

Financial Solutions for Development: National Infrastructure Platforms

Juan Antonio Ketterer
Adrián Ortega Andrade
Juan Martínez Álvarez
Daniel Fonseca

Institutions for
Development Sector

Connectivity,
Markets, and Finance
Division

TECHNICAL
NOTE N°
IDB-TN-2599

Financial Solutions for Development: National Infrastructure Platforms

Juan Antonio Ketterer
Adrián Ortega Andrade
Juan Martínez Álvarez
Daniel Fonseca

December 2022



Cataloging-in-Publication data provided by the
Inter-American Development Bank
Felipe Herrera Library

Financial solutions for development: national infrastructure platforms / Juan Antonio Ketterer,
Adrián Ortega Andrade, Juan Martínez Álvarez, Daniel Fonseca.
p. cm. — (IDB Technical Note ; 2599)

Includes bibliographic references.

1. Infrastructure (Economics)-Latin America-Finance. 2. Infrastructure (Economics)-Caribbean Area-
Finance. 3. Infrastructure (Economics)-Environmental aspects-Latin America. 4. Infrastructure
(Economics)-Environmental aspects-Caribbean Area. 5. Climatic changes-Economic aspects-Latin
America. 6. Climatic changes-Economic aspects-Caribbean Area. 7. Development banks-Latin
America. 8. Development banks-Caribbean Area. I. Ketterer, Juan Antonio. II. Ortega, Adrián.
III. Martínez Álvarez, Juan. IV. Fonseca, Daniel. V. Inter-American Development Bank. Connectivity,
Markets and Finance Division. VI. Series.
IDB-TN-2599

<http://www.iadb.org>

Copyright© 2022 Inter-American Development Bank. This work is licensed under a Creative
Commons IGO 3.0 Attribution-NonCommercial-NoDerivatives (CC-IGO BY-NC-ND 3.0 IGO) license
(<http://creativecommons.org/licenses/by-nc-nd/3.0/igo/legalcode>) and may be reproduced with
attribution to the IDB and for any non-commercial purpose. No derivative work is allowed.

Any dispute related to the use of the works of the IDB that cannot be settled amicably shall be
submitted to arbitration pursuant to the UNCITRAL rules. The use of the IDB's name for any purpose
other than for attribution and the use of the IDB's logo shall be subject to a separate written license
agreement between the IDB and the user and is not authorized as part of this CC-IGO license.

Note that the link provided above includes additional terms and conditions of the license.

The opinions expressed in this publication are those of the authors and do not necessarily reflect the
views of the Inter-American Development Bank, its Board of Directors, or the countries they represent.



Financial Solutions for Development: National Infrastructure Platforms

AUTHORS:

Juan Antonio Ketterer, Adrián Ortega Andrade,
Juan Martinez Alvarez, and Daniel Fonseca

December 2022



Abstract*

This paper presents a new public policy instrument, national infrastructure platforms (NIPs), to promote investment in sustainable infrastructure in Latin America and the Caribbean. The region has important infrastructure deficits that limit its ability to meet challenges of economic growth, climate change, and social inclusion and equality. NIPs will allow countries to maximize the use of public, multilateral, and concessional financing resources to promote socioeconomic development. Specifically, since the infrastructure challenges of the region will not be met with public funding, NIPs will permit countries to optimize the role of public investment as a financial enabler for private investment, prioritizing climate change resilience through sustainable infrastructure. This document outlines the structure of NIPs and their three main functions: project preparation, de-risking, and financial structuring. These respectively identify and prioritize projects, incorporate the necessary risk mitigation instruments, and structure and deliver bankable projects until they successfully reach their commercial and financial closing stages.

JEL Codes: F30, F50, G18, O16, O18, O19, Q54

Keywords: sustainable infrastructure financing, public resources optimization, private sector mobilization, project prioritization and development, project de-risking, project bankability, securitization and asset recycling

*The authors would like to thank Joan Prats, María Carmen Fernández Díez, Rafael Cavazzoni Lima, and Diego Herrera for their valuable contributions and comments.

Contents

Prologue	III
Executive Summary	V
1. Introduction	1
2. What Is the National Infrastructure Platform?	4
2.1 General Introduction	4
2.2 The Structure	5
2.3 Governance at the NIP	6
2.4 Key Advantages	7
3. Project Prioritization and Preparation	8
3.1 Why Is Prioritization Important?	8
3.2 Prioritization Methodologies	9
3.3 What Is a Well-Prepared Project and the Cost of Project Preparation?	10
3.4 Scheme to Manage Preparation Costs	11
4. De-Risking Products	12
4.1 Goal of the De-Risking Function	12
4.2 Sources of Funds and Their Differences in Costs	13
4.3 Understanding Infrastructure Risks	15
4.4 Taxonomy of De-Risking Products	16
5. Project Structuring	20
5.1 NIP's Financial Structuring Support	20
5.2 Use of Mitigation Instruments in Financial Structuring	21
5.3 Key Activities of the Financial Structuring Function	21

6. Project Securitization and Asset Recycling	24
6.1 Asset Pooling	24
6.2 NIP's Securitization Strategies	25
6.3 Asset Recycling	26
7. Final Remarks	28
References	29
Annexes	31
Annex 1 Infrastructure Assets Risk Classification	31
Annex 2 Risk Coverage of the NIP's Financial Instruments	33
Annex 3 International Examples of Facilities for Risk Mitigation and Blending of Concessional Funds	34
Annex 4 Operational Considerations for Implementing a NIP	35



Prologue

Investing in sustainable infrastructure is an important component of achieving economic growth, addressing the climate change challenge, and promoting social inclusion and equality. The current reality in Latin America and the Caribbean (LAC) is that the infrastructure gap is too great for governments to act alone. According to a recent Inter-American Development Bank (IDB) study, countries in LAC need to invest more than US\$2 trillion in infrastructure by 2030 to be able to meet the UN Sustainable Development Goals (Brichetti et al., 2021). This is a challenge that will not be achievable if governments continue to develop infrastructure under traditional public financing schemes or schemes where the participation of the private sector is oriented primarily to projects that have high profitability ratios, leaving to the side other opportunities with lesser returns but greater positive socioeconomic and environmental advantages.

Despite this context, the encouraging news is that the global level of private savings that could be channeled toward infrastructure investing is sizable and the demand for sustainable investment opportunities is rising. In 2022, the volume of assets under management (AUM) from institutional investors reached a new record high of US\$126 trillion (McKinsey & Company, 2022). Also, environmental, social, and governance (ESG) investing continues to rise, with projected figures that it will represent more than 50 percent of global professionally managed assets by 2024 (Deloitte Insights, 2022).

Governments along with multilateral development banks (MDBs) and the international development community must focus their efforts on addressing the obstacles that limit the scaling up of private financing in sustainable infrastructure. To do so, countries need to develop stable political and regulatory systems, generate well-structured projects, adequately balance the risk-return profile of socioeconomically viable projects, and generate consistent investment volumes. It is imperative to integrate project prioritization, risk mitigation, and financial structuring strategies so projects can become attractive investment opportunities for institutional investors.



Therefore, in this paper we propose a novel concept: the development of national infrastructure platforms (NIPs) in which governments, with the support of MDBs, can act at all the development stages of the life cycle of sustainable infrastructure projects. The NIP is a public policy instrument used to organize government's decision making and help to efficiently administrate and channel public and development resources to leverage private investment for sustainable infrastructure. The NIP has three main functions—project preparation, de-risking, and financial structuring—which identify and prioritize projects, incorporate the necessary risk mitigation instruments, and structure and deliver bankable projects until they successfully reach their commercial and financial closing stages. By creating the NIP governments can, in the short term, increase the volume of investment and build a track record of delivering bankable sustainable infrastructure projects; in the medium and long term, they can create a critical mass that could lead to additional investment opportunities through project securitization and asset recycling to further the goal of closing the infrastructure gap.

Executive Summary

Countries in Latin America and the Caribbean (LAC) need to work with the private sector to close the infrastructure gap and meet the Sustainable Development Goals (SDGs) ratified in 2015 by the United Nations. Development financial institutions (DFIs) provide support to developing countries to create and advance regulatory and investment environments conducive to promoting private investment. On the upstream side, DFIs support the definition and implementation of public policies in areas such as rule of law, transparency, regulation, and integration; on the downstream side, DFIs support investment programs and projects to achieve meaningful development impact. However, countries are falling short of fulfilling the SDGs; therefore, they need to further accelerate efforts to mobilize private capital in infrastructure projects with high social impacts that generally do not attract enough private investment because the risk-return profile is lower compared to alternative investment opportunities in other sectors.

