THE GREEN CITIES GUARANTEE FUND:
UNLOCKING ACCESS TO URBAN CLIMATE FINANCE

NOVEMBER 1, 2024

SDSN GLOBAL COMMISSION FOR URBAN SDG FINANCE

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EXECUTIVE SUMMARY

While many have claimed that the battle for climate change will be won in cities, the slow rate and pace of funding for needed urban mitigation and adaptation projects has hindered progress. The City Climate Finance Leadership Alliance (CCFLA) calls for USD 4.3 to 6 trillion annual spending, a sum that has not been realized. In fact, CCFLA shows that cities have received less than one percent of today's USD 1.3 trillion annual climate flows. While the public and private sectors are the sources of climate funds, the former cannot command sufficient capital to meet the total need and the latter's assessments of acceptable returns and risks often determine urban climate investments infeasible, thus reducing flows into these projects.

However, over time, the use of guarantees has incentivized private capital such that guarantees accounted for 20% of national level private climate finance mobilized by both MDBs and bilateral providers, according to the OECD. The Climate Policy Initiative (CPI) found that the capital mobilization ratio of guarantees is 6-25 times higher than that of loans, making them a highly effective tool at crowding in investment for green projects. These reports and other evidence have led the SDSN Global Commission for Urban SDG Finance to propose a Green Cities Guarantee Fund (GCGF) as an important tool to increase the flow of public and private capital into subnational climate-responsive projects. This report details the case for the GCGF, offers a roadmap for operationalizing the fund, and makes suggestions for its initial market pilot in Latin America. This specialized fund serves to enhance and complement Commission members' ongoing efforts in promoting urban SDG finance with a focus on climate change.

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ACKNOWLEDGMENTS

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About the SDSN Global Commission for Urban SDG Finance

In Paris, on June 21, 2023, Paris Mayor Anne Hidalgo, Rio de Janeiro Mayor Eduardo Paes, and SDSN Founder and President Jeffrey Sachs launched the SDSN Global Commission for Urban SDG Finance, serving as its co-chairs. The Commission's more than 90 members include mayors and governors, climate and finance experts, city network leaders, practitioners, and scholars. They hold leading positions in city and regional governments, international organizations, development finance institutions, investment firms, consultancies, civil society organizations, and academia. The University of Pennsylvania's Institute for Urban Research hosts the Commission's Secretariat.

The Commission has six Task Forces that build on members' existing work to develop and champion innovative ideas and solutions for increasing urban SDG finance, with a focus on climate change. Collectively, its members have developed a set of actionable recommendations, one of which is the proposal for the Green Cities Guarantee Fund (GCGF) described in this report.

In addition to their work on the Commission, members have engaged in dozens of global efforts to advance urban climate finance. They include the U20 Co-Chairs' Statement with its endorsement of the Green Cities Guarantee Fund concept, C40's Open Letter calling for increased subnational climate funding to Multilateral Development Banks (MDBs) signed by 40+ mayors, the CHAMP initiative calling for multilevel cooperation in developing the next round of nationally determined contributions (NDCs), the work of Local 2030 supporting on the ground SDG implementation, the Resilient Cities Network's New Agenda for Urban Resilience Action Today with its promotion of project portfolios, CCFLA's engagement in MDB reform, and overall assistance for the IPCC Special Report on Cities. Commission members are carrying this advocacy forward across multi-governmental and civil society levels, including continued engagement with the G20 and U20 processes and other important global discussions that recognize the critical role that cities play in fighting against climate change and meeting the SDGs.

About this Report

The proposal for a Green Cities Guarantee Fund represents the deepening of an idea put forth by Task Force Two during the second Commission meeting in September 2023 at Climate Week in New York. Working with many Commission members and external experts, the Commission's Secretariat has evaluated the initiative based on a thorough literature review, assessments of guarantee fund reports, and extensive interviews conducted with current and former mayors, climate finance experts from the public and private sectors, guarantee fund experts, national government officials, and individuals with experience incubating and launching new development finance entities/funds.

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Introduction

This report provides an overview of current practices and impacts in the realm of guarantees, serving as an introduction to the Green Cities Guarantee Fund (GCGF) proposal. This proposal has been developed by the SDSN Global Commission for Urban SDG Finance ("the Commission").

Guarantees have a long history in supporting investments in small- and medium-sized enterprises around the world. They have recently become important factors in climate finance. The OECD reported in *The New Collective Quantified Goal on Climate Finance* that guarantees accounted for 20% of national level private climate finance in developing countries mobilized by both MDBs and bilateral providers in 2020. The OECD has also found that projects by low and medium rated entities (B-to D) have been the majority of guarantee recipients. Moreover, in *Landscape of Guarantees for Climate Finance in EMDEs* (2024), the Climate Policy Initiative (CPI) holds that guarantees are 6-25 times more effective at mobilizing financing as compared to loans.

The GCGF aims to: 1) de-risk lending for climate mitigation and adaptation infrastructure in cities, and 2) attract capital for climate change responses on better terms for cities and associated entities. As key structural and operational details are to yet be developed, guiding principles covering governance, structure and operations, eligibility, and climate impact will provide the foundation for the GCGF.

The GCGF responds to UN Secretary-General António Guterres's assertion that "cities are where the climate battle will largely be won or lost." And it answers his call for investment in urban climate resilient infrastructure: "The choices that will be made on urban infrastructure in the coming decades – on urban planning, energy efficiency, power generation and transport – will have a decisive influence on the emissions curve."[1] This call implicitly acknowledges challenges to be met with the growth of greenhouse gas emissions from rapid urbanization in emerging economies, the high concentration of carbon emissions in cities across the world, the susceptibility of urban infrastructure to weather induced shocks, and the vulnerability of the more than one billion poor living in informal settlements.

Nonetheless, the rate and pace of climate finance are slow – some USD 1.3 trillion each year when USD 4.3 to 6 trillion is needed annually for cities alone. According to the City Climate Finance

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[1] "The choices that will be made on urban infrastructure in the coming decades – on urban planning, energy efficiency, power generation, and transport – will have a decisive influence on the emissions curve. Indeed, cities are where the climate battle will largely be won or lost," United Nations Framework Convention on Climate Change, "Guterres: Urban Infrastructure Choices Will Have Decisive Influence on the Emissions Curve," https://unfccc.int/news/guterres-urban-infrastructure-choices-will-have-decisive-influence-on-the-emissions-curve.

Leadership Alliance's (CCFLA) *State of Cities Climate Finance 2024,* in 2021 cities received less than 1 percent of these climate finance flows despite being responsible for 70 percent of global CO2 emissions, producers of 80 percent of global GDP, and home to more than 50 percent of the world's population.

The GCGF can contribute to alleviating the funding gap by fortifying investor confidence in financing climate-responsive projects undertaken by city governments and affiliated entities that capture local conditions and citizens' daily needs. The GCGF would complement other global, regional, national, and local initiatives revolving around urban climate action and resilience plans and projects, integrating cities' perspectives into country platforms, improving public financial management for local governments, and establishing municipal creditworthiness with domestic and international ratings agencies. Commission members are currently engaged in several such initiatives in cities around the world. (See the Commission website for details).

In sum, the GCGF is a tangible step to enhance and complement ongoing efforts to meet the goals for people, place and prosperity embodied in the *Agenda 2030 for Sustainable Development* and the *Paris Agreement* at the local level.

Part 1. Guarantees, Climate Finance and the Role of the GCGF

The GCGF fits neatly into the world of guarantee schemes and the climate finance ecosystem. While guarantees have a long existence and have been widely employed to support small and medium sized enterprises (SMEs), their use for climate finance is now slowly emerging. They have an important role in their ability to mobilize capital from public and private investors. Therein lies the potential strength of the GCGF.

1.1. The world of guarantees

A credit guarantee is a legally binding agreement under which the guarantor agrees to pay part or all the amount due on a loan, equity, or other instrument in the event of non-payment by the borrower.[2] Three parties are involved in a credit guarantee transaction: a borrower, a lender, and a guaranteeing agency. Credit guarantees assist borrowers by increasing access to debt and ultimately reducing the cost of borrowing. Credit guarantees incentivize lenders to provide debt to borrowers that have a high degree of perceived risk by transferring part or all the loan recovery risk to a guarantor. Involving a guarantor in the loan process can also help reduce information asymmetries between the lender and borrower.

Thus, credit guarantee programs are an important tool for derisking borrowing for entities like SMEs (and now cities) that may lack creditworthiness and have insufficient collateral. While SME-focused guarantee schemes date from the 19th century, recently they have become more widespread, especially in times of crises – the 2007-2008 financial meltdown and the COVID-19 pandemic.[3] In force in more than 100 countries worldwide, the total value of outstanding guarantees reached USD 1.17 trillion in 2022.[4] They are most common in Asia and Europe where they constitute more than three quarters of the world's guarantee programs. They are scarce in Latin America which has only 4 percent of the total. See Figure 1.

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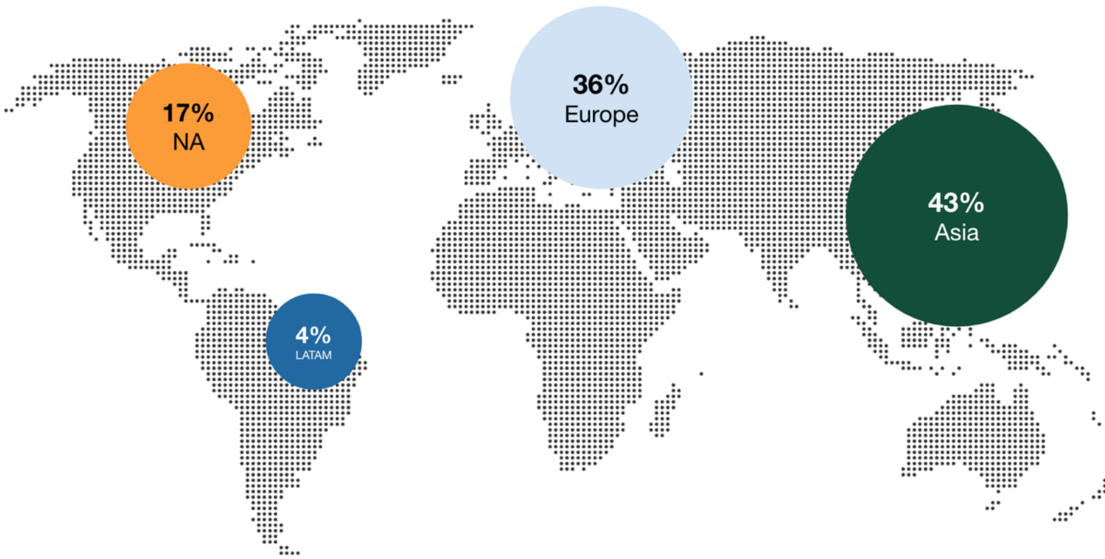
[2] *Funding Proposal: Green Guarantee Company (GGC)*. (2022). Green Climate Fund. https://www.greenclimate.fund/sites/default/files/document/funding-proposal-fp197.pdf.

[3] A prime example is the United States' Paycheck Protection (PPP) program that was originally a loan program but later evolved into a grant or forgiveness program. See W.B. Marsh and P. Sharma, "Loan Guarantees in a Crisis: An Antidote to a Credit Crunch?" *Journal of Financial Stability* 72 (2024); S. Caselli et al., "Survival Analysis of Public Guarantee Loans: Does Financial Intermediary Matter?" *Journal of Financial Stability* 54 (2021); OECD, op. cit.

[4] *Regar, Observatorio Estadístico de los sistemas de garantía.* 2022. https://redegarantias.com/wp-content/uploads/2024/03/REGAR-Observatorio-Estadistico-Sistemas-de-Garantias-2022.pdf.

