Pemeringkat Efek Indonesia; local ratings agency in Indonesia
PFC	Power Finance Corporation; India
PHEI	Penilai Harga Efek Indonesia; entity that provides weekly bond market updates
PhilExim	Philippine Export-Import Credit Agency; Philippines
PhilGuarantee	Philippine Guarantee Corporation; Philippines
PhilRatings	a Philippines based ratings agency
PPP	public private partnership
PT SMI	PT. Sarana Multi Infrastruktur; government owned lending platform for PPP projects in Indonesia
RBI	Reserve Bank of India
REC	Rural Electrification Corporation Limited; India
RIDF	Regional Infrastructure Development Fund; government owned lending platform for subnational governments in Indonesia
RPJMN	5-year external loan plan for regional development and infrastructure; Indonesia
Rule 15c2-12	establishes disclosure and continuing disclosure requirements for municipal bond issuers; United States
RUSDIP	Rajasthan Urban Sector Development Investment Program; State of Rajasthan, India
SBC	Small Business Corporation; the Philippines
SDL	state development loan; describes state loans in India that are facilitated by the Reserve Bank of India
SEBI	Securities and Exchange Board of India
SEC	Securities and Exchange Commission; financial markets regulator; designation used in the United States and in the Philippines
SOE	State-owned enterprise
SPV	special purpose vehicle
SSC	State Securities Commission; Viet Nam
SUN	Sovereign Debt Instruments; Indonesia
Swachh Bharat Mission	also known as the Clean India Mission, it is a country-wide campaign initiated by the Government of India in 2014 to eliminate open defecation and improve solid waste management
SZSE	Shenzhen Stock Exchange, People's Republic of China
TPBM	Tokyo Pro-Bond Market; Japan
Tripartite Agreement	a legal contract executed between three parties; commonly used to secure financial obligations in India
TSE	Tokyo Stock Exchange; Japan
tugas pembantuan	duty of assistance; Indonesia
ULB	urban local body; designation used in India to describe a local government
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
USAID	United States Agency for International Development
User Pay	the concept whereby only benefitted parties pay for a municipal service and not taxpayers citywide; guiding concept behind revenue bonds; United States
walikota	Mayor of a municipality; Indonesia
WSPF	Water and Sanitation Pooled Fund; Tamil Nadu, India

N. Appendix 14: Terms of Reference for Local Government Bonds Specialist (for the subject study)

1. Objective and purpose of the assignment

1. Asian Development Bank (ADB) estimates that developing Asia and the Pacific needs \$26.2 trillion between 2016 and 2030—\$1.7 trillion annually—to meet its infrastructure needs to maintain growth, eradicate poverty, and respond to the changing climate. Asian cities require considerable resources to provide facilities and services to growing urban populations, address existing infrastructure deficits, and cope with external shocks such as COVID-19. However, municipal and subnational governments in ADB's developing member countries (DMCs) often struggle with securing adequate sources of finances, one of which is local government bonds.

2. Local government bonds—or Subnational bonds or Municipal bonds or any bond issued by a subnational agency—provide a robust source of financing urban infrastructure. The bond market at the subnational or local government level has matured in countries like the United States where almost 2/3 of the cities' infrastructure is funded through municipal bonds. In 2019, almost 50,000 state or local government entities issued bonds with \$3.85 trillion outstanding in municipal bonds, much of which is owned by retail investors. Countries in Asia and the Pacific such as India, Indonesia, and the Philippines, are now increasingly using subnational bonds for financing infrastructure. However, Asian cities often lack an adequate ecosystem and enabling environment—such as a robust legal, regulatory, and policy framework; compliance with accounting and financial standards by subnational entities; reliable system of credit ratings of subnational entities at par with international standards; depth, security, and transparency of the municipal bond market, lack of adequate communications to the potential investors, etc.—which adversely affects the capacity of the subnational entities to issue bonds at reasonable cost of capital while assuring adequate returns to potential investors. Asian cities are willing to increase their capacities to potentially utilize bonds, particularly with climate and social impacts, for which global investors' interest is rapidly growing. Local governments need to make concerted efforts to improving their creditworthiness while the national governments can help to develop appropriate enabling environment.