This paper presents the concept of a new support mechanism, the national infrastructure platform (NIP), which will allow governments in the region to maximize the use of public, multilateral, and concessional financing resources to promote socioeconomic development and optimize the role of public investment as a financial enabler for private investment, prioritizing climate change resilience through sustainable infrastructure. The NIP is a vehicle for coordination and prioritization of projects through a process of technical and financial preparation. Projects are subsequently assessed to incorporate the necessary de-risking instruments and are finally structured to achieve the commercial and financial closing of bankable projects. The NIP could be applied to many sectors, particularly those with a high impact on sustainability, such as clean energy, resilient construction, rural connectivity, inclusive infrastructure, and sustainable housing, among others.

The NIP has three functions. The first function is project preparation, in which countries establish a portfolio of projects and select the order in which they will be structured and financed. This is not an easy task, as it requires considerable financial resources and political consensus. The second function is de-risking. Project risk-return profiles are adjusted using the most appropriate combination of risk mitigation and financial enhancing instruments, making them bankable and suitable for final structuring. The third and final function is financial structuring, where all the technical and financial studies are completed and the most appropriate financial structure is engineered to attract the largest possible participation of the private sector in the project. Last, the NIP could also facilitate potential project securitization. By securitizing project assets, the capital resources invested in the platform can be released, new funding raised, and the process can become self-sustainable. This last step will largely depend on financial and regulatory market conditions in the country where the NIP will be used.

The specific design of the platform will depend on the idiosyncrasies of each country's institutional and legal framework. The concept and methodology of the platform is designed to be applied in all LAC countries, molding itself to their unique circumstances. Specifically, in each country it will be possible to build a platform that offers: (i) a clear, predictable, and transparent methodology for prioritizing projects; (ii) a methodology to allocate guarantees, mixed funds, and other de-risking instruments to make projects eligible for financing; and (iii) a financial structure that minimizes global financing costs while maximizing private sector participation in infrastructure projects. Countries will thus be able to involve national banks, capital markets, pension and equity funds, and international investors into the mix.

The NIP methodology offers opportunities for developing sector-specific vehicles that can later be integrated at country or regional level based on similar approaches and their risk-return profiles. Platforms could be built sector by sector, for example, starting with climate investments and then adding or separately establishing a platform for digital infrastructure. The NIP could also generate positive spillover effects in terms of public policy. The public sector would be able to measure the ex ante and ex post impacts of environmental, social, and governance (ESG) and gender considerations in infrastructure projects, contributing to a macro assessment of sustainability of the sector. In addition, the public sector can use the NIP to identify the appropriate financial instruments (de-risking and increasing profitability) to encourage private sector investment, and non-financial measures related to the regulatory and legal environment that could be adopted to improve rates of return. By simply creating NIPs and defining their institutional architecture, countries will perceive the political and institutional reforms that must first be addressed to facilitate the flow of private resources toward projects of public interest.

This discussion note is divided into seven sections that explain in detail the structure of the NIP, each of its functions, and how they work together to successfully produce bankable projects and new opportunities for institutional investors through the securitization and recycling of assets. Section 1 explains the context in which the idea of the NIP was born. Section 2 describes the NIP as a whole. Sections 3–6 discuss each function of the platform, including: project prioritization, de-risking, financial structuring, and the asset securitization and recycling strategy. Finally, Section 7 proposes general guidelines on how to move ahead with the implementation of a NIP.

1. Introduction

The financing of sustainable infrastructure is an important challenge in the development agenda of Latin America and the Caribbean (LAC) and a key commitment of the region to meet the Sustainable Development Goals (SDGs). Infrastructure stimulates growth by increasing productivity, reducing production costs, facilitating the accumulation of human capital (through easier access to educational opportunities), helping to diversify the productive structure, and creating employment (IDB, 2014). The limited provision of infrastructure services is a major factor constraining both medium-term growth rates and quality of life in many countries.

Infrastructure provision in LAC has been based on a traditional model of mostly public financing, but the lack of sufficient public resources coupled with the pandemic-induced economic slowdown have increased the infrastructure gap. The already limited public funds have been further pressured by the support and fiscal stimulus channeled by central governments to face the COVID-19 pandemic and its economic consequences. In 2020 in emerging markets, the pandemic caused a 2.1 percent drop in GDP (IMF, 2021). According to the economic projections of the International Monetary Fund (IMF), the growth projections of LAC until 2026 have an average of 2.7 percent of GDP, making it one of the regions that will face a more pronounced slowdown. In a recent Inter-American Development Bank (IDB) study that includes the effect of COVID-19 on LAC economies, it is estimated that the region will need to invest annually more than 70 percent of the current average investment, from 1.8 percent of GDP to 3.12 percent, in order to close the existing infrastructure gap by 2030 (Brichetti et al., 2021).

There are also new challenges in the infrastructure sector, such as the urgent need to tackle climate change and the need to develop projects that promote social and demographic inclusion, that will further widen the current infrastructure gap. Emerging markets (EM) are essential to achieve the net zero transition as they account for 34 percent of global carbon emissions (excluding China). According to BlackRock estimates, EM will need at least US\$1 trillion a year to achieve net zero emissions by 2050, which represents more than six times the current investment in clean production of energy, goods and services, and means of transportation, among others (BlackRock, 2021). In the case of LAC, this means an average annual investment of around US\$180 billion (IEA, 2021).

There is also a need to implement gender considerations and promote the inclusion of people with disabilities and disadvantaged groups in infrastructure projects for the provision of basic services. According to a recent report by the Economic Commission for Latin America and the Caribbean (ECLAC), there are 166 and 433 million people in the region without safe access to drinking water and sanitation services, respectively, and 19 million people without access to electricity (ECLAC, 2021). In the digital connectivity sector, it is estimated that the region would need an additional investment of US\$68.5 billion to close the digital gap (García Zaballos et al., 2020). The digital connectivity gap remains significantly wide in LAC, hitting low-income and rural communities the hardest. According to an IDB study in partnership with the Inter-American Institute for Cooperation in Agriculture (IICA) and Microsoft, over 77 million people in rural areas of LAC do not have access to basic digital infrastructure; for many more, such access is either of poor quality or too expensive (IDB, IICA, and Microsoft, 2020). Furthermore, in the case of rural connectivity, in 2006 it was estimated that 40 percent of the population of LAC did not have a road within two kilometers of their home that was passable at all times of the year (ECLAC, 2020).

LAC governments must shift their focus toward a new infrastructure financing model where public resources are optimized and applied to leverage private investment. Countries face fiscal restrictions combined with increased needs for public infrastructure. Therefore, depending exclusively on public investment is not a feasible solution. In this context, the role of the public sector should be to optimize its intervention by taking the minimum amount of risk necessary to make projects attractive to private investment, as long as economic viability is maintained. In this way, with the support of the private sector, it is possible to carry out a greater volume of projects that have high social and sustainability value and that normally do not have sufficient resources for financing.

The creation of a national infrastructure platform (NIP) stems from the need to develop infrastructure projects with high social and sustainable impact while using public sector funding to mobilize private investment. Some LAC countries have been able to develop different functions of the NIP separately through their sectorial ministries and national development banks, but there is no model to date that has been capable of comprehensively addressing and developing the optimal solutions for the planning and financing of infrastructure. The NIP is designed as a public investment vehicle that covers the development phases of the infrastructure project life cycle, such as prioritization, preparation, and structuring, alongside a function that develops customized credit enhancement strategies to help make projects commercially attractive. The purpose of the NIP is to create a structure that systematically prepares sound large-scale projects and maximizes private sector financing in sustainable and resilient infrastructure.

The NIP would help governments organize their infrastructure development strategy by making comprehensive decisions and optimizing the use of available funds. The NIP structure enables decision making throughout the development stages of infrastructure projects to be consistent with a strategy in which sustainable projects with high social value are prioritized. It would also allow the channeling of different government resources such as public funds, concessional loans, and grants to unlock private capital through risk mitigation strategies. Furthermore, the platform's medium- and long-term vision is to create a critical mass of long-term investments that, depending on the conditions of each market, can allow the securitization and recycling of assets for use in new sustainable infrastructure projects.

The scope of the NIP aims to go further than the “Billions to Trillions” approach and the use of public-private partnerships (PPPs) for leveraging private financing to infrastructure, providing a much broader vehicle that develops projects using different delivery models, provides financial solutions, and structures bankable transactions under one roof. In 2015 the IMF and major multilateral development banks (MDBs) agreed that, to achieve the proposed SDGs, there must be a shift in focus from “billions” of development finance to “trillions” of private resource mobilization to ensure global growth and shared prosperity (World Bank Group and IMF Development Committee, 2015). The NIP concept seeks to provide countries with the ability to strategically manage private sector participation irrespective of the contracting model. It also helps to manage all the financing available from public resources, concessional financing, and grants, looking for the most efficient way to use the different financial characteristics of each source and turn them into catalytic de-risking products. Finally, the NIP allows for extensive financing of similar projects and future securitization of assets to create a robust investment cycle. First, it provides a transparent platform for investors to source future investment opportunities. Second, it allows the public sector to replenish funding for the development of additional investments.