Figure 1. Regional Breakdown of Guarantee Scheme

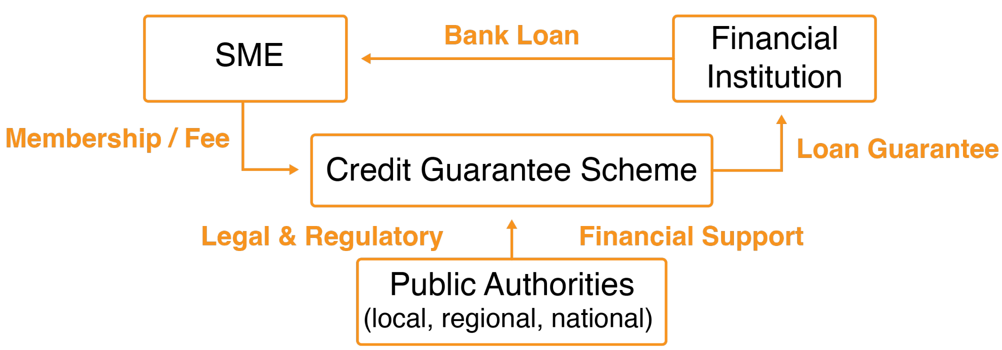
$1.7 Trillion in Active Guarantees



Source: Regar (2024)

Three types of credit guarantees exist: public sector, private sector, and mixed. While their primary use is SME support, they also have a place in development finance. For example, national governments establish them to achieve policy goals including economic growth, job creation, and poverty alleviation. Some national guarantee programs target specific sectors beyond SMEs such as agriculture, manufacturing, and infrastructure.[5] Public sector guarantee schemes take on many forms, depending on respective regulatory environments and mandates. See Figure 2.

Figure 2. Public Guarantee Schemes Concept



Source: OECD, 2013

In addition to national guarantee programs, many development finance institutions (DFIs) including the World Bank, the African Development Bank, Asian Development Bank, CAF, the Inter-American Development Bank, and others, have guarantee programs to support development at

[5] The World Bank and FIRST Initiative. 2015. Principles for Public Credit Guarantee Schemes for SMEs. Washington, DC: World Bank.

the global and regional levels. More specialized DFIs such as the Private Infrastructure Development Group (PIDG), a small MDB focused on the mobilization of private capital in emerging markets infrastructure, have also entered the guarantee fund space. Major bilateral development agencies such as the United States Development Finance Corporation (DFC) and the French Development Agency (AfD) also offer guarantees. The increased adoption of guarantee programs by multilateral and bilateral DFIs is expanding the role of guarantees for infrastructure globally. The CPI analysis of 52 guarantee instruments from 34 entities cited earlier (*Landscape of Guarantees for Climate Finance in EMDEs, 2024)* found that most climate-focused guarantees were issued for projects in Africa, focused on debt (not equity), and tended to cover commercial risk.

While established credit guarantee funds focused on development at the global or regional levels have existed for several years, climate-oriented guarantee funds have only recently emerged. These guarantee entities range in size, focus, and geographic emphasis. For example, in 2023, MIGA, the World Bank's Multilateral Investment Guarantee Agency (established 1985) supported 40 projects around the world with guarantees valued at USD 6.4 billion, of which 28 percent were climate-related.[6] As of 2022, GuarantCo (established in 2005) issued USD 1.9 billion in guarantees for sustainable infrastructure projects throughout select countries in Africa and Asia.[7] The Green Guarantee Company (GGC) launched in 2024, and led by Commission members Lasitha Perera and Boo Hock Khoo, is the first independent guarantee fund focused on green projects globally. Its USD 100 million capitalization comes from the Green Climate Fund, United Kingdom, United States, Norway, and Nigeria.

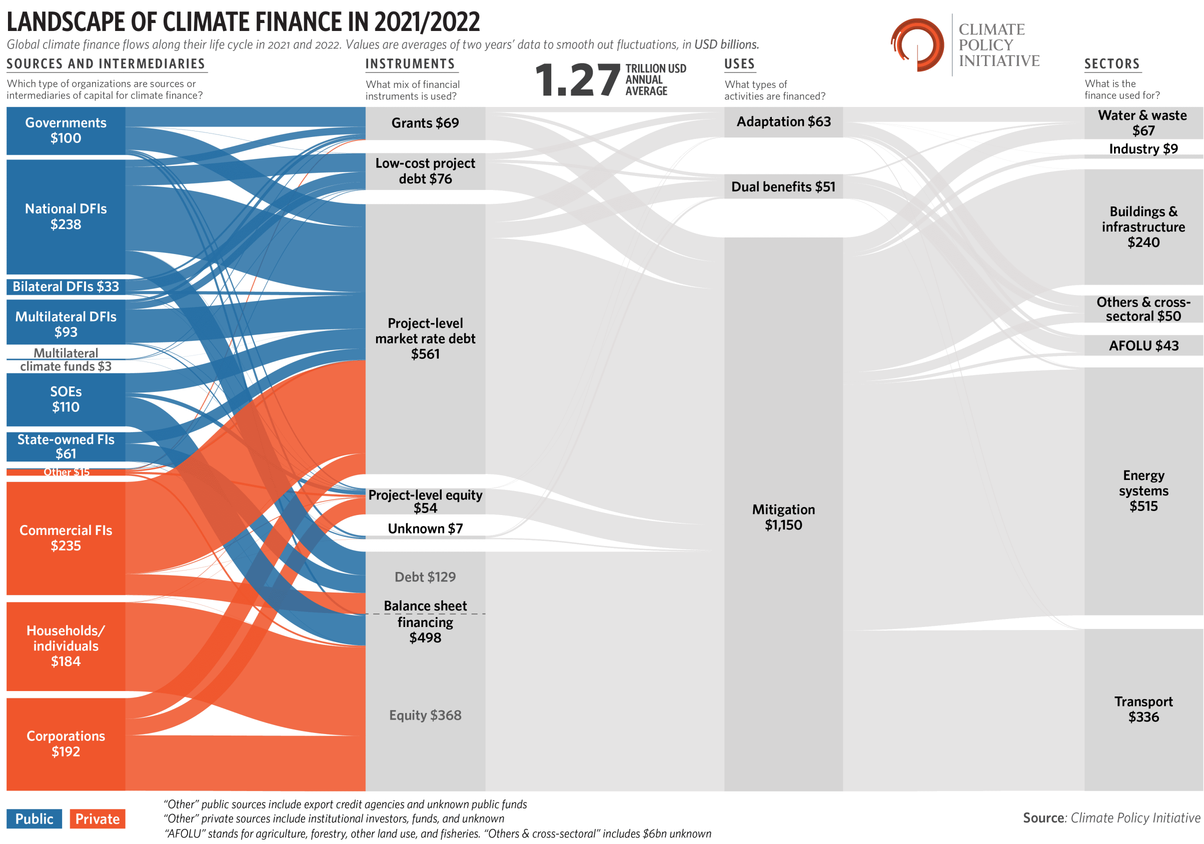
Urban-focused guarantee funds are in development or recently put in operation but no guarantees for this purpose have been deployed yet, possibly related to the added layer of political complexity that comes with subnational governments. Subnational governments also generally lack creditworthiness which is a major impediment to accessing capital markets.

[6] *MIGA Annual Report 2023.* https://www.miga.org/2023-annual-report.
[7] *GuarantCo: Enabling Long-Term Infrastructure Finance in Local Currency.* 2024. https://guarantco.com/wp-content/uploads/2024/05/GuarantCo-Corporate-Presentation-Q1-24.pdf.

1.2 The climate finance ecosystem

Climate finance is composed of an array of public and private investors. On the public side, governments, national DFIs, multilateral DFIs, multilateral climate funds, state-owned enterprises (SOEs), and state-owned financial institutions are the primary sources of funds. From the private sector, commercial banks, corporations, and households/individuals are the major contributors to climate finance. Many public and private entities have mandates to allocate capital to green or sustainable projects and initiatives, which is one factor that has pushed climate finance to more than USD 1 trillion annually. See Figure 3.A.

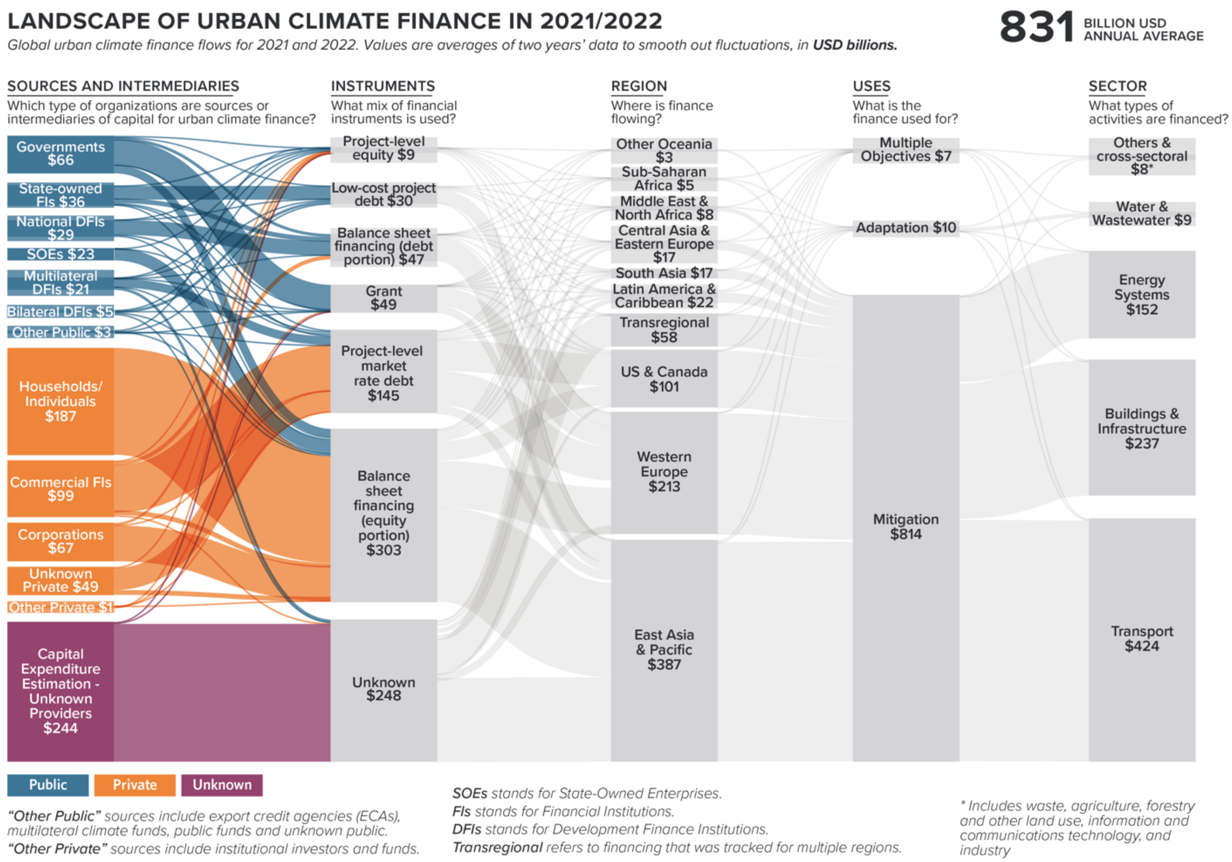
Figure 3.A. Landscape of Climate Finance 2021-2022



Source: Climate Policy Initiative (2023.