3. Against this backdrop, the proposed study on local government bonds aims at analyzing issues and constraints that local governments in cities in ADB's DMCs face while issuing bonds, and preparing recommendations for cities and their national governments to develop the appropriate ecosystem to facilitate issuance of local government bonds. This is in line with one of the core pillars, which is to strengthen urban planning and financial sustainability of cities, under ADB's Strategy 2030 Operational Priority 4: Making Cities More Livable.

2. Scope of Work

4. The scope of work includes, among others, a comprehensive assessment of the issues and challenges that the local governments or other subnational entities face in issuing bonds. The study will also assess the existing ecosystem of issuing local government bonds in ADB's DMCs, and will give recommendations on further support needed from both DMCs and ADB in this regard. The study will also include an assessment of the trends of development of the local government bond markets in DMCs, including the support provided so far by ADB, governments, and other development partners. The study will build on ADB's existing analytical work on local government bonds in cities in DMCs. The Local Government Bond Specialist (the Expert) will work with ADB's Urban Sector Group, Climate Change and Sustainable Development Department (SDSC-Urban), and other related thematic groups (governance, finance, private sector), in carrying out this study.

3. Detailed tasks

5. The detailed tasks for the Expert are as follows:

- (i) identify past and emerging trends in the development of local government bond market globally and in the Asia and Pacific region, including but not limited to comparative analysis of various DMCs, etc.;
- (ii) analyze in detail the challenges faced by local government in issuing bonds, which, among others, could be in the following areas: policies and legal and regulatory framework at the national and subnational level; accounting and financial standards for local governments and subnational entities; taxation policies on local government bonds; availability of pipeline of targeted projects for specific instruments (e.g., green bond or social sector bond); systems for credit rating and assessing creditworthiness of local governments and subnational entities at par with international standards; constraints to acquiring investment grade credit ratings; factors adversely affecting credit profile of local governments (e.g., governance, financial and accounting robustness, human resources, systems, processes, and documents, etc.);
- (iii) assess the existing external ecosystem of issuing local government bonds such as the capacities of the local credit rating agencies and the trend of developing such capacities over the last few years; efficiency, safety, and transparency of the bond market; cost of capital of bonds as compared to other instruments available to the issuers; maturity of pension and insurance funds as potential investors in such bonds; returns in relation to risks available to the investors in comparison to other investment opportunities; capacity and functionality of regulators along with the systems for communication, and public information and education used by them; constraints to accessing the global pools of liquidity without credit support from the sovereign; and requirement and availability of credit enhancement support (e.g., partial credit guarantee) from financial institutions (e.g., ADB) to the local governments;
- (iv) examine the support provided by ADB to DMCs in the past decade on developing the local government bond markets and enhancing the capacities of subnational entities to issue bonds; in consultation with relevant ADB staff, identify potential DMCs for further detailed case studies;
- (v) deep dive and prepare more detailed reports in at least three DMCs on these points as outlined above;
- (vi) collate lessons learned and good practices from developing countries in other regions (outside Asia and the Pacific) and from initiatives of other development partners, and suggest how these can be applicable in ADB's DMCs;
- (vii) identify the capacity building requirements of the local governments that would help instill the 'credit culture' in a sustainable manner;
- (viii) provide key findings and recommendations—for ADB and DMCs—on enhancing the ecosystem of local government bonds including a deep and effectively-functioning bond market and accelerating bond issuance by subnational entities in DMCs;
- (ix) consult with ADB project officers to incorporate ADB's experiences and to ensure synergies with other similar work in ADB; and
- (x) prepare appropriate knowledge products (e.g., a publication, a blog, and a webinar) in consultation with the ADB team along with appropriate mechanism for dissemination of the same to ADB staff and DMCs.

Mobilizing Resources through Municipal Bonds

Experiences from Developed and Developing Countries

Municipal bonds are an innovative external source of financing for strengthening the financial sustainability of cities—one of the main objectives of Strategy 2030 of the Asian Development Bank (ADB). This publication provides timely information to both ADB staff and its developing member countries on how to leverage municipal bonds as an important instrument to finance climate-resilient infrastructure and make cities more livable. It documents valuable experiences and lessons learned from advanced and emerging economies. This publication recommends strategies on how to promote greater issuance and acceptance of municipal bonds in India, Indonesia, the Philippines, and Viet Nam.

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