2. What Is the National Infrastructure Platform?

2.1. General Introduction

The NIP is a public investment vehicle designed to identify, prioritize, and support the private financing of sustainable infrastructure projects through de-risking instruments. It is designed to operate as a self-sustained “single window” platform that covers the development stages of the project life cycle, promoting the optimal use of available government resources for de-risking projects and unlocking private financing for sustainable infrastructure.

NIPs have three main functions that coordinate to deliver bankable transactions. The first function is the project preparation that selects a portfolio of projects to be prioritized based on their level of impact and need for government resources. Following this stage, the second and third functions work together. On one side, there is the de-risking function that uses public resources to design and develop de-risking instruments for different types of infrastructure risks; on the other side, the financial structuring function seeks to implement these instruments to reach the financial closure of private sector financing.

The NIP concept goes one step further by offering financiers a platform that creates a critical mass of long-term bankable projects that can be securitized, transforming illiquid assets into new investment opportunities. Depending on the regulatory environment and the depth of the investment markets, the flow of private loan obligations structured through the NIP can be pooled into a securitization vehicle and sold as interest-bearing securities to investors. The funds raised through this process can be recycled and used to finance new projects and the continuity of operations of the NIP.

2.2. The Structure

The NIP consists of various functions that cover the development stages of the infrastructure project life cycle, as shown in Figure 1.

Figure 1. National Infrastructure Platform Functions and Scope



Source: Authors' elaboration.



Function 1 – Project preparation

Infrastructure projects are prioritized and prepared, ensuring technical viability and social profitability. In line with national development plans, the fund's goal is to identify projects with a high social impact that are typically financed exclusively with public funds, then design the right financial incentives to attract as much private investment as feasible to those projects.



Function 2 – De-risking

Following the project preparation and prioritization process, the NIP offers credit enhancement instruments and co-financing to ensure that the high-impact projects selected are sufficiently attractive for the private sector. As part of this function, available funds collected from public resources, concessional loans, and grants from other governments, donors, and MDBs are transformed into risk mitigation instruments and blended loans to ensure that projects' risk-return profiles are attractive to private investors.



Function 3 – Financial structuring

Together with the de-risking function, at this phase the NIP offers a financial structuring service that finalizes the preparation cycle to achieve projects' commercial and financial closure. The expected result is to achieve the financial closure of bankable projects that generate a positive return for investors and develop a track record of success so that these types of investments require less support from the public sector over time.



Securitization and asset recycling

The NIP also offers the medium- and long-term possibility to group the bankable projects generated by the NIP in a securitization vehicle that bundles long-term debt obligations as structured securities. Securitizations have the potential to free capital of private banks and expand infrastructure lending, allow the participation of capital markets, and generate new resources for the NIP that can be recycled as a source of funding for future operations.

2.3. Governance at the NIP

The NIP's governance structure is critical to systematically attracting private investment to infrastructure. Depending on the country's legal architecture and local market practices, the NIP can be established as a public entity with the option of private sector participation that is flexible and adaptable to its wide range of business activities. The NIP must be an independent body that can impartially make decisions based on a well-structured, technically sound, and transparent process. The interdependent nature of the NIP functions must be managed even-handedly, ensuring that each one is self-sufficient and makes decisions according to their competencies and range of action. The use of ethical walls must be implemented to ensure that operations are independent and to prevent conflicts of interest between each function. A good corporate governance structure must also be based on transparency and accountability to its shareholders. The ability to disclose key data, and monitor and evaluate the effectiveness of the NIP, will improve its market reputation and trust, allowing it to be more effective in the financing of public infrastructure projects with private investment.

Developing a solid governance structure at the NIP level is key to promote the development of cost-effective, affordable sustainable infrastructure projects with positive value to the end users. Countries frequently struggle to appropriately plan for infrastructure development: identifying what investment should be undertaken, determining the essential components, assessing needs and trade-offs, and prioritizing projects (OECD, 2017). Good governance throughout the life cycle of projects is rooted in the ability of governments to invest resources efficiently and attract private investment to the sector. As a public sector vehicle, the NIP must follow best corporate governance practices to design its governance mechanisms. The NIP's governance should follow international standards and best practices such as the Organisation for Economic Co-operation and Development (OECD)'s Principles of Corporate Governance (OECD, 2015a) and the 10-dimension framework for getting infrastructure right (OECD, 2017). The final governance structure and rules will also have to consider the rule of law and the regulatory framework of each country to be appropriately customized to individual realities.

Coordination among public agencies and bodies and with the private sector involved in infrastructure development is paramount. Infrastructure projects must originate from and be aligned with national development strategies. Frameworks for effective institutional coordination among line ministries and national and subnational planning bodies should be in place to ensure that the prioritized projects have the highest economic and social developmental impact. The governance must also include proper channels to receive and incorporate the private sector perspective into the decision-making process.

2.4. Key Advantages

The NIP is an innovative model that has multiple advantages to support LAC governments developing infrastructure, including:

- **Enabling environment:** The establishment of the NIP and its functions motivate governments to address the different phases of project development, which helps identify the political and institutional reforms that must be addressed to facilitate the flow of private resources toward public interest projects.
- **Leveraging resources:** It systematically helps maximize the use of limited public sector resources and boost economic growth by attracting investment from the private sector.
- **Increasing efficiency:** It generates additionality in multiple ways, focusing on projects with high social value, reducing the cost of financing and transferring part of these savings to consumers, and fostering innovation.
- **Developing markets:** It supports infrastructure development as an asset class and provides local and international institutional investors with diversification opportunities through the provision of long-term investment assets.

The NIP provides flexibility to governments as it is a vehicle capable of supporting the pursuit of thematic or strategic priorities and of being established at any level, either regional or sectorial. It could be used to pursue social impact in strategic sectors by establishing dedicated sub-platforms, such as climate change or digital infrastructure projects. By providing various stages for decision making, the NIP ensures that strategic policies such as environmental, social, and governance issues, gender, and inclusion are incorporated in infrastructure projects.

The platform is replicable across not only countries but also regions and its concept and methodology is applicable in countries regardless of their credit rating. Once a platform is established, it could be scaled up or down and utilized as a tool for integrating national investment platforms across regions. The key is to use the same methodology across platforms to facilitate standardization and integration.

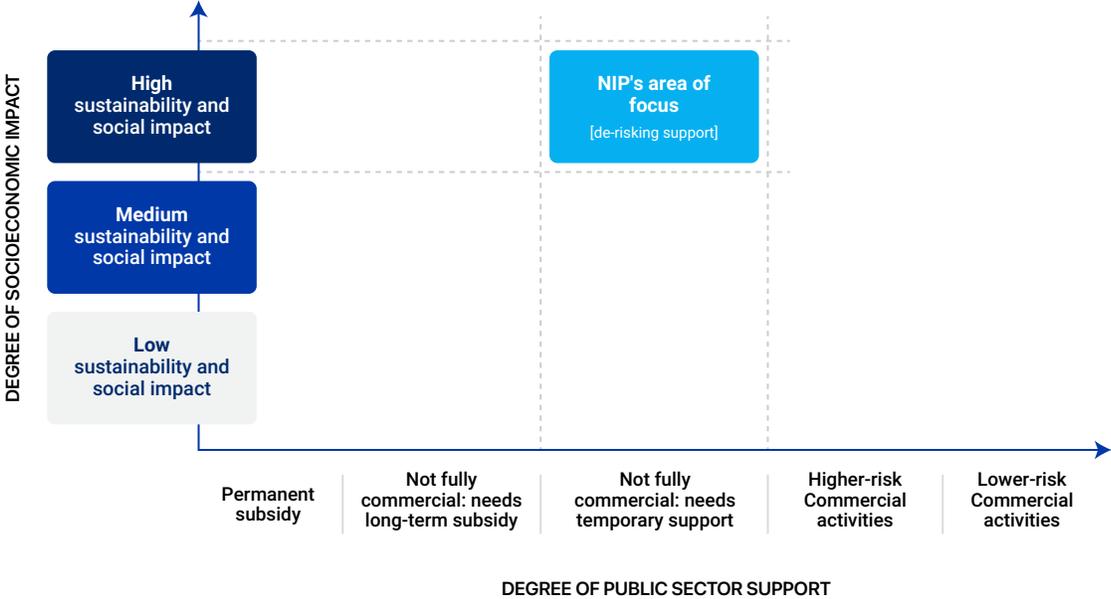
3. Project Prioritization and Preparation

3.1. Why Is Prioritization Important?

The prioritization of infrastructure projects is a necessary exercise that governments must undertake given the number of potential projects and the technical and financial work required to implement them. Prioritization should be developed based on medium- and long-term infrastructure planning that considers socioeconomic priorities and SDG contributions to build a portfolio of feasible projects (Global Infrastructure Hub, 2019a). A well-executed prioritization program increases project success rates, improves productivity, and can create alignment and focus among operational teams to deliver projects that support the overall strategy set by governments to achieve the SDGs.