CCFLA released further details of urban climate finance in its *State of Cities Climate Finance 2024.* It found that of the USD 831 billion in climate flows to cities, 99 percent was for mitigation in the transport, energy systems, and buildings and infrastructure sectors. Some 65 percent of the total went to North America, Western Europe and China, while Latin America received three percent and Sub-Saharan Africa, Middle East and North Africa received approximately one percent. See Figure 3.B

Figure 3.B. Landscape of Urban Climate Finance 2021-2022



Source: CCFLA (2024)

While Figures 3.A. and 3.B provide overviews of overall and urban climate finance, they do not reflect the existence or use of credit guarantees in mobilizing specific funding streams. Globally agreed accounting conventions for climate finance include only direct monetary transfers and export credits.[8] In contrast, as a credit guarantee is "a type of insurance policy protecting banks and investors from the risks of non-payment," it has little standing in the reporting because it does not constitute a flow of funds.[9]

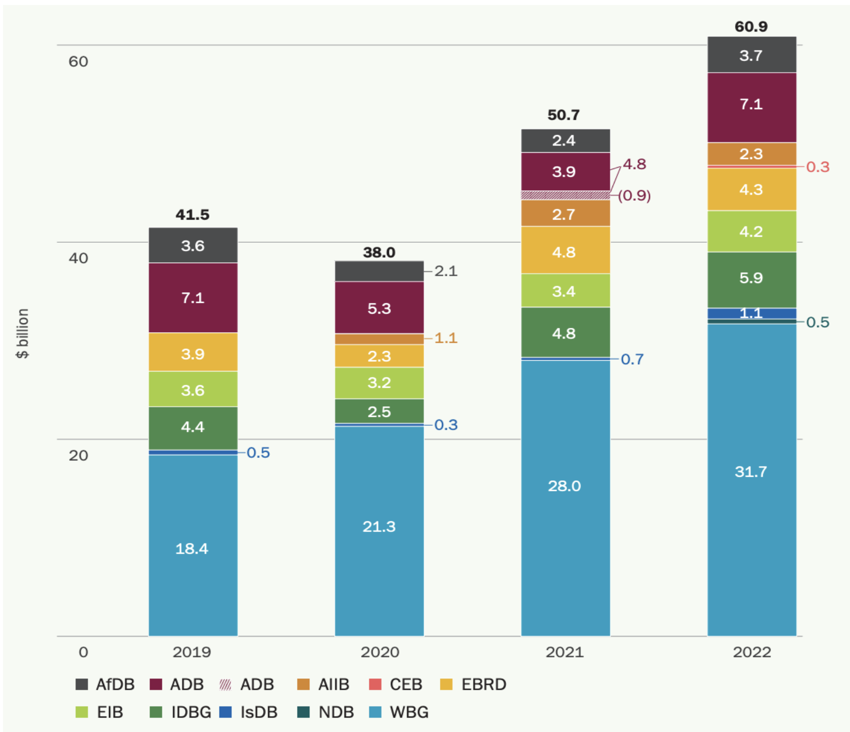
However, in illustrating the role that guarantees currently play in climate finance, an analysis of MDBs highlights their potential to mobilize more public and private capital into urban climate

[8] Sources of climate finance are the OECD that includes four components (multilateral and bilateral public finance, climate related export credits and private finance mobilized by multilateral and bilateral public finance) OECD. *Climate Finance Provided and Mobilised by Developed Countries in 2013-2022, Climate Finance and the USD 100 Billion Goal.* OECD Publishing, 2024. https://doi.org/10.1787/19150727-en.; The Climate Policy Initiative is roughly aligned with the UNFCC framework in its report *Climate Policy Initiative. Global Landscape of Climate Finance 2023.* https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2023/.; The Joint MDB group and the International Development Fund Club (IFDC) that track climate finance engages like the others in improving definitions and date collection. *Joint MDB Report on Climate Finance.* International Development Fund Club (IFDC) and MDBs, 2022. https://www.eib.org/attachments/lucalli/20230128_mdbs_joint_report_2022_en.pdf.

[9] *CPI Methodology Explanation, Asian Journal of Business and Accounting,* https://mojem.um.edu.my/index.php/AJBA/article/view/2658/859; *Climate Policy Initiative, Global Landscape of Climate Finance 2023: Methodology,* 7, https://www.climatepolicyinitiative.org/wp-content/uploads/2023/11/GLCF-2023-Methodology.pdf.

projects. According to the Joint Multilateral Development Bank group, in 2022, MDBs expended USD 60.9 billion in low and middle-income countries for climate projects, a 45 percent increase since 2019. However, only 21 percent went to urban areas.[10] See Figure 4.

Figure 4. MDB Climate Finance Commitments to Low- and Middle-Income Countries, 2022



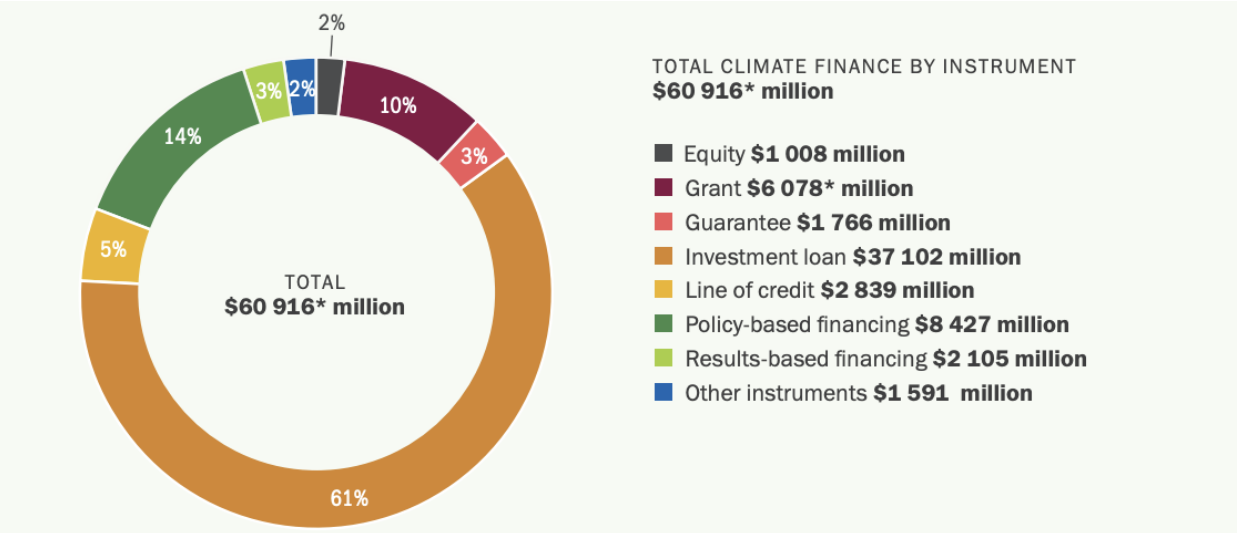
Source: Joint MDB Report (2023)

This MDB climate activity covers public and private transactions for a variety of instruments with mitigation constituting 63 percent of the total. Some 80 percent of their funding went to public entities that dedicated 61 percent to loans and 3 percent to guarantees.[11] See Figure 5.

[10] European Investment Bank. *2022 Joint Report on Multilateral Development Banks' Climate Finance*. 2023. https://www.eib.org/attachments/lucalli/20230128_mdbs_joint_report_2022_en.pdf.; Lasitha Perera, "Development Guarantee Group," presentation to the SDSN Global Commission on Urban SDG Finance, July 2024.

[11] Note that there are 11 contributors to the Joint MDB Report. They do not include such regional MDBs as CAF with a capitalization of more than USD 50 billion nor any of the 500 public development banks such as Brazil's *Banco Nacional de Desenvolvimento Econômico e Social* (BNDES) with USD 272 billion in assets, that are members of Finance in Common (FIC). This gap results in an under count of public climate finance.

Figure 5. MDB Finance by Type of Instrument



Source: Joint MDB Report (2023)

The private sector delivered nearly half the climate activity reported earlier in Figure 3.A. In 2022, it expended some USD 625 billion, representing a 96 percent increase since 2019.[12] Commercial finance institutions and corporations provided USD 425 billion (68 percent of the total), primarily investing in mitigation: energy transition, building efficiency and transport. However, of this amount, only 28 percent went to projects in low- and moderate-income countries.[13]

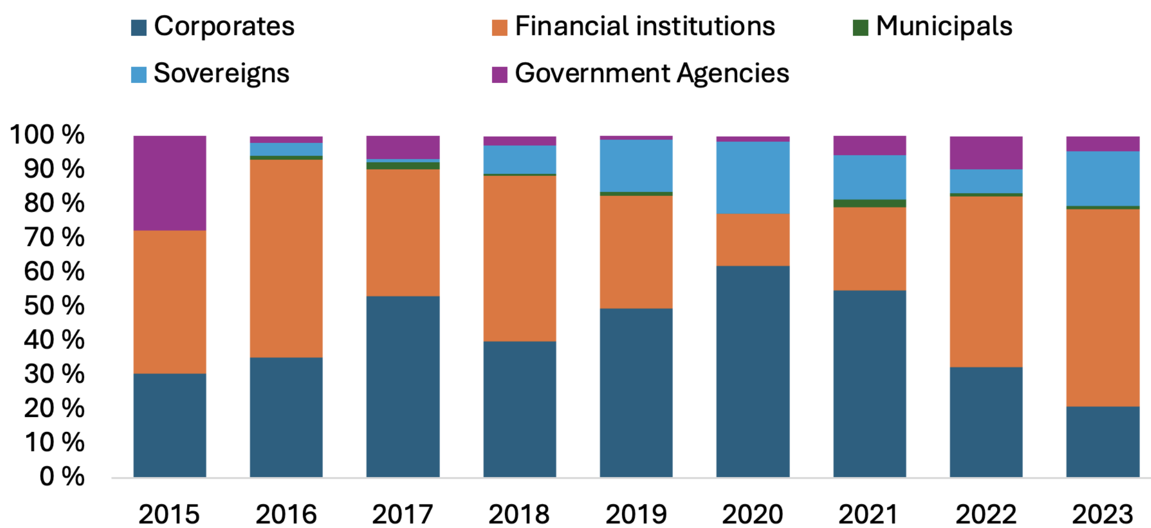
The Smart Market Initiative's (SMI) Blended Finance Task Force (BFTF) deepens the argument that expanding the deployment of guarantees could have the potential to increase MDBs capital mobilization ratios dramatically, especially for private investment. According to its findings, in current practice MDBs mobilized USD 30 cents of private investment for each dollar of loans spent on climate projects – a mobilization ratio of 0.3.[14] By contrast, it found that each dollar of guarantees provided by MDBs mobilized an additional USD 1.50 for climate projects, a capital mobilization ratio 5 times higher than that of loans.[15]

Additional analysis by the Development Guarantee Group sees an important role for urban-focused guarantee funds to play in supporting the growth of the municipal green bond market. They

[12] *Climate Policy Initiative. Global Landscape of Climate Finance 2023.* *https://www.climatepolicyinitiative.org/wp-content/uploads/2023/11/Global-Landscape-of-Climate-Finance-2023.pdf*.
[13] *Ibid., 19-21.*
[14] Smart Markets Initiative, Blended Finance Task Force. *Better Guarantees, Better Finance: Mobilizing Capital for Climate through Fit-for-Purpose Guarantees*. 2023. https://www.systemiq.earth/wp-content/uploads/2023/06/Blended-Finance-Taskforce-2023-Better-Guarantees-Better-Finance-1.pdf.
[15] *Ibid.*

underline the extremely small size of municipal issuances – they are virtually nonexistent, something that an instrument like the GCGF, with its de-risking effect, could help to change. See Figure 6.

Figure 6. Green Bond Market Sales by Issuers 2015-2023



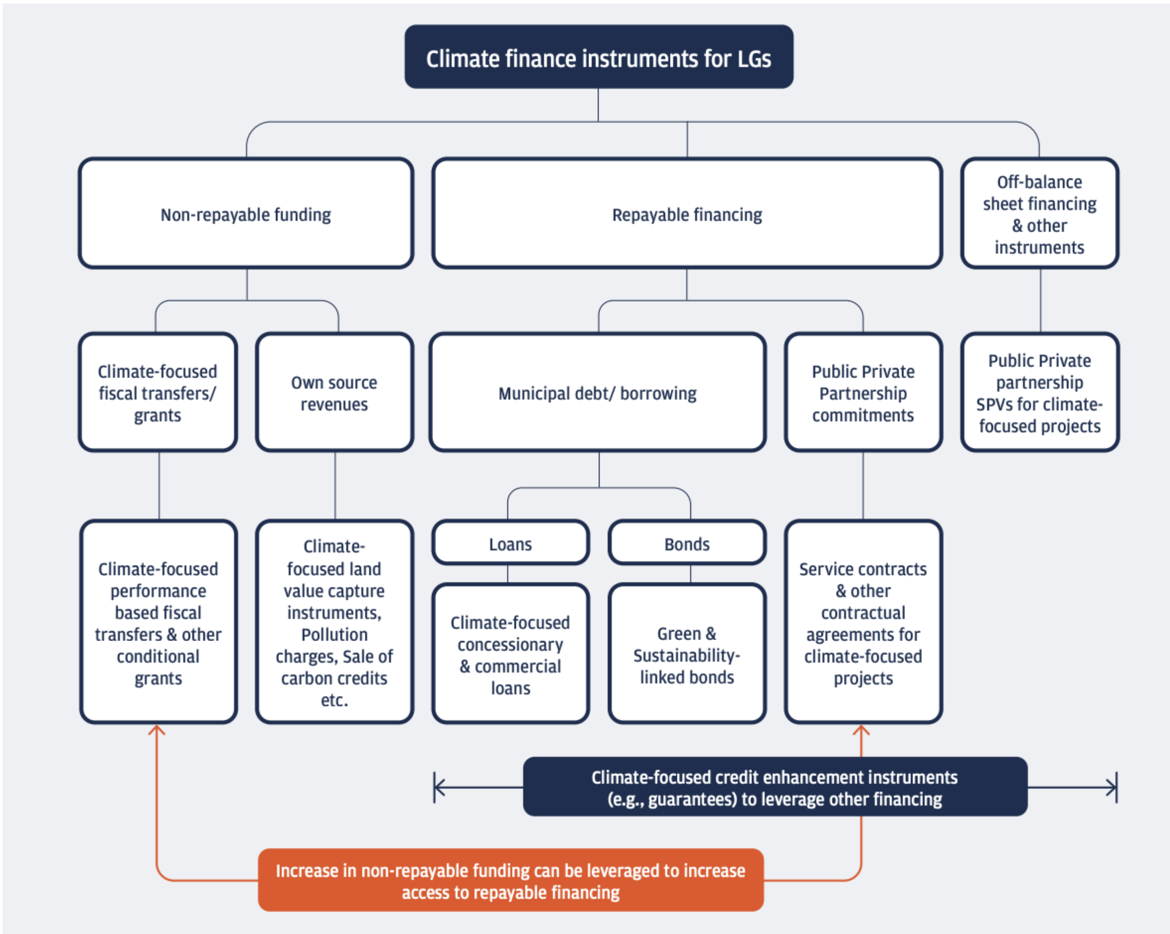
Source: Perera, Development Guarantee Group (2024)

1.3. Locating the Green Cities Guarantee Fund in the climate finance and guarantee fund landscapes

The proposed GCGF would be situated between lenders and cities. For lenders, guarantees provide an incentive to provide capital to cities that lack a history of creditworthiness or sufficient collateral. For cities, guarantees contribute to raising the credit ratings of their debt issuances, lowering their cost of borrowing, increasing the tenor of loans/bonds, and providing access to a broader pool of investors.