Project prioritization is the entry point for the NIP, as it provides a platform that enables the selection of projects that are close to being commercially attractive, are environmentally sustainable, and have high social value. Within the NIP's Project Preparation Fund, the prioritization strategy needs to create an "area of focus" (see Figure 2) in which projects can be selected based on two apparent qualities: degree of public support required and degree of development impact. The prioritization criteria should favor projects requiring minimal support from the public sector to become commercially viable investments and that have a high developmental impact, both from an environmental and a socioeconomic angle.

Figure 2. Project Prioritization: NIP's Area of Focus



Source: Authors' elaboration.

3.2. Prioritization Methodologies

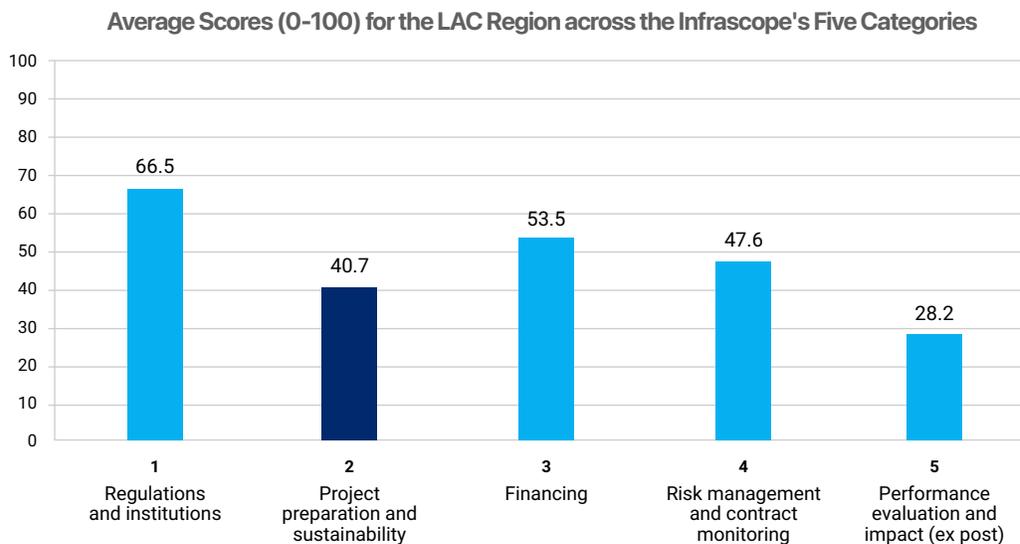
Under traditional public investment management frameworks, prioritization is carried out through a social cost benefit analysis (SCBA) process and the subsequent selection is based on projects with the highest net present value (NPV). This scheme is best when there is sufficient information available and expertise to evaluate projects. Otherwise, it is most appropriate to use a decision framework base on a multi-criteria analysis to make best use of available information.

The NIP applies a prioritization strategy that incorporates long-term development objectives, environmental sustainability considerations, and traditional economic and financial evaluation practices to help governments develop a robust pipeline of projects. The use of the infrastructure prioritization framework developed by MDBs could serve as a best practice decision-making tool to prioritize projects that have been subject to basic appraisal in the context of limited resources (Marcelo et al., 2016). This framework allows for a more in-depth and structured discussion of key decision factors and comparing projects that pass the strategic pre-screening and are subject to appraisal.

3.3. What Is a Well-Prepared Project and the Cost of Project Preparation?

One of the main barriers to increasing investment in infrastructure in developing economies is the lack of well-prepared projects. Even when project pipelines have been identified, many governments in emerging economies face challenges to have adequate financing and institutional capacity to follow-on project preparation activities. The Infrascopes, a recent IDB study that evaluates the environment for PPP development in LAC, shows that there is a significant project preparation gap, especially in areas such as project evaluation, identification of selection standards, preparation facilities, and the incorporation of environmental criteria and SDGs (Economist Impact and IDB, 2022); see Figure 3. In this context, project preparation becomes an essential practice to create bankable projects and enable the translation of demand for infrastructure into effective implementation and development of projects.

Figure 3. Project Preparation for PPP Scores in Latin America and the Caribbean



Source: Economist Impact and IDB (2022).

A well-prepared project is one that has undergone a rigorous evaluation by way of feasibility studies covering its economic and financial viability, its associated risks and risk allocation scheme, environmental and social impacts, stakeholder consultations, the integration of available technology, and other relevant matters. At this stage of the project life cycle, the implementation of good practices is essential for success in project preparation. It is important to consider the general principles proposed by the G20 (G20 Infrastructure Working Group, 2018), which lists critical aspects to consider in the following categories: project justification, options appraisal, commercial viability, long-term affordability, and deliverability. Compared to traditional procurement, projects that seek to attract private financing are subject to detailed scrutiny from potential developers and investors who often have onerous due diligence requirements. As a result, well-prepared projects can be a sign of available expertise and available resources from the public sector that ensure an alignment of interests with the private sector.

The costs of preparing an infrastructure project can vary widely and depend on factors including the project's size, location, complexity, social and environmental impacts, need for detailed technical designs, and nature of the legal and regulatory frameworks. The time required for proper project preparation and structuring also varies significantly depending on the status and circumstances of each project.

3.4. Scheme to Manage Preparation Costs

Facilities that specialize in preparing projects are structured to support and finance upstream activities such as pre-feasibility studies to determine whether the selected projects are viable, all the way to downstream feasibility analyses that aim to bring projects to financial closure. The work carried out is multidisciplinary and requires diverse skills and in-depth experience in technical, economic, social, environmental, and financial aspects.

Preparation costs related to upstream studies are generally funded by grants, while some project preparation facilities (PPFs) support downstream activities on a reimbursable basis when projects have successfully reached commercial or financial closure. The costs of activities in the early stages of project development are difficult to recover since there is usually a high degree of uncertainty around the viability of projects in their early phases, and it is difficult to transport those costs to the final price of the project. However, once projects are known to be sound, preparation activities can be financed in a revolving manner where costs can be recovered at the financing stage as a pass-through to the project developer.

4. De-Risking Products

4.1. Goal of the De-Risking Function

De-risking plays a fundamental role in the structure of the NIP as a function that promotes financial innovation where instruments are developed to unlock private investment. Based on a resource maximization model, this function seeks to channel different sources of funding and financing to develop risk mitigation products and co-financing strategies to ensure that the largest number of prioritized projects become bankable.

The purpose of this function is to apply limited public resources effectively to create an investment environment, in which projects with high social value are attractive to private investors without creating market distortions or suppressing market development. The NIP is a platform that integrates public funds obtained from different financing sources that, based on their financial terms, can have greater or lesser leverage of private financing depending on the risk profile of the project and the financial instrument used to support it. The opportunities for impact lie in finding the additionality of each of these resources to provide tailor-made de-risking instruments to crowd-in private financing. The goal of the financial instruments of the NIP is to achieve the most extensive portfolio of projects possible without over-covering risks or providing unnecessary subsidies that could distort the market. To achieve this, the de-risking function plays a key role in the assessment and efficient distribution of project risks to create a pipeline of commercially sustainable projects.

4.2. Sources of Funds and Their Differences in Costs

The NIP channels funds to the de-risking function from multiple sources—including public resources, financial and capital markets financing, concessional financing from bilateral and multilateral organizations, and grants—that have different cost structures. The cost of public capital is equivalent to the cost of financing that each country has in the debt markets, while development financing from bilateral and multilateral organizations is offered at discounted rates or at zero cost. In addition, multilateral banks could help leverage NIP resources using their AAA funding, which increases the NIP's creditworthiness and reputation in the market.

In LAC, the cost of borrowing for sovereigns in the debt markets can be considerable, depending primarily on the investors' perception of country risk and solvency. Investment-grade countries are perceived as stable and can access financing at longer tenors and competitive interest rates. Table 1 shows the current sovereign ratings of LAC countries and their respective yields at which their long-term debt is currently being traded, indicating a trend toward higher financing costs for non-investment-grade countries.

Table 1. Credit Ratings and Borrowing Costs of Long-Term Debt of LAC Countries (August 2022)

Country	Credit rating (S&P / Moody's)	Remaining tenor (years)	Sovereign bond trading level ^a
El Salvador	CCC+ / Caa3	6.63	35.35%
Argentina	CCC+ / Ca	7	24.84%
Suriname	SD / Caa3	4	19.19%
Ecuador	B- / WR	18.22	17.20%
Bahamas	B+ / Ba3	10.31	16.44%
Belize	B- / Caa3	11.68	12.40%
Honduras	BB- / B1	7.97	9.88%
Bolivia	B+ / B2	7.65	9.12%
Barbados	B- / WR	7.23	7.35%
Dominican Rep.	BB- / Ba3	10.25	7.31%
Costa Rica	B / B2	8.63	6.63%
Colombia	BB+ / Baa2	9.82	6.44%
Guatemala	BB- / Ba1	11.3	5.73%
Brazil	BB- / Ba2	9.2	5.70%
Trinidad & Tobago	BBB- / Ba2	7.97	5.11%
Paraguay	BB / Ba1	11.02	5.10%
Panama	BBB / Baa2	10.58	4.95%
Jamaica	B+ / B2	5.78	4.86%
Mexico	BBB / Baa2	8.89	4.83%
Chile	A / A1	11.63	4.60%
Peru	BBB / Baa1	10.44	4.58%
Uruguay	BBB / Baa2	8.56	3.81%
Nicaragua	B- / B3	NA	NA
Guyana	NA	NA	NA
Venezuela	NR / C	NA	NA

Source: Authors' elaboration based on information from IDB Treasury Department.

^aDoes not include bond issuance fees.

Box 1. IDB Group Support of the De-Risking Function

The IDB Group can support the de-risking function by offering technical and financial assistance beyond the traditional MDB lending approach that can increase investor confidence in the platform and develop the financial instruments required to improve credit rating and cash flow stability of the projects under the NIP.

IDB and IDB Invest can be key technical partners to support the development of de-risking instruments under this function: IDB Group offers Technical Cooperation Programs (grants and reimbursable loans) to transfer technical know-how and expertise on the development of de-risking instruments to mobilize investment in infrastructure.

IDB Group's financial solutions can work together with NIP's instruments to offer additionality: IDB's public (IDB, n.d.) and private (IDB Invest, n.d.) windows can strategically deploy its financial solutions to enhance confidence in the projects developed within the NIP structure. The support from an AAA-rated institution can be incorporated into the de-risking strategy to pass through the credit quality and crowd-in effect of IDB.

Source: Authors' elaboration based on publicly available information from IDB.

4.3. Understanding Infrastructure Risks

Infrastructure financing requires large volumes of long-term investment that expose investors to a variety of risks that are costly and complex to manage, making the understanding of infrastructure risks and their allocation a critical condition for successfully attracting commercial funding. Infrastructure projects as investment assets require detailed risk analysis, appropriate risk allocation strategies, and robust risk mitigation mechanisms given the illiquid nature of the assets and the inherent risk factors that can negatively affect the projects. The correct allocation of risks seeks to balance the needs of governments, achieve optimal value for money for users, and develop financially viable opportunities for the private sector (Global Infrastructure Hub, 2019b). The risk allocation of a project directly impacts the cost of capital for the private player and whether an infrastructure project financed by the private sector is affordable to the country.

Therefore, it is essential to align incentives among stakeholders and have available risk mitigation instruments that can help correct market failures or inefficiencies and improve the risk-return trade-off for private stakeholders. The OECD classifies infrastructure risks by categories and according to when they are assumed during the project life cycle; see Annex 1 for more details.

4.4. Taxonomy of De-Risking Products

The de-risking function will use its funding to develop credit enhancement and blended financing instruments to improve the risk profile and increase the internal rate of return of prioritized projects. The instruments will be designed based on the needs of each project and will aim to reduce the cost of capital for investors based on risk mitigation strategies and/or co-financing schemes using funding at below-market rates and extended tenors. With this criterion, possible instruments that could be developed by the NIP's de-risking function are listed in Table 2.

Table 2. Set of Applicable De-Risking Instruments

<p>Credit Enhancement Instruments designed for improving the credit risk profile of projects</p>
<ul style="list-style-type: none"> • Credit risk guarantees Covers all categories of non-payment risks, political risks, and commercial risks
<ul style="list-style-type: none"> • Political risk guarantees Covers the risk that a sovereign or public entity will not comply with contractual obligations agreed with a private entity
<ul style="list-style-type: none"> • Contingent credit lines Written commitment by a financial institution to guarantee recovery of a specified cash amount in the event of any cash shortfalls in the project
<ul style="list-style-type: none"> • First loss cash facilities Protects investors from pre-defined initial losses associated with macroeconomic and business risks

(continued on next page)

Table 2. Set of Applicable De-Risking Instruments (cont.)

<p>Blended Financing Instruments designed for improving projects’ cost of capital through blending commercial financing with financial instruments at below-market rates</p>
<ul style="list-style-type: none"> <p>Senior syndicated loans Loans with top priority of repayment provided at below-market rate and/or other non-commercial terms, such as maturity, grace period, repayment profile</p>
<ul style="list-style-type: none"> <p>Subordinated loans Loans with lower priority of repayment offered at a discounted rate and/or other non-commercial terms</p>
<ul style="list-style-type: none"> <p>Bridge loans for green infrastructure Short-term loans at lower-than-market rates to de-risk the construction and first few years of operation</p>
<ul style="list-style-type: none"> <p>Viability gap funding Grants with no expectation of repayment to cover for the heavy upfront funding that is required to kick-start projects</p>

**Box 2. Example of NIP's De-Risking Function to Support the Growth of New Industries:
The Case of Green Hydrogen**

The new application of technologies has created nascent industries such as green hydrogen and presents opportunities that can not only support action against climate change but also drive economic growth through the development of new industries and associated value chains. However, there are key risks and costs associated with the development of new industries that can hinder their development.

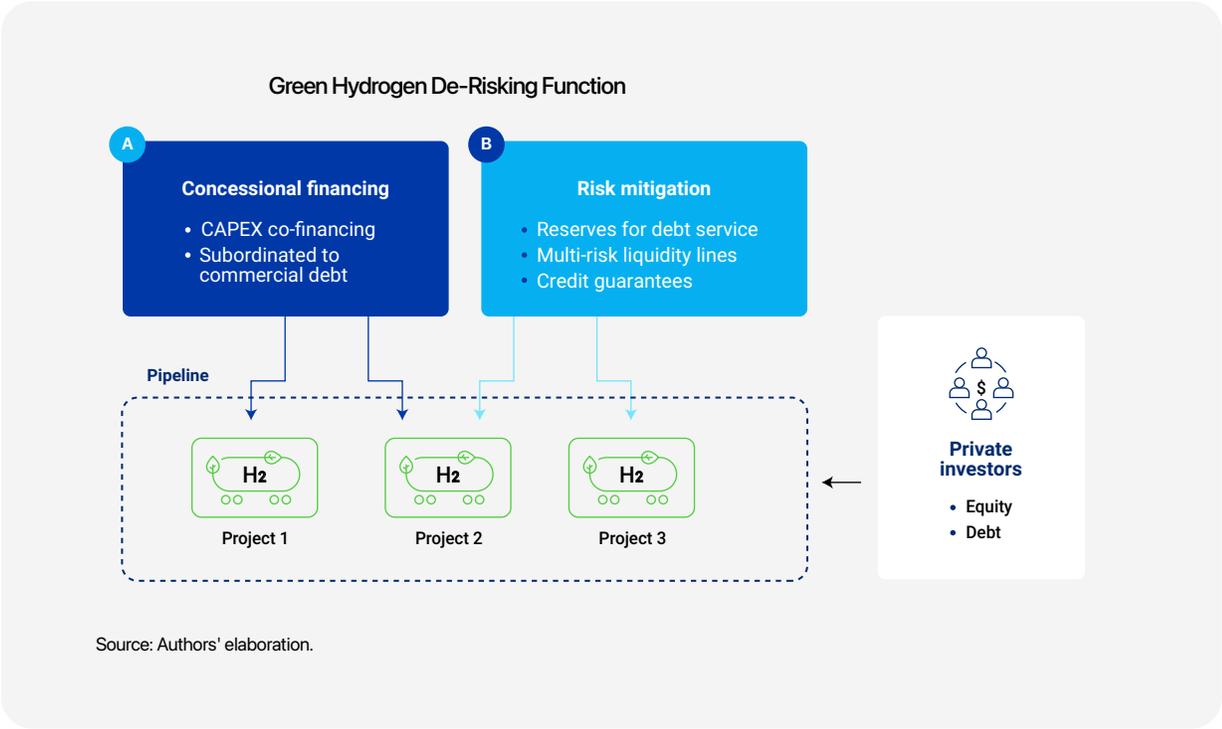
Green hydrogen is a new technology that presents risks that may inhibit large-scale private investment. The industry is still in a development process with a limited project operating history, which triggers a high-risk perception by debt and equity investors. The costs of the technology for the transformation into green hydrogen are still high, with electrolyzers being the second-largest costs of production after energy costs. This limits the availability of investors, as they would prefer to wait until prices decline and cost volatility subsides. Finally, project developers tend to offer lower performance guarantees or increase contract costs, as there is not enough technical information to guarantee the long-term, large-scale performance of the technology. To mitigate the main risks identified in green hydrogen projects, the NIP's de-risking function would offer tailor-made financial solutions to encourage private investment and develop the industry.