In general, city resources for climate projects come from two sources: non-repayable funding (taxes, intergovernmental transfers) and repayable financing (loans or bonds). The GCGF is suited to support a range of projects through several lending instruments available to cities, associated entities, or the private sector. For example, cities can sometimes borrow directly, issue bonds, raise funds through municipal authorities or utilities, engage in public private partnerships (PPPs), and create special purpose vehicles (SPV). Cities can additionally award concessions to the private sector to develop urban infrastructure projects. See Figure 7.

Figure 7. Guarantees Fit in Available Local Government Climate Finance Instruments



Source: World Bank and United Nations Capital Development Fund (2024)

Table 1, which is based on a combination of publicly available information and interviews, provides a preliminary overview of guarantee funds most relevant to the discussion of the proposed Green Cities Guarantee Fund.

Table 1. Selected Guarantee Funds Relevant to the Green Cities Guarantee Fund

	Green Guarantee Company (2024)	**GuarantCo (2005)**	**African Development Fund (ADF)**	**World Bank Multilateral Investment Guarantee Agency (MIGA) (1988)**	**UN Capital Development Fund Guarantee Facility for Sustainable Cities (in discussion)**	**CITYRIZ (French Development Agency) (2021)**
Funding:	Green Climate Fund, UK, Norway, Nigeria, USAID	Donor countries primarily in Europe	ADF Member Countries (Regional and Non-Regional)	The World Bank donor countries	The EU EFSD+ Program	The EU EFSD+ Program
Fund Manager:	Development Guarantee Group, subsidiary of Cardano Development	Cardano Development (non-profit)	Managed by African Development Fund	The World Bank	Managed by UN Capital Development Fund (in negotiation with EU)	The French Development Agency (no guarantees issued yet)
Focus on cities	Low	Low	Low	Low	High	High
Regional Focus	Africa and SE Asia	Africa and Asia	Africa	Global	Africa and SE Asia	Africa
Project types	Energy, Transport, Buildings, Water & Sanitation, Land Use, Marine	Energy, Water & Waste, Transport, Urban Infrastructure, Telecom, Mining	Industrial, Agribusiness, Energy, Financial Transport, Health & Education, Water & Sanitation	Financial, Infrastructure, Oil and Gas, Mining, Telecom, Services, Agribusiness, Manufacturing	Sustainable urban development projects	Sustainable water, transport, and energy projects
Currency type	Hard currency	Local currency	Local currency	Hard & local currency	Hard & local currency	Hard & local currency

Of note, the first four guarantee programs have little or no focus on cities. The UNCDF's Facility for Sustainable Cities and AFD's CITYRIZ are the only two known urban-focused guarantee funds. The UNCDF program is under development. CITYRIZ has funding up to EUR 30 million but has not yet extended any guarantees.[16]

[16] David Jackson, personal communication, April 2024.; Constant Harbonn et al., personal communication, May 2024.; European Commission. "European Fund for Sustainable Development Plus." https://international-partnerships.ec.europa.eu/funding-and-technical-assistance/funding-instruments/european-fund-sustainable-development-plus_en.

PART 2. THE CASE FOR THE GREEN CITIES GUARANTEE FUND (GCGF)

The Green Cities Guarantee Fund (GCGF) has the potential to fill a wide gap in the urban climate finance market especially where cities lack access to timely and affordable capital for green projects. In addressing these issues, the GCGF could catalyze the growth of local commercial debt markets, support access to global capital markets, help increase the presence of municipalities in the Green, Social, Sustainable (GSS) bond market, expand public-private partnerships at the subnational level, and encourage greater private sector investment in urban infrastructure. Since climate finance spans a broad capital base, the GCGF could have a flexible mandate, supporting the growth of a variety of markets while attracting a wide range of investors to the urban climate finance sector.

2.1 Lack of timely and affordable borrowing

Several reasons explain why cities in low- and middle-income countries lack access to affordable debt.[17] First, today's international financial architecture is country-centered, mandating most development financial institutions (e.g., MDBs) to provide capital directly to national, not subnational, governments. National governments determine the type and use of such funds, administering them via their own ministries or through pre-determined intergovernmental transfers, often independent of local considerations. Of note, important discussions are now taking place on reforming the MDBs, but city considerations are not on the table.[18] Second, only 44 percent of the world's countries allow subnational borrowing, but they generally require sovereign guarantees and/or sovereign approval as a condition, which can lead to lengthy, complex, and politically complicated processes for cities.[19] Third, lenders and rating agencies view cities as high-risk borrowers due to political vulnerability (e.g. election cycles, municipal approval processes), and in some cases, weak institutional frameworks.[20] When cities can access financing, they generally face high interest rates with short tenors, factors that can lead to significant fiscal stress, leading to a higher likelihood of defaulting on debt, and less investment in climate-responsive projects.

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17 Priscilla Negreiros et al. Accelerating Urban Climate Finance in Low- and Middle-Income Countries: An Important Strategic Dimension of MDB Reform. Climate Policy Initiative, November 2023.

18 "Meeting Minutes," Task Force 1, SDSN Global Commission for Urban SDG Finance, September 2023.
19 Jaime Pumajero, former mayor, Barranquilla, Colombia; Mauricio Rodas, former mayor, Quito, Ecuador, personal communications.
20 See Appendix B.

2.1.1 The perceived risk of lending to cities is higher than the real risk

The European Investment Bank (EIB) found evidence which suggests that the actual risk of lending to cities is relatively low. In 2022, it compared the default rates of private and subnational borrowers using pooled data from major DFIs including the International Finance Corporation (IFC), African Development Bank (AfDB), Asian Development Bank (ADB), Inter-American Development Bank (IDB), Asian Infrastructure Investment Bank (AIIB), and others. It determined that from 1994 to 2022, subnational borrowers had a lower default rate (2.2 percent) on average than private borrowers (3.6 percent). In late 2024, the EIB will issue a second report that breaks down default rates by sector and geography. See Figure 8.

Figure 8. Private and Sub-sovereign Annual Default Rates 1994-2022

[21] *Source: EIB (2023)*

2.1.2 Sovereign guarantees are not reliable

In places where national laws allow subnational government borrowing, they may require cities to secure a sovereign guarantee on any debt transaction, likely for two reasons. First, the sovereign guarantee provides investors with confidence that the national government will repay the lenders in the event of default. Second, it serves as a way for finance ministers to manage their country's overall debt and ensure that irresponsible borrowing at the subnational level doesn't threaten national fiscal stability.

[21]European Investment Bank. *Default Statistics: Private and Sub-Sovereign Lending 1994–2022*. Vol. 1. Luxembourg: Publications Office, 2023.

However, sovereign guarantees are not a reliable way for cities to access needed capital. Securing a sovereign guarantee can be a burdensome process, resulting in untenably long delays. Moreover, a national government can withhold or deny a sovereign guarantee because it has differing priorities than a given city, it does not fully understand the city's capital requirements for infrastructure, or for blatant political reasons.

In cases where subnational borrowing without a sovereign guarantee is prohibited, the GCGF could work with city owned utility companies (e.g., a water utility company), special purpose vehicles or the private sector investing in urban projects.

2.1.3 Existing Guarantee Programs Neglect Subnational Governments

In addition to the aforementioned factors that prevent cities from accessing finance, existing guarantee funds neglect subnational governments. A preliminary analysis of GuarantCo and the World Bank's Multilateral Investment Guarantee Agency (MIGA), two of the most prominent guarantee funds that publicly disclose their portfolios, shows that subnational governments receive a very small share of guarantees. For example, GuarantCo's public portfolio of 71 guarantees includes only one guarantee for a project in which a municipality was the borrower. MIGA also has a limited subnational government focus, and its approval process can pose several administrative challenges to cities.

Today's guarantors operating in emerging markets mainly support private sector borrowing, citing political risk as a major deterrent to working with cities.[22] They also mention issues surrounding local governments' lack of capacity to develop bankable project pipelines, issue debt in international markets, and establish creditworthiness relative to private sector entities.

2.2 Guarantee Funds could play a critical role in channeling investment to subnational governments

The GCGF could benefit the urban climate finance ecosystem in several ways: it could have a positive effect on city credit ratings and address risk perceptions that limit city borrowing. Of note, operationalizing the GCGF would likely include developing technical assistance efforts for cities and nations. For example, cities may need aid in project preparation activities, structuring complex climate-related debt transactions, and for their reporting – a crucial step for impact finance instruments such as green bonds. Countries may need advice on instituting legislative reforms and

[22] Lasitha Perera, personal communication, April 2, 2024.

national climate policies that drive green investment to local governments while maintaining their overall fiscal stability.[23]

2.2.1 Address Perceived Risk of Lending to Cities

Having a strong credit rating is one of the most critical prerequisites for raising debt in capital markets. In general, cities in low- and middle-income countries either have a low credit rating or none. According to the World Bank, of the 500 largest cities in the developing world, less than 20 percent are creditworthy.

In contrast, guarantors generally have high ratings, which can be leveraged to directly benefit borrowers such as cities in the case of an urban-focused guarantee fund (For example, the World Bank's MIGA and GuarantCo are both AAA-rated). So, when a city with a credit guarantee from a highly rated guarantor performs well over time, it builds its credit history and can improve its rating. Moreover, when a third-party guarantee fund has a higher credit rating than a city's national government, it could potentially raise the city's rating above that of its national government – making it a superior alternative to a sovereign guarantee in this respect. Finally, highly creditworthy guarantors can operate within strong legal regimes (e.g., New York or London) reducing the legal risk associated with sub-sovereign debt from the perspective of investors.

Guarantee funds have proven to be successful at raising credit ratings and increasing access to debt at better terms for borrowers in below-investment-grade countries. GuarantCo, developed under its former CEO, Commissioner Lasitha Perera, is an example. Founded in 2005, it has guaranteed infrastructure projects in low-credit-profile countries in Africa (Benin, Cambodia, Cameroon, Chad, Ghana, Jordan, Kenya, Madagascar, Mali, Nigeria, Tanzania, Togo, and Uganda) and Asia (India, Nepal, Pakistan, the Philippines, Thailand, and Vietnam). GuarantCo's careful selection of projects and proper structuring of each guarantee resulted in commercial returns—despite its not having a commercial mandate. The GCGF could seek to replicate this model for urban infrastructure.

2.3 Increase domestic and international capital flows for urban climate finance

The GCGF's guarantees could play a role in expanding cities' share of total climate finance flows – a market that has eclipsed USD 1 trillion annually across public and private markets.

[23] Budina, Olga, Sandeep Kumar, and others. *Structural Reforms to Accelerate Growth, Ease Policy Trade-offs, and Support the Green Transition in Emerging Market and Developing Economies*. Staff Discussion Note SDN/2023/007. Washington, D.C.: International Monetary Fund, 2023.