CRITICAL RISK	FINANCIAL SOLUTION
New industry risk →	Expansion of debt service reserve accounts to mitigate financial risks related to industry/project uncertainty
Low return risk →	CAPEX co-financing and subordinated debt (e.g., purchase of electrolyzers) to lower total project costs and make it financially viable
Performance risk →	Liquidity credit lines and credit guarantees to alleviate revenue shortfalls due to a potential lower production of green hydrogen

For an efficient use of resources, the NIP would offer hydrogen projects de-risking instruments through two windows. Window A, focused on blended financing, would support with the co-financing of a limited percentage of the CAPEX. Window B would offer credit risk mitigation instruments such as debt service reserve accounts, liquidity lines, and credit guarantees.

(continued on next page)

Box 2. Example of NIP's De-Risking Function to Support the Growth of New Industries:
The Case of Green Hydrogen (cont.)



5. Project Structuring

5.1. NIP's Financial Structuring Support

The third function of the NIP includes customized support to structure projects that implement both the activities carried out during the preparation phase and the de-risking financial products offered by the platform. At this point, the procurement model that best fits the project is validated and the necessary technical, social, environmental, economic-financial, and legal studies are updated or deepened. The risk allocation of the project is also finalized and the best de-risking products to be used are determined; finally, the contract documents are developed for the project tender.

The support of the financial structuring function of the NIP will cover three main areas of project structuring:

1. Risk structuring

The preliminary risk allocation developed in the preparation phase is finalized and implemented in the project contract. This is done through risk definition and assessment, specifying the risks retained by each public and private party, and the potential compensations in case the risk materializes. The most sensitive risks for the project's bankability are identified, and work is done in conjunction with the NIP's risk mitigation function to develop tailored solutions that allow the participation of the private sector without distorting the market.

2. Financial structuring

Seen from a public sector perspective, the financial structuring of projects seeks to revalidate the public intervention strategy established in the preparation phase and to materialize the implementation of de-risking instruments so that the projects can mobilize financing from the private sector. Based on the basic financial structure of each project, the type and size of public intervention is selected. The de-risking products developed by the NIP are chosen and incorporated to improve the rate of return of the projects and reduce the risk perceived by private financiers.



3. Contract structuring

This last step is highly interrelated with the other two structuring activities. In the structuring of the contract, all the final documents are packaged, including the technical bases of the project, the economic-financial analysis, environmental and social studies, the evaluation and allocation of risks, and the respective legal terms and conditions of the project. Under this activity, the bidding process is chosen, as well as the methodologies and criteria for qualifying companies and evaluating offers.

5.2. Use of Mitigation Instruments in Financial Structuring

Each of the actors involved in the development of infrastructure projects has the ability to manage certain risks better than others; however, there are risk gaps where mitigation instruments can help make high-impact projects bankable. The public sector can manage the political and regulatory risks that affect investment in infrastructure by creating enabling environments through the preparation of long-term infrastructure development plans and policies that help with the regulation of project investment. The private sector should bear certain commercial risks by using financial engineering techniques, such as creating reserve accounts, or contracting private insurance. In addition, the private sector is better equipped to face technical risks, since these can be managed based on the know-how that specialized operators bring to the industry.

The financial instruments proposed under this platform are designed to cover specific risks that help unlock private investment in sustainable projects with a high social impact. Annex 2 conceptualizes the use of instruments for specific categories of risks in infrastructure development.

5.3. Key Activities of the Financial Structuring Function

The objective of the financial structuring function is to develop bankable projects and support the contracting process to reach commercial and financial close. To achieve this goal, the structuring function will be responsible for several multidisciplinary activities developed by internal teams and with the technical support of MDBs and/or outsourced specialists. The main activities to be carried out include, but are not limited to:

- **Due diligence of technical studies**

Review of feasibility studies, market evaluations, supply and demand forecasts, sector analysis, among others

- **Detailed environmental and social assessment**

Identification of environmental and social impacts of the project and planning of mitigation measures

- **Legal analysis**

Analysis of the project's compliance with local laws and regulations, and evaluation of the legal structure of the contract and of all the necessary authorizations and permits

- **Economic and financial viability**

Update of final economic and financial models to determine the financial viability and profitability for the project company and its stakeholders

- **Risk assessment and allocation**

Identification of the risks inherent to the project and allocation to the counterparties that will assume them

- **Structuring of the operation**

Identification of the optimal contractual structure and the contracting process to follow, which includes selection requirements and award criteria

- **Document preparation**

Drafting of contract documents including terms and conditions, prequalification package, request for proposal (RFP)

- **Marketing and road shows**

Publicity of the project through press releases, press conferences, and road shows to present the project to potential developers

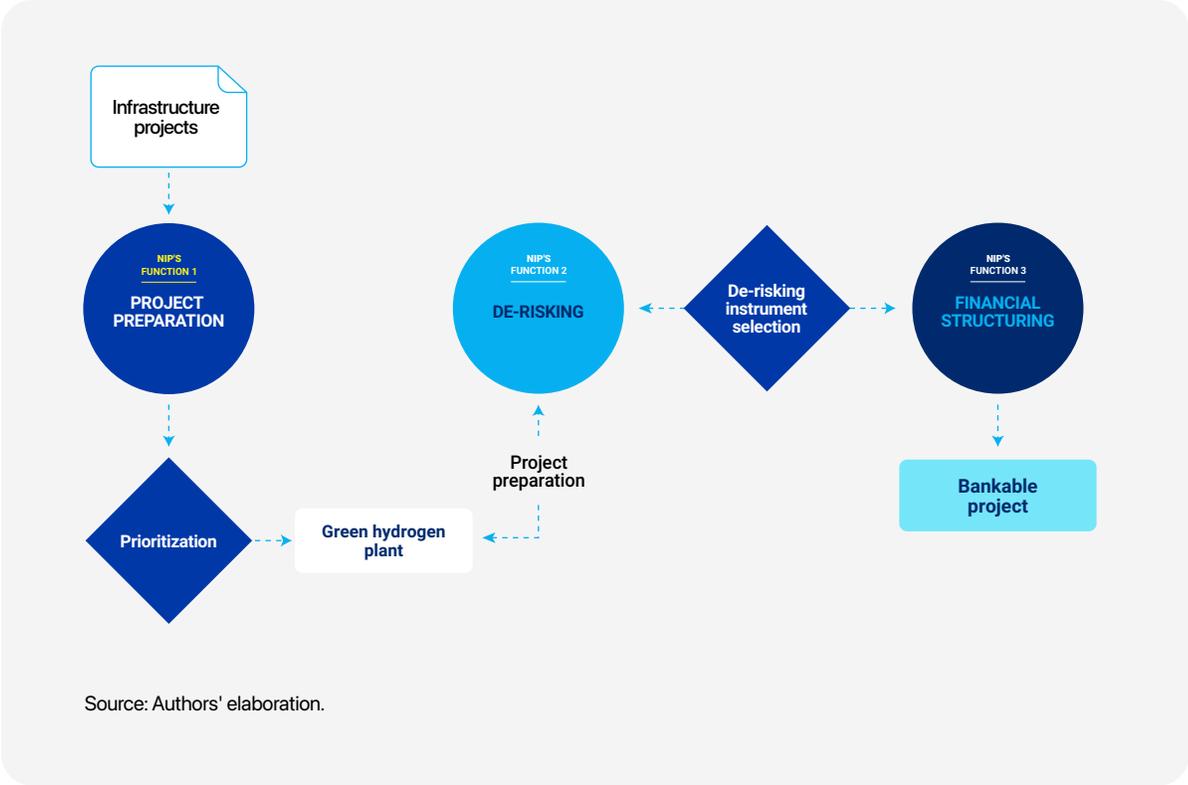
- **Evaluation of offers**

Support in the selection of qualified bidders and final offers

- **Commercial and financial closing negotiations and contract signing**

Legal and financial support in the final negotiations and signing of commercial and financial agreements

Box 3. Process Flow Diagram for a High-Impact Project Going through the NIP Structure



6. Project Securitization and Asset Recycling

6.1. Asset Pooling

The NIP concept creates a critical mass of bankable projects with similar characteristics and long-term debt contracts, easing their aggregation into securitized instruments that are attractive to different investor profiles. Securitization makes it possible to transform illiquid assets into tradable financial instruments, which allows financiers to free capital and expand lending capacity and investors searching for stable opportunities that can match their long-term liabilities to participate in the infrastructure sector. The NIP platform secures infrastructure assets by guaranteeing an adequate regulatory and competition framework and facilitating coordination between the public sector, private infrastructure lenders, and capital market investors.

The different stages of the NIP from preparation to risk mitigation and structuring guarantee that its projects have a high level of standardization and quality that makes them suitable to attract institutional investors to infrastructure. The underlying debt of NIP-supported projects will generate long-term, predictable cash flows that can be packaged and sold on debt and equity markets. According to IDB (2019), participation of institutional investors in LAC infrastructure remains negligible (around 1 percent). Securitization would thus contribute to the creation of liquidity and allow institutional investors to participate in infrastructure by investing in primary and secondary markets.

By including securitization, the NIP supports the consolidation of infrastructure as an asset class by promoting the development of securities with high positive covariances.¹ By adding securitization of assets, the NIP scheme is in line with the main objectives of the G20 Roadmap to Infrastructure as an Asset Class, which includes: (i) improving project development, (ii) improving the investment environment for infrastructure, and (iii) promoting greater standardization (OECD, 2018).

¹A set of securities makes up an asset class if their returns have high covariances and are greater than with other assets (Ketterer and Powell, 2018).



6.2. NIP's Securitization Strategies

Depending on the regulatory environment and institutional capacity, the NIP can take different positions to facilitate the securitization of assets (see Figure 4). Among the potential strategies, the NIP can take the role of:

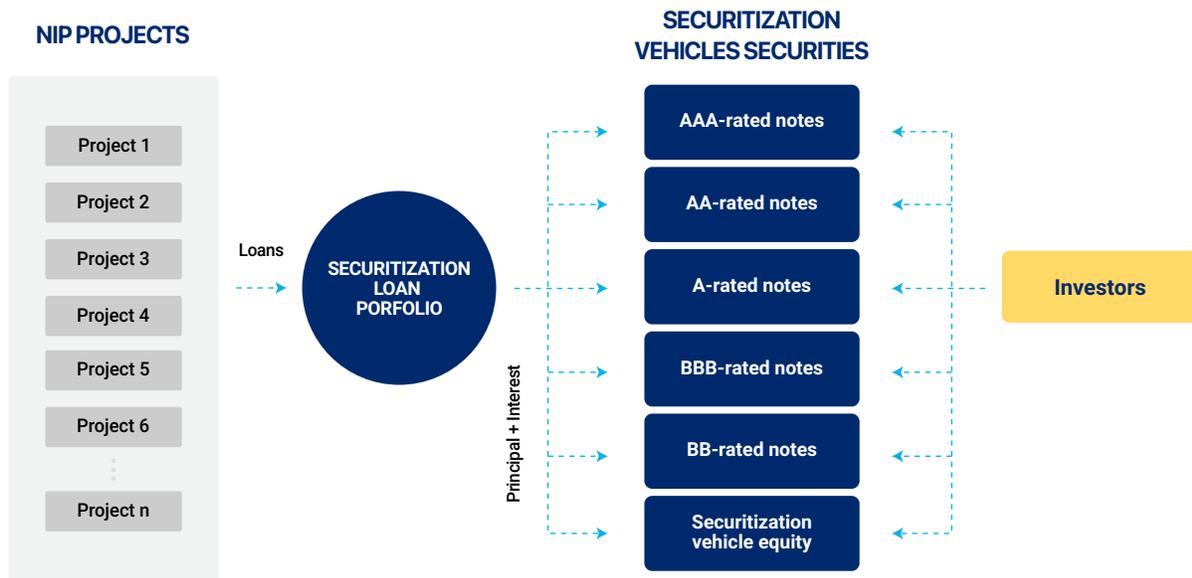
- **Credit enhancer**

The NIP can support the development of securitization strategies and provide credit enhancement and risk mitigation products to support private sector counterparties interested in recycling long-term assets to expand their available lending capital

- **Issuer**

The role of the NIP could also include issuing the securitization by purchasing the commercial debt of infrastructure projects from private sector counterparties and then selling it through collateralized loan obligations (CLOs) in the capital markets

Figure 4. Diagram of a Potential Securitization Strategy of NIP Project Loans



Source: Authors' elaboration.

Box 4. Infrastructure Take-Out Facility (TOF) Concept: An Example from Asia

The TOF is a model designed and structured by Clifford Capital, a debt finance solutions provider established with the support of the Government of Singapore, where private banks' contractual debt related to infrastructure assets is sold to an off-balance sheet special purpose vehicle (SPV) and tranches of securities are later issued to a syndicate of institutional investors. The TOF has been designed to provide investors with exposure to a diversified portfolio of loans for infrastructure projects across multiple sectors and countries in Asia.

Based on this idea, the Asian Infrastructure Investment Bank (AIIB) and Clifford Capital established in 2019 the Bayfront Infrastructure Management (BIM) platform, designed to mobilize institutional capital for infrastructure financing in Asia. The first TOF was developed by BIM, creating a portfolio of 37 infrastructure loans, covering 30 projects spread across 16 Asian countries and 8 sub-sectors. Loans for underlying infrastructure projects were obtained from leading commercial banking institutions including Development Bank of Singapore (DBS), Hongkong and Shanghai Banking Corporation (HSBC), Mitsubishi UFJ Financial Group (MUFG), Sumitomo Mitsui Banking Corporation (SMBC), and Standard Chartered (APEC/OECD, 2019).

The loans in the portfolio have been grouped into three investment grade-rated notes listed on the Singapore Stock Exchange. Clifford Capital has retained only one unrated subordinated note serving as a first loss tranche and corresponding to 10 percent of the total issuance, thus providing a credit enhancement to the senior notes.

Source: Authors' elaboration.

Note: For more information see <https://www.bayfront.sg/>.

6.3. Asset Recycling

If the NIP takes an issuer role, the funds received from the securitization can be recycled to promote more infrastructure projects and sustain the platform's operations. This could be a relevant cash flow to partially finance the project preparation, risk mitigation instruments, and structuring activities performed through the various stages of the NIP. The recycling of funds essentially monetizes the existing assets and frees up capital to be redeployed in new investments, so the NIP can continue to be a key sponsor for the delivery of infrastructure assets and maintain a virtuous cycle of infrastructure pipeline development.

According to APEC/OECD (2019), asset recycling brings a variety of benefits to the public sector, such as:

- **Leveraging the potential of mature assets**

Governments see asset recycling models as an effective tool for freeing up idle capital in mature infrastructure assets by transferring them to private investors and reinvesting profits in new infrastructure projects

- **Catering to investors' preferences with stable returns**

Asset recycling taps into investors' appetite for operating infrastructure assets, which typically have long-lasting and relatively stable cash flows, and the ability of governments to absorb development risk, thereby removing a major risk for investors, many of whom are risk averse

- **Channeling more funds to the investment cycle**

The capital raised through asset recycling is an instrument to accelerate investment in infrastructure

- **Aligning the interest of national and local stakeholders to ensure the success of the program**

When implementing asset recycling policies, governments seek solid agreements between national, regional, and local governments to provide legal certainty, credibility, continuity, and efficiency to policies



7. Final Remarks

The NIP is an innovative model that should be considered by LAC countries as a public policy instrument to accelerate investment in infrastructure, achievement of SDGs, and improvement of public services. By creating a standardized platform where the key activities of the project development cycle are integrated under one roof, governments can create a volume of bankable projects, improve the use of limited financing resources, increase confidence of local and foreign investors, and promote investment in projects with high social and environmental impact. The key to the success of this platform is to take advantage of the synergies created internally and focus the efforts of the public sector into addressing the technical, legal, and financial aspects that currently limit investment in sustainable infrastructure projects with a high social impact.

The IDB Group could support decision makers from LAC countries to explore this conceptual idea and assess the broad benefits that a platform like the NIP can bring to their countries. The IDB Group could be a strategic partner in the process of designing and implementing a NIP, since it has the necessary technical and financial tools to support the successful establishment and implementation of these platforms. IDB could provide its specialized teams to support preparing and financing infrastructure projects, as well as developing customizable de-risking instruments for commercial financing. It could also support attracting institutional investors at a national and regional level and supporting the development of securitization vehicles to create liquidity in the infrastructure market.

References

APEC/OECD. 2019. Financing Infrastructure in APEC Economies: APEC/OECD Report on Selected Effective Approaches. Paris: OECD Publishing. Available at: <https://www.oecd.org/finance/Financing-infrastructure-in-APEC-economies-selected-effective-approaches-2019.pdf>.

BlackRock. 2021. The Big Emerging Question: How to Finance the Net Zero Transition in Emerging Markets.

Brichetti, J. P. et al. 2021. The Infrastructure Gap in Latin America and the Caribbean: Investment Needed through 2030 to Meet the Sustainable Development Goals. Washington, DC: Inter-American Development Bank.

Deloitte Insights. 2022. Ingraining Sustainability in the Next Era of ESG Investing: New Opportunities Are Emerging for Investment Managers to Adapt as Investor Preferences Evolve.

ECLAC (Economic Commission for Latin America and the Caribbean). 2020. Rural Roads: Key Routes for Production, Connectivity and Territorial Development. Santiago de Chile: Economic Commission for Latin America and the Caribbean.