In domestic markets, the GCGF has the potential to prove the viability of local bank lending. In most countries, commercial banks perceive cities as too risky for credit. However, a credit guarantee can change the risk-return profile of a debt transaction. In addition, third party (non-sovereign) guarantees that reduce a national government's liability risk may increase the likelihood of national support. Finally, from a city's perspective, borrowing in local currency mitigates currency risk. All these features could contribute to increasing the amount of local lending at lower cost.

The following hypothetical example is illustrative. In a country where municipal governments are legally allowed to borrow but must secure national government approval of their debts, a city seeks a commercial bank loan for renewable energy and electrified transport projects. After preliminary negotiations, the two parties approach the GCGF with a request for a guarantee for the transaction. After a due diligence review of the loan/project, the GCGF offers a partial credit guarantee – providing additionality to the transaction – a term meaning that it would help facilitate a transaction that would not otherwise happen and/or makes the transaction happen on more favorable terms for the borrower. Soon the partial credit guarantee is in place, national government approval is given, and the loan extended. For three years, the city performs well, comfortably paying back the loan's principal and interest and the guarantee fees. At this point, the city and the lender renegotiate the terms and agree to remove the guarantee, eliminating the recurring guarantee fee for the city.

In this case, the success of the GCGF-guaranteed loan not only signals that the city (or associated entities, PPPs, private sector) is a safe investment but also produces a good performance record and resultant lowered costs. Over time, this record (and others that accumulate) may lead domestic lenders such as banks and asset managers to expand their lending to subnational governments. In fact, GuarantCo has demonstrated the impact of guarantees in stimulating local markets in its work in Africa and Asia where well-performing projects guaranteed by GuarantCo have incentivized lenders to support similar projects without guarantees.

In the international arena, the GCGF could help expand the base of investors for emerging market cities through increasing access to the global bond market, a world dominated by hard currency transactions. Though protective of the lender, hard currency issues often pose problems for the borrower whose revenues (property taxes) pledged against the debt are in local currency. A hypothetical case of municipal bonds issued by Dakar, Senegal serves as an example. Dakar issues bonds in euros but collects its taxes in CFA XOFs (Franc of West African Communities). Due to unforeseen circumstances occurring during the bond's tenor, the CFA XOF depreciates by 20 percent relative to the euro. This affects the city's budget dramatically, raising the cost of debt by 20 percent, and increasing the risk for a default. In this case, the GCGF would have assisted the city in currency hedging to address this issue. Precedent for this exists as exemplified by Gurantco and The Currency Exchange (TCX).

The GCGF could be well-suited to channel capital from debt markets in the developed countries that hold the concentration of funds to developing countries in need. For example, by providing a partial or full credit guarantee governed by legal systems in New York, London, or other hard currency markets, the GCGF could fortify investor confidence in municipal bonds. It could help manage currency risk by structuring guarantees in partnership with currency hedging platforms such as TCX[24], and assisting cities with accessing grants or other forms of funding to cover currency hedging fees.

The case of the Municipality of Lima is an example of how GCGF activities could open the international bond market more broadly to subnational governments through a range of services. In December 2023, Lima debuted a 20-year USD 325.6 million bond issuance denominated in Peruvian soles but payable in US dollars on the Singapore Stock Exchange. The bond proceeds fund a portfolio of 42 infrastructure and public service projects. The city pledged its motor vehicle tax and the property transfer tax against the bond. The revenue flows into a special purpose vehicle (SPV) administered by Credicorp Capital Sociedad Titulizadora S.A., a Peruvian bank serving as the trustee responsible for transferring the revenue to bondholders at predetermined intervals. In a complex legal arrangement crafted by Commission member Adam Brenneman, Partner at Cleary Gottlieb, the city government issued a Peruvian law protected guarantee. Bank of America was the initial purchaser of the bonds which were rated BBB by Fitch. Of note, while the initial issuance was for USD 325.6 million, the securitization program enables Lima to issue up to USD 1.08 billion of bonds.[25] Lima's first international bond issuance was made possible by these complex and innovative arrangements.[26]

In addition to supporting standard international bond issuances, the GCGF could gear efforts to Green, Social, or Sustainable (GSS) bonds, that today constitute a USD 1 trillion business.[27] While dominated by the US, Europe, and China, in recent years, national governments in emerging

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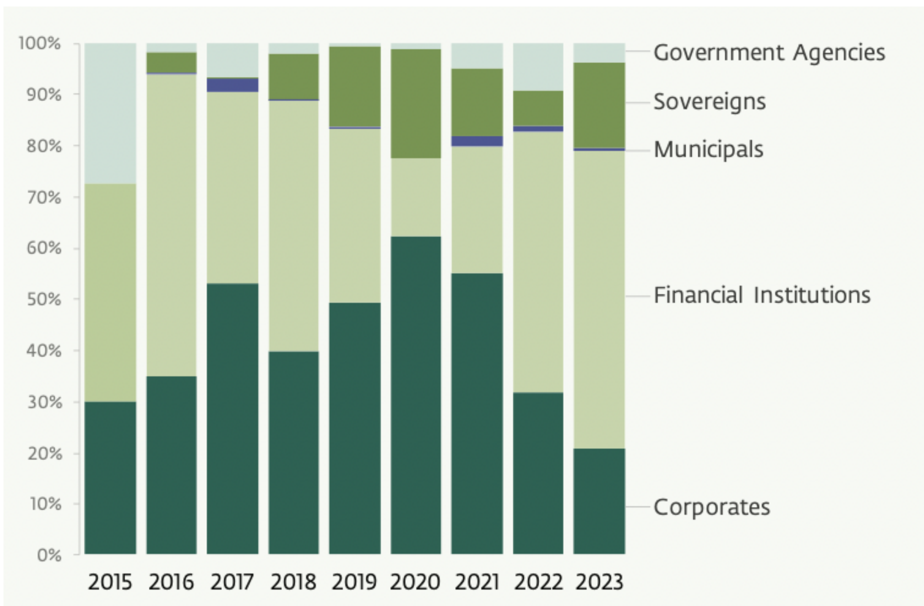
[24] Thomas Oostheim and others, personal communication, June 2024.
[25] PerAdam Brenneman, personal communication, April 16, 2024.
[26] "The Municipality of Lima's Bond Offering." Cleary Gottlieb. Accessed July 20, 2024. https://www.clearygottlieb.com/news-and-insights/news-listing/the-municipality-of-limas-bond-offering.
[27] International Finance Corporation and Amundi. *Emerging Market Green Bonds, 2024*. https://www.ifc.org/content/dam/ifc/doc/2024/emerging-market-green-bonds-2023.pdf.

markets have become active issuers of GSS bonds, suggesting opportunities for properly structured issuances by cities.[28] Municipalities across emerging markets rarely tap the GSS bond market – in 2023, they represented less than 1 percent of the total.[29] Beyond the usual previously mentioned limitations, GSS bonds require compliance and reporting requirements to ensure environmental or social impact. Here, the GCGF could assist local governments in navigating the complexities of GSS bond issuances, including through supporting the creation of green debt frameworks and reporting processes. See Figure 9.

Figure 9. Green Bond Issuances by Sector (Emerging Markets)



Source: IFC/Amundi (2023)

2.4 Support PPPs with Cities and Municipal Utilities

Another way to provide subnational governments with direct access to capital is through public-private partnerships (PPPs) with subnational governments as shareholders. In a PPP arrangement, a project company or special purpose vehicle (SPV) is generally established for the delivery of a single infrastructure project. This structure can lend itself to greater investor confidence due to the participation of private sector partner(s) that bring expertise in raising capital, financial management, and establishing creditworthiness. In countries with relatively inactive municipal debt

[28] In Africa, Angola, Kenya, Senegal, Egypt, Morocco, Mozambique, Nigeria, and South Africa have either issued or announced intentions to issue them. Latin America has seen similarly rapid increase in green bond issuances in the past several years. In 2019, Chile was the first government to issue a sovereign GSS bond, followed by, Mexico, Colombia, Brazil, Peru, Costa Rica, Argentina, Ecuador, the Dominican Republic, Paraguay, Bolivia, and Uruguay. International Finance Corporation and Amundi. *Emerging Market Green Bonds, 2024*. https://www.ifc.org/content/dam/ifc/doc/2024/emerging-market-green-bonds-2023.pdf.

[29] *Ibid.*

markets, subnational PPPs could be a key channel through which cities expand their role in the financing and development of infrastructure.

If public-private partnerships structured at the municipal level are new to a potential GCGF client, the GFCF could create or partner with a project preparation facility. This type of arrangement could follow a similar TA strategy as Meridiam's Urban Resilience Fund (TURF), led by Commission member Salim Bensmail. TURF makes equity investments in subnational urban resilience projects in Africa and Europe and has an associated TA facility which directly funds the project preparation phase for cities.[30] This euro 20 million facility is capitalized by USAID, Private Infrastructure Development Group (PIDG) and others. The GCGF's TA facility could also look to ICLEI'S Transformative Actions Program (TAP) as a model. TAP is a global initiative which assists subnational governments and local businesses with turning their sustainable infrastructure ideas into solid, investment-ready projects by connecting them with potential investors and project preparation facilities, as well as providing personalized support for project development.[31]

An example of guarantees within a PPP with a subnational government is the Ho Chi Minh City-Mekong Delta Corridor Project. After the Ho Chi Minh City People's Committee approved a strategy to privatize infrastructure development in 2001, the city established the Ho Chi Minh Infrastructure Investments JSC (CII), a joint stock company, to attract private capital for transport and water infrastructure. In March 2019, GuarantCo provided a USD 50 million guarantee to CII for a debut 10-year bond issuance to finance the construction of an expressway in the Mekong Delta, serving a 4 million population region. This credit guarantee was key to enabling CII's first bond issuance.[32]

2.5 Foster Privately Funded Urban Infrastructure Projects

In addition to facilitating municipal debt and public-private partnerships, the GCGF can provide guarantees for private sector-led urban infrastructure projects such as water systems, waste collection, and transit lines. Private companies can access finance for critical urban infrastructure where, for reasons cited earlier, cities cannot. In a common practice, a municipality can award a concession to a private company to finance, design, build, and operate public infrastructure. Here, the municipality would relinquish its proprietary interest to some degree but secure the development of critical infrastructure. As with PPPs, private companies usually establish an SPV to

[30] Meridiam. "Sustainable and Resilient Cities of Tomorrow." Accessed July 20, 2024. https://www.meridiam.com/assets/sustainable-and-resilient-cities-of-tomorrow/.
[31] Jaume Marques Colom (ICLEI), personal communication.
[32] GuarantCo. "Ho Chi Minh Infrastructure Investments JSC." 2019. https://guarantco.com/our-portfolio/ho-chi-minh-infrastructure-investments-jsc/.

execute a given project. The SPV can borrow from commercial banks and/or development finance institutions or can issue bonds on domestic or global capital markets. While private companies are generally viewed as less risky borrowers than local governments, they still incur project-related risks for which guarantees are important.[33]

An example of a guarantee for a privately funded project, albeit not a green project, is GuarantCo's support of the Lagos Free Zone, Nigeria's largest port-based economic zone adjacent to the country's USD 1.5 billion Lekki deep seaport (jointly owned by the Nigerian government, Lagos State Government, and private companies) that opened in 2023 and serves as an economic hub in the West African region.[34] In November 2019, GuarantCo provided a USD 25 million counter-guarantee to InfraCredit Nigeria that enabled InfraCredit Nigeria to guarantee a USD 65.5 million bond issuance by the Lagos Free Zone Company. The free zone has attracted USD 2.5 billion in private investment.[35] While the city of Lagos is not a shareholder in the project, the influx of private investment into the Zone has provided employment for residents of Lagos.

[33] The risks include liquidity, performance, counterparty (depending on local approvals).
[34] GuarantCo. "Lagos Free Zone Company." 2023. https://guarantco.com/our-portfolio/lagos-free-zone-company/.
[35] *Ibid*.

PART 3. THE WAY FORWARD: OPERATIONALIZING THE GREEN CITIES GUARANTEE FUND

For the GCGF to move from a concept to operations requires technical studies. Among them are determination of its legal and governance structure, the development of its business model and selecting the markets for the fund to operate in. Guiding principles, currently in draft, will frame the studies and subsequent decisions. See Appendix A.

The Commission Secretariat has been in discussion with relevant parties to outline and undertake the studies. After a preliminary screening of regions according to market study criteria discussed below, it suggests a focus on Latin America for a pilot phase. (Part 4, Piloting the Green Cities Guarantee Fund details the reasoning behind the recommendations.) The following sections consolidate preliminary research and delineates some of the questions to be resolved with additional technical studies.

3.1 Structure and Governance

The first decision in operationalizing the GCGF is determining its legal structure and associated governance. Choices range from being hosted by a multilateral development bank (MDB) to being an independent organization. Each option presents an array of advantages and disadvantages.

If hosted by an MDB, the GCGF could become a multi-donor trust fund (MDTF). A MDTF is a pass-through mechanism in which the hosting organization is the trustee and provides legal, administrative, and secretariat services. Under this arrangement, the MDTF generally adopts the host's credit rating along with its reputation and brand. In addition, it may gain access to such complementary facilities located within the host as technical assistance, research, or data collection. Negotiating a MDFT is a relatively straightforward process likely taking two years or less. In exchange for trustee services, the MDFT pays fees to the host. The World Bank, for example, has two MDTF fees: a one-time fee, 2-5 percent of the fund at establishment, and an annual fee, 12 percent of the fund's total amount of disbursements. Operationalizing the GCGF will require technical studies to determine fee structures and other key details as discussed below.

However, a MDB host arrangement has challenges because MDBs are large membership organizations with fiduciary responsibilities, goals, and complex internal processes within which the MDFT must work. For example, the World Bank has 189 members or shareholders, four separate boards of directors, and five all-board standing committees. One MDB-hosted guarantee fund has reported that the institutional governance and practices were sometimes at odds with the fund.[36]

Becoming an independent institution, the second option, is more time- and resource-intensive than being an MDTF. It calls for establishing the fund's legal status in a host country, creating a secretariat with associated administrative functions and developing a credit rating, brand, and reputation. Any technical assistance or other services needed by the fund would have to be incorporated or subcontracted. Based on the experiences of other independently formed guarantee funds explored in this study, this endeavor could take more than four years. However, as a stand-alone entity with no competing priorities, the fund could be nimble and innovative.

3.2 Business Model

Regardless of its host, GCGF needs to develop its business model, incorporating a capitalization plan based on assumptions regarding its leverage ratio and the composition of its portfolio. As a hybrid insurance/development finance company, the GCGF would aim to be self-financing with its revenues covering costs and producing a return for its investors. In general, its guarantee premium plus the return on investment (ROI) of its reserve fund would supply its revenue while administration, cost of capital, and portfolio management writ large would be the expenses.

3.2.1 Capitalization

As envisioned, the GCGF will be capitalized by equity which is leveraged to expand the total guarantee capacity of the fund. An analysis of existing guarantee funds shows leverage ratios have a wide range: GuarantCo's is 3 (i.e., it can guarantee 3 dollars of projects for every 1 dollar of equity); the recently formed Green Guarantee Company's is 10. While a high leverage ratio can be risky because it raises the chances of insolvency, it also enables each dollar of equity invested in the fund to go further. For example, the Green Guarantee Company is leveraging USD 100 million in equity 10x to provide USD 1 billion in guarantees.

3.2.2 Portfolio

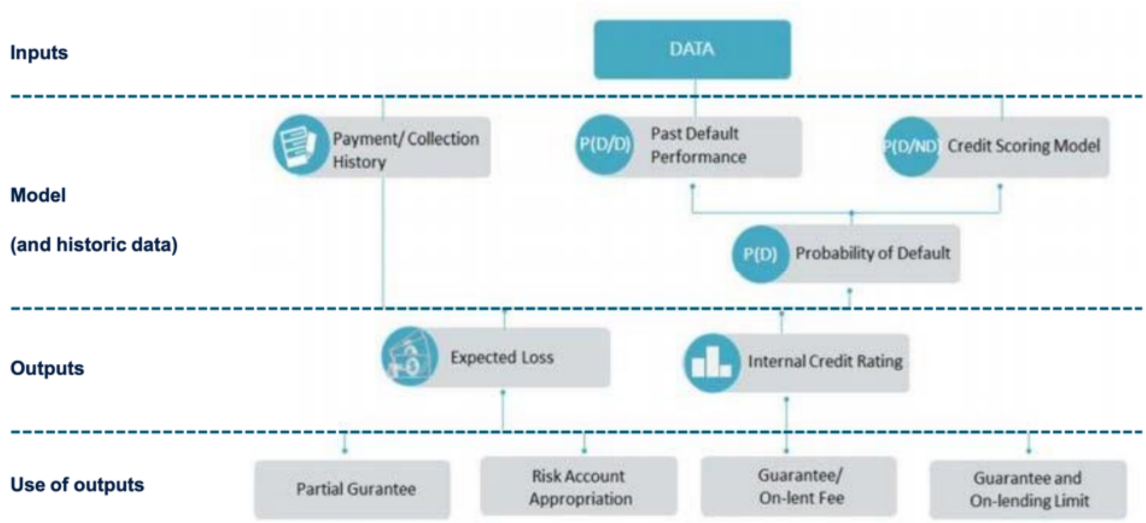
The GCGF's ability to meet its aims depends on having a solvent portfolio based on sound risk analyses of its guaranteed projects and their borrowers. While not "rocket science," public and private credit and insurance institutions employ multiple risk models available for replication. Their common characteristics are the use of historical data and probability assumptions.[37] See Figure 10.

[36] Boo Hock Khoo, personal communication, April 2, 2024.

[37] The cost of risk is calculated at the individual guarantee and portfolio levels. A simple equation establishes the individual guarantee level data:

Figure 10. Risk Assessment Example (World Bank

Source: World Bank (2020)



The GCGF would be engaged in areas having limited historical data, rife with misconceptions about the perceived risks of subnational borrowing. In response, the proposed business model study would need to develop risk profiles for types of projects (e.g., transportation, energy, sanitation) and subnational governments and associated entities (cities, municipal utility companies, authorities). The study should also propose strategies for balancing the sectors, risk profiles of cities, and purposes (mitigation v. adaptation) of climate investments in the portfolio.

3.2.3 Guarantee Premium

The next step in the business model is determining the guarantee fees, which are generally calculated as a percent of the total guaranteed capital. For example, if a fund provides a full credit guarantee on a USD 50 million loan with a 1 percent guarantee premium, then the annual guarantee fee would be 1 percent of USD 50 million, or USD 500,000. The borrower pays the guarantor the fee on a recurring basis until all principal and interest payments are made. While this fee may appear to be steep, guaranteed loans tend to have lower interest rates than unguaranteed loans, which may lead to net savings.

Cost of Risk = Probability of Default (PD) x Loss Given Default (LGD)

PD is the projected likelihood that the borrower will default on a loan in a given year. LGD is the percent of the guaranteed amount that is projected to be lost in the event of the default. A set of assumptions related to the risk profile of the borrower and the project along with the structure of the guarantee underlies each calculation. The portfolio level cost of risk is the sum of the individual guarantees' costs of risk.

The business model study for the GCGF needs to be done in conjunction with a market analysis to orient the fund's initial operations. Key questions to be addressed include the GCGF's total addressable market (depending on the selected geography), the target amount and sources of its capitalization, and the composition of its portfolio.

3.3 Selecting the Market

The Commission Secretariat has undertaken preliminary analyses of regions, countries and sectors preparatory for the needed in-depth market study. It considered the rates of urbanization, documented urban infrastructure gaps, funding levels at the subnational level, and regulatory environments for subnational borrowing. It assessed the extent of public development assets. It also looked at the supply of existing funds by geography – Latin America has only four percent of the world's guarantee funds – and developed or proposed subnational guarantee funds: CITYRIZ and the UNCDF Guarantee Facility for Sustainable Cities are focused on Africa and Asia. Based on this research, the Secretariat recommends Latin America as the region for the deeper GCGF market study.

The Secretariat also undertook a preliminary examination of Latin American countries looking at key regulatory components for which data is available (e.g., the laws surrounding sovereign guarantees and the approval process for subnational entities) and some examples of urban climate finance within individual countries. It concluded that Brazil, Colombia, Mexico and Argentina would be strong candidates for GCGF operations. Subject to further analysis, Uruguay, Peru, Chile and the Dominican Republic may also be candidates. The Secretariat suggests that the in-depth market study of these countries include an evaluation of the size and characteristics of their subnational debt markets (e.g., the total, type, and providers of debt capital raised annually, including transaction sizes, terms, type of collateral, use of funds, type of currency, presence and use guarantees, municipal debt management and limits, rules related to hard currency borrowing from external lenders, and other matters). It also suggests looking at enabling conditions in selected cities, assessing not only the large-sized cities but also the intermediate and smaller cities for consideration by the GCGF.

The Secretariat briefly reviewed the specific types of urban infrastructure projects of interest to the GCGF. They are transport, energy, water and sanitation, local public infrastructure, waste treatment and disposal, and climate disaster risk management. See Table 2. Moving forward, the market study needs to develop performance and risk profiles for these countries and these sectors, assessing their relative opportunities and risks. It should also identify the public or private entities that are responsible for the identified sectors in each selected country, as national governments take different approaches to infrastructure financing and development.[38]

Table 2. Eligible Sectors Eligible for GCGF Guarantees

Sector	**Mitigation**	**Adaptation**	**Cross-cutting**
Urban Public Transport	• Electromobility • Non-motorized public transport • Low-carbon public transport	• Construction of resilient road infrastructure	
Energy	• Electricity generation and distributed systems from renewable sources • Energy efficiency		
Water and Sanitation		• Building/improving multipurpose reservoirs • Creating interconnected regional water systems and enhancing groundwater recharge • Increasing supply of water by improving technical efficiency	• Conservation and recovery of water sources • Construction of reservoirs
Local Public Infrastructure	Low-carbon local infrastructure	• Coastal protection • Construction of slops • Increasing permeable surfaces and wetlands	• Green infrastructure
Waste Treatment and Disposal	• Elimination of open dumps • Carbon prevention, capture and storage	•	
Climate Disaster Risk Management		• Risk reduction efforts • Disaster response • Climate event recovery	

Source: Almeida (2022)

[38] Almeida, Maria Dolores, et al. *Decentralized Governance and Climate Change in Latin America*. June 2022. https://icepp.gsu.edu/files/2022/06/B1-Decentralized-Governance-and-Climate-Change-in-LAC_FINAL.pdf.

PART 4. PILOTING THE GREEN CITIES GUARANTEE FUND

The GCGF portfolio should be climate-responsive, balanced and, of course, solvent. These characteristics depend on the GCGF having a context-aware management approach to its selection of projects to guarantee, a quality that calls for in-depth knowledge of the place and players involved. As discussed earlier, the proposal for the GCGF focuses on Latin America as a suitable candidate for its piloting for the following reasons:

- Guarantee industry is nascent; the region accounts for only four percent guarantee activity globally
- Other developed or proposed subnational guarantee funds, CITYRIZ and UNCDF's Sustainable Cities, are focusing on Africa and Asia
- High level of urbanization, sustained decentralization, and mature subnational institutions but a great need for climate-responsive infrastructure in large and intermediate-sized cities
- Four countries – Brazil, Colombia, Mexico and Argentina – possibly eight including Uruguay, Peru, Chile, and the Dominican Republic – stand out not only for their favorable enabling environments for subnational guarantees, but also for their abilities to develop feasible climate mitigation and adaptation projects
- The region hosts numerous public development funds ready to be leveraged for sustainable and resilient urban infrastructure projects.

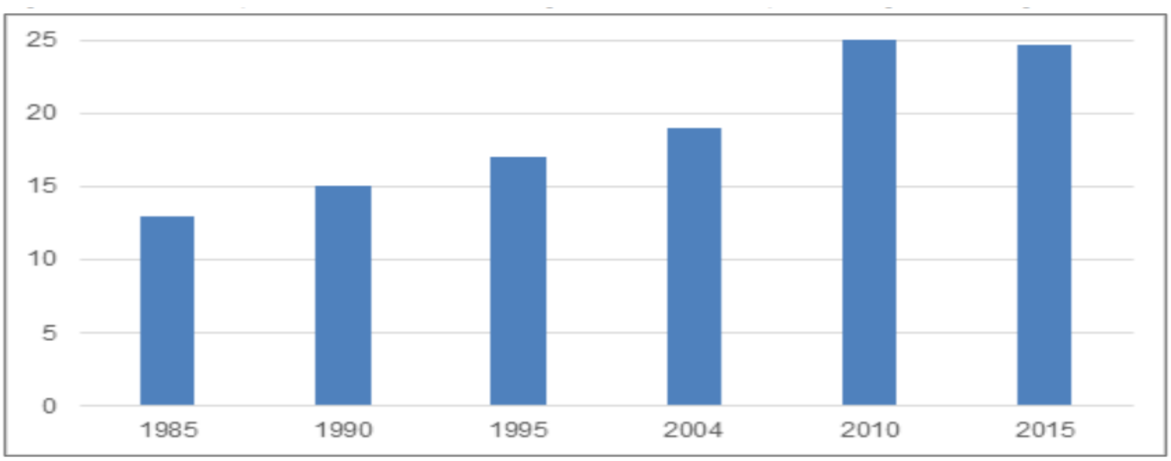
4.1 Latin America is highly urbanized with a sustained rate of decentralization

Latin America is the world's most urbanized region. From 1950 to 2010, its urban population rose from 30 percent to more than 85 percent of the total. [39] This demographic shift significantly increased the political and economic importance of local governments throughout the region. Moreover, due to this rapid growth, the region's cities are confronted with insufficient infrastructure to mitigate or meet the impacts of climate change. In trying to address these challenges, these cities suffer from an overreliance on intergovernmental transfers that are neither timely, large enough, nor fit for purpose.

[39] Muggah, Robert. "Latin America's Cities Are Ready to Take Off. But Their Infrastructure Is Failing Them." World Economic Forum, June 2018. https://www.weforum.org/agenda/2018/06/latin-america-cities-urbanization-infrastructure-failing-robert-muggah/.

Between 1985 and 2015, the region's national governments decentralized many functions, leaving subnational governments to have a greater share in managing public expenditures, a share that jumped from 13 percent to 25 percent. See Figure 11.

Figure 11. Public Expenditure: Subnational Government as a Percent of the Total 1985-2015



Source: IDB (2015)

4.2 Local governments can legally borrow in most Latin American countries

While most subnational governments can legally borrow in Latin America, Brazil, Colombia, Mexico, and Argentina stand out as having the largest and most developed subnational debt markets in the region. See Table 3. A brief description of selected features in the four countries underline their promise for future GCGF engagement.

Table 3. Four Strong Markets in Latin America

Country (Gov type)	**Pop (millions)**	**GDP (USD billions)**	**GDP Per Capita**	**Legality of Subnational Borrowing**
Brazil (Federal)	216.4	4,101.0	20,079	Legal – requires national government approval, does not require sovereign guarantee.
Colombia (Unitary)	46.7	1,016	19,482	Legal – certain instruments require national government approval (bonds), commercial loans and state-owned bank loans generally do not require national government approval. Sovereign guarantee is not required.
Mexico (Federal)	128.5	3,277.6	24,796	Legal – requires approval from the state legislature. Does not require national government approval or guarantee. Municipalities can only borrow from Mexican sources of capital in Mexican pesos.
Argentina (Federal)	52.1	1,239	26,506	Legal – does not require national government approval, but generally does require approval by the provincial government. Does not require a sovereign guarantee.

Source: Urban and Cities Platform of Latin America

Brazil's national government for example, permits subnational governments borrowing from domestic and external lenders, subject to national government approval, not guarantee. Further, it ensures sound subnational debt management through a series of borrowing constraints. As of 2020, the country's subnational governments had USD 229 billion in outstanding debt, of which municipalities accounted for 16 percent (USD 36.2 billion); state and regional governments the remainder. Municipal debt is primarily domestic – 92 percent of the total – and comes from such lenders as União, the Federal Savings Bank, BNDES, the Brazilian Development Bank, and the Bank of Brazil. The World Bank, the Inter-American Development Bank, and CAF are the major providers of the municipal external debt.[40] Some debt resulted from the national government's Programa de Parcerias de Investimentos (Investment Partnership Program, 2016) designed to attract private sector investment for infrastructure, which has a focus on sustainable urban projects across transport, water, sanitation, waste collection, and slum upgrading programs.[41]

In the Colombia case, the country adopted fiscal decentralization measures in the 1990s making local and regional governments larger players in the nation's economic development. This effort

[40] World Bank. *City Creditworthiness Initiative: Brazil*. 2022. https://www.citycred.org/sites/default/files/2022-12/Brazil_12.2_design.pdf.
[41] *Ibid*.

included permitting subnational debt subject to national approval.[42] Cities of varying sizes – Bogotá (8 million), Medellín (2.3 million) and Barranquilla (1.2 million) – have borrowed and continue to borrow, raising funds on the domestic and the global capital markets for infrastructure investments.[43] Fitch rated Barranquilla 'BB' when the city issued USD 156 million in bonds at a coupon rate of 9.9 percent in 2023. Under former mayor and Commission member, Jaime Pumajero, the city managed its hard currency debt – some 37 percent of which is in dollars and euros through utilizing currency swaps to mitigate the impacts from exchange rate fluctuations.

In the early 2000s, major economic reforms led to the rapid growth of the subnational debt market in Mexico. The national government established the Master Trust Funds (MTFs), which enabled local governments to borrow against future federal transfers, significantly de-risking subnational debt and lowering the interest rate at which local governments could borrow at. All subnational government borrowing must be in Mexican pesos. Some 30 Mexican municipalities have a Moody's rating.[44] In 2020, the country's total subnational debt stood at USD 29.7 billion with municipal governments accounting for only 7 percent (USD 2 billion) despite a 94 percent increase between 2008-2018. Domestic commercial banks provided 50 percent of total, followed by domestic development banks, representing 42 percent of the total.[45]

As one of the three most decentralized countries in Latin America alongside Brazil and Mexico, Argentina has two levels of subnational government: provincial and municipal. The provinces have the constitutional right to define the role and responsibilities of municipalities within their jurisdictions. In all provinces except one (Tucumán), municipalities are legally allowed to borrow. In fact, Argentinian municipalities are leaders in financing green projects. For example, the municipality of Godoy Cruz (population 183,000) is in the process of issuing a green bond to finance the expansion of its solar park, a project aligned with the city's climate action plan.[46] In 2022, the municipality of Córdoba (2.2 million population) issued more than USD 18 million in green bonds to finance infrastructure development.[47]

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[42] Lozano, Luis, and Julio Rojas. "Fiscal Decentralization and Economic Growth in Colombia: Evidence from Regional-Level Panel Data." 2016. https://repositorio.cepal.org/server/api/core/bitstreams/f66223cc-205c-49dc-995f-370a0acf0efe/content.

[43] Urban and Cities Platform of Latin America. "Internal and External Public Debt: Colombia." https://plataformaurbana.cepal.org/es/instrumentos/financiamiento/deuda-publica-interna-y-externa.

[44] World Bank. *City Creditworthiness Initiative: Mexico*. 2022. https://www.citycred.org/sites/default/files/2022-12/Mexico_12.2.pdf.

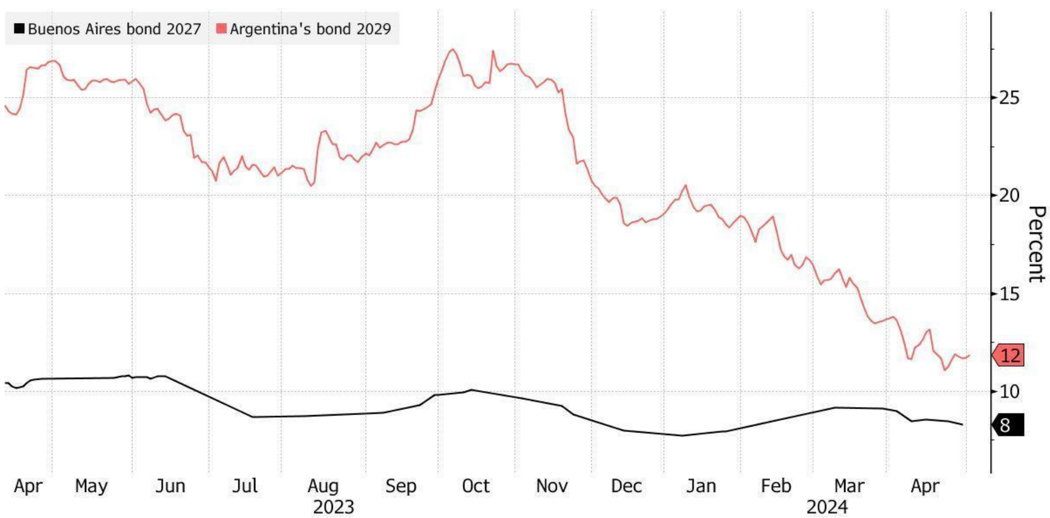
[45] Quiroga and Smith. "Fiscal Sustainability of Mexican Debt Decisions: Is Bad Behavior Rewarded?" https://www.cepal.org/sites/default/files/events/files/jimenez_smith_1_0.pdf.

[46] Green Finance for Latin America. "Municipality of Godoy Cruz Will Issue Green Bonds to Finance Solar Energy." 2023. https://greenfinancelac.org/resources/news/municipality-of-godoy-cruz-will-issue-green-bonds-to-finance-solar-energy/.

[47] Tavarone Rovelli, Salim, and Miani. "Municipality of Cordoba's Green and Infrastructure Bond Issuance for ARUSD 2,846,069,500." https://www.trsym.com/municipality-of-cordobas-green-and-infrastucture-bond-issuance-for-ar-2846069500/?lang=en.

The city of Buenos Aires is a case of a city that is more financially stable than its national government. Argentina's sovereign bonds over the past 13 months are marked by extremely high volatility, yielding 27 percent at their high and 11 percent at their low over this period. The yield on Argentina's bonds has dropped steadily since Javier Milei was elected President of Argentina in December 2023. In contrast, from April 2023 to May of 2024, the city of Buenos Aires's bonds yielded between 7 percent and 11 percent, a much narrower and lower range than that of the national government. See Figure 12. The December election had a negligible impact on Buenos Aires's bonds, reinforcing the notion that well-managed cities can be sheltered from fluctuations at the national level, particularly in federal systems. While Buenos Aires is an example of a city that would likely not need a guarantee for a standard bond issue, it could use GCGF to support innovative green transactions.[48]

Figure 12. Buenos Aires City's Yield is Lower Than National Government's



Source: Bloomberg (2024)

4.3 Latin America has significant sources of public development funds

Latin America is also home to significant sources of public development funds. This includes multilateral development banks, national development banks, and bilateral aid offices. The Brazilian Development Bank (BNDES), for example, has over USD 131 billion in assets, making it the second largest development bank in the region behind the Inter-American Development Bank (IDB). Mexico's National Bank of Public Works and Services (BANOBRAS) has USD 52 billion under management. The region's two major multilateral development banks are well-financed and have subnational initiatives: IDB and CAF. Of note, CAF recently pledged 1/3 of its capital to

[48] Bloomberg. "Buenos Aires Officials to Meet Investors as City Weighs Global Bond Sale." May 2, 2024. https://www.bloomberg.com/news/articles/2024-05-02/buenos-aires-city-to-meet-investors-as-it-mulls-global-bond-sale.

subnational governments, a key institutional commitment to financing sustainable and resilient infrastructure in cities throughout the region. Additionally, such bilateral offices as the US Development Finance Corporation (DFC) provide capital and guarantees for Latin American infrastructure projects. It should also be noted that Latin American cities access capital from a global base of DFIs for infrastructure, with one example being the French Development Agency's USD 70 million loan to Quito's Water and Sanitation Company without a sovereign guarantee during Commission member Mauricio Rodas's term as mayor.

The GCGF may be able to make the large supply of public development funds at both the regional and global levels more accessible for urban mitigation and adaptation projects in Latin America. These DFIs have mandates related to development and many have adopted climate-specific resolutions as well. By de-risking the debt of local governments, municipal utility companies, public-private partnerships, and private companies developing urban projects, the Green Cities Guarantee Fund may be able to help increase the flow of capital from these sources into critical urban projects. With that said, the Commission has a global ambition for the Green Cities Guarantee Fund and has established a goal to eventually mobilize funds throughout emerging markets globally in the future.

The following table provides an overview of the remaining Latin American countries which may be further explored as part of an in-depth market study.

Table 4. Overview of Latin American Countries

	Population (millions)	GDP (USD billions)	GDP Per Capita	Legality of Subnational Borrowing
Chile	19.6	597.5	29,935	Municipalities are not legally allowed to borrow – however, they do it in practice through leasing contracts and arrears.
Peru	34	548.5	15,894	Legal – requires national government approval and a sovereign guarantee. Lima is the only city that has been allowed to borrow from international capital markets.
Dominican Republic	11.2	273.7	25,523	Legal – requires national government approval.
Guatemala	17.4	242.6	13,285	Legal – requires national government approval.
Ecuador	18.0	201.4	10,595	Legal – requires approval of the national government and a sovereign guarantee.
Panama	4.4	190.3	42,738	Legal –requires approval of the national government and a sovereign guarantee.
Costa Rica	5.2	141.5	26,805	Legal – does not need national government approval by law (need to explore if this is true in practice).
Bolivia	12.2	125.4	10,340	Legal – requires the approval of the national government.
Paraguay	6.8	117.3	15,533	Legal – does not require national government approval by law. Need to further explore how it works in practice.
Uruguay	3.4	103.4	28,984	Legal – requires national government approval.
Honduras	10.4	75.0	7,163	N/A
El Salvador	6.3	74.5	11,717	Legal – requires the approval of the national government.
Nicaragua	6.9	51.0	7,642	Legal – does not require national government. Only short and medium-term loans (up to 5 years)

Source: Urban and Cities Platform of Latin America

Part 5. The Time is Right for the Green Cities Guarantee Fund

5.1 Urban climate finance momentum

Recently, initiatives to increase access to climate finance for cities have gained attention on the global stage. For example, in 2023 the UAE COP Presidency in partnership with Bloomberg Philanthropies hosted the Local Climate Action Summit, a first-of-its-kind meeting within the official COP 28 program. It focused on bringing together national and subnational leaders to transform climate finance, enhance global action, fast-track the energy transition, and strengthen resilience and adaptation at the local level. COP 28 also witnessed more than 70 nations endorsing the creation of CHAMP (the Coalition for High Ambition Multilevel Partnerships for Climate Action), which will incorporate subnational governments in the development and implementation of the next Nationally Determined Contributions (NDCs) in 2025, a commitment with potential to significantly increase cities' access to climate finance.

Development Finance Institutions (DFIs) globally are also launching numerous efforts to support local sustainable development. Mobilizing funding from the Green Climate Fund and donor countries and guarantees from InvestEU, the European Bank for Reconstruction and Development (EBRD) Green Cities program (begun 2016) has supported investment in sustainable infrastructure in more than 50 cities, mobilizing more than USD 5 billion in investment.[49] The City Climate Finance Gap Fund was launched in 2020 and is administered by the World Bank and European Investment Bank to assist cities with technical assistance for sustainable and climate-resilient projects. The fund was replenished in 2023 and has funded 183 cities in 67 countries.[50]

In the policy and advocacy realms, several organizations provide data, policy advice and knowledge-sharing platforms. For example, the OECD's Center for Entrepreneurship, SMEs, Cities, and Region's advises the G-20, public and private sector leaders and other interested parties with comprehensive up-to-date data, programs, and policies on subnational infrastructure finance. Financing Cities of Tomorrow, OECD Report for the G-20 Infrastructure Working Group under the

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[49] For the ERBD Green Cities program: European Bank for Reconstruction and Development. *Green Cities Program*. https://ebrdgreencities.com/green-cities/about/.; For the EU guarantee program see InvestEU Green Cities Framework: European Commission. *InvestEU Green Cities Framework*. https://investeu.europa.eu/investeu-operations-0/investeu-operations-list/investeu-green-cities-framework_en/.; for the Green Climate Fund financing see: Green Climate Fund. *Project FP086: Scaling Up Energy Efficiency for Industrial Enterprises in Vietnam*. https://www.greenclimate.fund/project/fp086.

[50] City Climate Finance GAP Fund. "Increasing Support for Resilient, Low-Carbon Urban Development." https://www.citygapfund.org/news/increasing-support-resilient-low-carbon-urban-development.; World Bank. *Annual Report for the GAP Fund*. https://www.citygapfund.org/sites/default/files/2023-11/WB-Gap-Fund-Annual-Report-FY23_0.pdf.; European Investment Bank. *Annual Report for the GAP Fund*. https://www.citygapfund.org/sites/default/files/2023-08/city-climate-finance-gap-fund-annual-report-2022.pdf.

Indian Presidency (September 2023) and Infrastructure for a Climate Resilient Future (April 2024) exemplify this work.[51] UN Habitat monitors the urban content of the NDCs, and, sponsored by Spain, it has joined UNDP and other UN units to form the Local 2030 Secretariat in Bilbao (2022) to share tools, experiences, and new solutions for SDG implementation.[52] CPI, CCFLA, WRI's Ross Center for Sustainable Cities, CDP (Carbon Disclosure Project), and the World Economic Forum's Future Councils, also perform critical work on the cities climate finance space.

On top of these initiatives, city networks such as C40, ICLEI, UCLG, R-Cities (Resilient City Networks) and global alliances for city climate leadership such as GCoM play a pivotal role in advocating for greater access to climate finance for local governments. Together with their city stakeholders, they are actively working to bridge the gap between capital markets and urban climate finance. A wave of city focused advocacy, which includes new initiatives launched by NGOs, development banks, national governments, and the private sector reflect the momentum behind expanding urban climate finance. To build on this work, mayors Anne Hidalgo (Paris) and Eduardo Paes (Rio de Janeiro), and economist Jeffrey Sachs launched the SDSN Global Commission for Urban SDG Finance in June 2023 with the express purpose of finding ways to increase the flow of climate finance into cities around the world. The proposed Green Cities Guarantee Fund represents a first step in this work.

5.2 The rise of credit guarantees

Research conducted over the past several years has drawn attention to the effectiveness of guarantees in mobilizing investment in climate projects. This recognition is reflected by several key initiatives and announcements. In February, Ajay Banga, President of the World Bank, announced that the World Bank will be tripling its guarantees to USD 20 billion throughout 2030. In June of 2023, Systemiq, a London-based climate think tank, produced a highly influential report which found that guarantees can mobilize five times more investment per dollar spent on climate projects relative to loans and equities.

Several guarantee funds are responsible for proving that credit guarantees are a successful model for crowding in private investment for emerging markets infrastructure. In 2005, the UK government established GuarantCo in partnership with the Private Infrastructure Development

[51] OECD. *Infrastructure for a Climate-Resilient Future*. 2024. OECD Publishing, Paris. https://doi.org/10.1787/a74a45b0-en.; OECD. *Financing Cities of Tomorrow: G20/OECD Report for the G20 Infrastructure Working Group under the Indian Presidency*. 2023. OECD Publishing, Paris. https://doi.org/10.1787/51bd124a-en.

[52] UN-Habitat. *Urban Climate Action: The Urban Content of the NDCs. Global Review 2022*. https://unhabitat.org/sites/default/files/2022/12/ndc_urban_content_2022_report.pdf.; UN-Habitat. *Local Action for Global Goals: An Opportunity for Enhancing Nationally Determined Contributions*. https://unhabitat.org/local-action-for-global-goals-an-opportunity-for-enhancing-nationally-determined-contributions.

Group and Cardano Development. GuarantCo is the first local currency guarantor for infrastructure projects which has a regional focus on Africa and Asia. Since its launch, GuarantCo has mobilized USD 6.2 billion for infrastructure projects in emerging markets and produced commercial returns for the public investors despite the expectation that it would be a concessional vehicle. The successful model that GuarantCo established led to the creation of the Development Guarantee Group (DGG), which advises on the creation of new guarantee funds that are capitalized by both public and private investors. DGG's heads successfully launched the Green Guarantee Company in February 2024. The DGG is also working on the launch of several other guarantee initiatives.

The strong performance of guarantee funds has translated into new funds designed specifically for cities as exemplified by the French Development Agency's recently launched CITYRIZ and the UN Capital Development Fund's (UNCDF) ongoing discussions with the EU on launching the Guarantee Facility for Sustainable Cities. However, the cities-dedicated guarantee space is still nascent, and currently no such urban guarantee fund is focusing on Latin America. This gap could be filled by the proposed Green Cities Guarantee Fund pilot, a first step for it to eventually become a global endeavor with the potential to significantly enhance financial flows toward the development of much needed sustainable and climate-resilient urban infrastructure.

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APPENDICES

Appendix A. DRAFT Guiding Principles

Background: In 2015 when the United Nations members states approved *Transforming Our World, Agenda 2030 for Sustainable Development* outlining 17 goals and 169 targets and the *Paris Agreement* aiming to retain global warming and address its impact, supplemented with other agreements including the *Sendai Framework for Disaster Risk Reduction*, the *Addis Ababa Action Agenda, the New Urban Agenda* and *the Kunming-Montreal Global Biodiversity Framework,* they called for ambitious plans and programs for their implementation. These agreements and treaties call for aggressive spending at all levels of government – estimated at some USD 4 trillion annually for development and USD 7-8 trillion annually for climate – sums that would require massive public and private resources. Now at the halfway point to the targets, significant funding gaps exist– in 2023 development funding was at USD 300 billion; climate at USD 1.3 trillion, stimulating global discussions on how to remedy the situation. A key imperative is finding means to increase funding to critical initiatives and places, especially at the subnational level. Wide support for guarantees has emerged in this context with many national governments, major development finance institutions, private sector leaders and such groups as the SDSN Global Commission for Urban SDG Finance advocating the expansion of this instrument.

In so doing, the Commission is proposing the Green Cities Guarantee Fund. Framing it would be a set of guiding principles to articulate its mandate, organization, and anticipated outcomes. Below is a preliminary draft of the GCGF guiding principles.

The Green Cities Guarantee Fund has a:

- **Mandate:** 1) to de-risk lending for climate mitigation and adaptation infrastructure in cities by transferring the risk of repayment to the guarantor, and 2) to attract capital on better terms that would not ordinarily be available to cities or associated entities.
- **Governing Structure:** The GCGF would have an independent board that balances several critical viewpoints. The board would include former local government and national government leaders, experts in municipal finance and law, leaders from city networks and IFIs, and representatives from the private sector, civil society and academia.
- **Beneficiaries:** Municipal governments and affiliated entities (municipal utilities, SPVs), public-private partnerships, private sector developing urban infrastructure.
- **Specialization:** The GCGF will develop a deep understanding of local government institutional practices, including local government finance and law, enabling the fund to help

bridge the gap between cities and investors. It will also become specialized in the unique particularities of urban projects.

- **Product:** The GCGF will provide partial or full credit guarantees for local and hard currency debt. The GCGF will guarantee a range of commercial and concessional debt instruments including green bonds, commercial loans, syndicated project-based loans, project bonds, and local revolving credit structures.
- **Climate Impact Criteria:** The GCGF will use explicit criteria to ensure that all guaranteed debt is used to fund projects that achieve their desired climate impact. These criteria will be based on best practices established by major climate funds.
- **Structure and processes:** The GCGF will seek to model its operational processes off high-performance and recently launched guarantee funds which operate similarly to private sector financial insurance companies in terms of their operational efficiency but are capitalized by public investors.
- **Capitalization:** The GCGF will be initially capitalized by MDBs, bilateral development agencies, national governments, philanthropies, and eventually the private sector.

Appendix B. Major International Ratings Agencies and Subnational Governments

The following table provides an overview of how rating agency, Fitch, evaluates subnational governments.

Revenue	Risks associated with revenue are analyzed based on a subnational government's "Revenue Robustness", which accounts for the growth rate, stability, and predictability of revenue. Revenue Adjustability is the ability of the Local or Regional Government to increase its revenue, and this is considered the main revenue risk mitigant.
Expenditure	Fitch analyzes Expenditure Sustainability to understand the extent of the risk that expenditure for a subnational government rises. The main mitigant to this category of risks is Expenditure Adjustability – the ability of a subnational government to curb expenditure.
Debt and Liquidity	Debt and Liquidity Robustness analysis seeks to determine the risk that a subnational government's debt service increases in the near-term. The main mitigant to this type of risk is the ability of subnational governments to use liquidity or access new financing.
Institutional Framework	The core considerations related to the Institutional Framework include a subnational government's tax autonomy, revenue mix, expenditure profile, intergovernmental relationships, bankruptcy regime, accounting and reporting policies, funding and equalization mechanisms, and level and mix of responsibilities.
Sovereign Rating	The sovereign rating oftentimes provides a "ceiling", meaning that a subnational government's rating will rarely exceed that of the national government. More generally, the characteristics of the national economy generally have a strong influence on subnational borrowers and are accounted for at various points throughout the assessment process.

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