———. 2021. The Recovery Paradox in Latin America and the Caribbean: Growth Amid Persisting Structural Problems: Inequality, Poverty and Low Investment and Productivity. Santiago de Chile: Economic Commission for Latin America and the Caribbean.

Economist Impact and IDB. 2022. The 2021/22 Infrascopes: Evaluating the Environment of Public-Private Partnerships in Latin America and the Caribbean.

G20 Infrastructure Working Group. 2018. G20 Principles for the Infrastructure Project Preparation.

García Zaballos, A. et al. 2020. Annual Report of the Broadband Development Index: Digital Gap in Latin America and the Caribbean. Washington, DC: Inter-American Development Bank.

Global Infrastructure Hub. 2019a. Leading Practices in Governmental Processes Facilitating Infrastructure Project Preparation: A Practical Guide for Governments, Informed by a Country-lens Review of Leading Practices.

———. 2019b. PPP Risk Allocation Tool 2019 Edition.

IDB (Inter-American Development Bank). n.d. IDB Public Sector Financing. Washington, DC: Inter-American Development Bank. <https://www.iadb.org/en/about-us/public-sector-financing>.

———. 2014. Sustainable Infrastructure for Competitiveness and Inclusive Growth: IDB Infrastructure Strategy. Washington, DC: Inter-American Development Bank.

———. 2019. Informe macroeconómico de América Latina y el Caribe 2019: Construir Oportunidades para Crecer en un Mundo Desafiante. Washington, DC: Inter-American Development Bank.

IDB, IICA, and Microsoft. 2020. Rural Connectivity in Latin America and the Caribbean: A Bridge for Sustainable Development in a Time of Pandemic.

IDB Invest. n.d. IDB Invest Solutions for Infrastructure. Washington, DC: IDB Invest. <https://www.idbinvest.org/en/solutions>.

IEA (International Energy Agency). 2021. Financing Clean Energy Transitions in Emerging and Developing Economies: World Energy Investment 2021 Special Report. Paris: International Energy Agency. Available at: <https://www.iea.org/reports/financing-clean-energy-transitions-in-emerging-and-developing-economies>.

IMF (International Monetary Fund). 2021. World Economic Outlook: Recovery During a Pandemic: Health Concerns, Supply Disruptions, and Price Pressures. Washington, DC: International Monetary Fund.

Ketterer, J. A. and A. Powell. 2018. Financing Infrastructure: On the Quest for an Asset Class. Washington, DC: Inter-American Development Bank.

Marcelo, D., C. Mandri-Perrott, S. House, and J. Schwartz. 2016. Prioritizing Infrastructure Investment: A Framework for Government Decision Making. Washington, DC: World Bank Group.

McKinsey & Company. 2022. The Great Reset: North American Asset Management in 2022.

OECD (Organisation for Economic Co-operation and Development). 2015a. G20/OECD Principles of Corporate Governance. Paris: OECD Publishing.

———. 2015b. Risk and Return Characteristics of Infrastructure Investment in Low Income Countries. Paris: OECD Publishing.

———. 2017. Getting Infrastructure Right: A Framework for Better Governance. Paris: OECD Publishing.

———. 2018. Roadmap to Infrastructure as an Asset Class. Paris: OECD Publishing.

World Bank Group and IMF Development Committee. 2015. From Billions to Trillions: Transforming Development Finance.

Annexes

Annex 1. Infrastructure Assets Risk Classification

The OECD classifies infrastructure risks into three broad categories depending on when they appear during the life cycle of the project (OECD, 2015b). In this way, a difference is made between the risks that are present in a specific phase and those that are found throughout the project life. The risk categories are as follows:

1. Political and regulatory risks

Are one of the main limitations of private investment in infrastructure since they can be very subjective and difficult to quantify within the financial structure of a project. The perception of these risks is especially acute in emerging markets with low credit rating scores. These risks can take different forms during a project's life cycle such as an increase in construction prices, cancellation of contracts and renegotiations, changes in tariffs, and duration of contracts. Other risks are general and impact all phases of the project, such as regulatory and tax changes, and social acceptance of the project.

2. Macroeconomic and business risks

Are related to the impact of the variability of economic indicators and the industry solvency on the viability of an infrastructure project. These risks include macroeconomic variables such as foreign exchange exposure, inflation, and real interest rates. This category also includes commercial risks such as the availability of financing, liquidity, refinancing, volatility of demand, and market risks.

3. Technical risks

Are determined based on the complexity of construction of the project, the use of technology, and the skills of operators and managers when executing a project. Archaeological concerns, technical feasibility, construction delays, structural issues, and early termination are phase-specific risks, while others extend over several phases or throughout the project's life, such as governance, environmental, technology obsolescence, and force majeure risks.

Table A1. Risk and Return Characteristics of Infrastructure Investment in Low-Income Countries

Risk category	Development phase	Construction phase	Operation phase	Termination phase
Political and regulatory	Environmental review	Cancellation of permits	Change in tariff regulation	Contract duration
	Rise in pre-construction costs (longer permitting process)	Contract negotiation		Decommission
				Asset transfer
		Currency convertibility		
		Change in taxation		
		Social acceptance		
		Change in regulatory or legal environment		
	Enforceability of contracts, collateral, and security			
Macroeconomic and business	Prefunding	Default counterparty		
	Financing availability		Refinancing risk	
			Liquidity	
			Volatility of demand/Market risk	
	Inflation			
	Real interest rates			
Exchange rate fluctuation				
Technical	Governance and management of the project			Termination value different from expected
	Environmental			
	Project feasibility	Construction delays and cost overruns	Qualitative deficit of the physical structure/service	
	Archaeological			
	Technology and obsolescence			
	Force majeure			

Source: OECD (2015b).

Annex 2. Risk Coverage of the NIP's Financial Instruments

Table A2. Financial Instruments and Risk Coverage Matrix

		Political risk guarantees	Credit risk guarantees	Contingent credit lines	First loss cash facility	Sr syndicated loans	Subordinated loans	Bridge loans	Viability gap funding
Political and regulatory risks	Change in law	•							
	Cancellation of permits	•							
	Changes in tariffs	•							
	Currency convertibility	•		•					
	Expropriations	•							
Macroeconomic and business risks	Prefunding					•			•
	Financing availability					•	•	•	•
	Default counterparty		•						
	Refinancing risk		•	•	•	•	•	•	
	Liquidity		•	•	•	•			
	Market demand risk		•				•		
	Exchange rate		•	•	•				
Technical risks	Natural disasters			•					
	Construction risk							•	•

Source: Authors' elaboration.

Annex 3. International Examples of Facilities for Risk Mitigation and Blending of Concessional Funds

At an international level, there are facilities/funds that specialize in providing financial instruments for the promotion of investment in infrastructure. These funds (see Table A3) generally specialize in offering standardized instruments based on defined eligibility criteria.

Table A3. International Risk Mitigation Facilities Examples

<p>Latin America and Caribbean Investment Facility (LAIF and CIF) https://www.eulaif.eu/</p>	<p>European Union (EU) regional blended financing facilities that use EU development grants to leverage additional investment from development finance institutions (DFIs) to promote private participation in infrastructure development.</p>
<p>Guarantee Fund for Infrastructure (Fundo Garantidor de Infraestrutura, or FGIE) https://www.abgf.gov.br/negocios/garantias-para-infraestrutura/</p>	<p>Established by ABGF (Brazilian Management Agency of Guarantee Funds), FGIE is a private fund created in 2014 to provide credit guarantees to partially coverage risks related to concessions, subject to the conditions and forms provided for in its bylaws.</p>
<p>GuarantCo https://guarantco.com/</p>	<p>GuarantCo is part of the Private Infrastructure Development Group and sponsored by the governments of Australia, the UK, Sweden, Switzerland, and the Netherlands. GuarantCo promotes infrastructure development in low-income countries of Africa and Asia through local currency credit guarantees that enable infrastructure projects to raise debt finance.</p>
<p>ASEAN Infrastructure Fund (AIF) https://www.adb.org/aif</p>	<p>Established by the Asian Development Bank (ADB) and the Association of Southeast Asian Nations (ASEAN) member nations, AIF blends public and concessional resources to finance projects that can address infrastructure development needs of the region.</p>
<p>Indonesia Infrastructure Guarantee Fund (IIGF) https://ptpii.co.id/en</p>	<p>IIGF was created by the Government of Indonesia to improve the quality and creditworthiness of PPPs. It provides counterparty risk and early termination guarantees to de-risk the private investment in infrastructure projects.</p>

Source: Authors' elaboration.

Annex 4. Operational Considerations for Implementing a NIP

The implementation of the NIP model requires certain preparatory steps to ensure the successful launch of the platform. Once these steps have been taken, the governance and management model of the platform can be developed as well as the schedule to implement the NIP. The preparatory steps include:

- **National strategy**
Study of the national development and infrastructure plans and the SDGs agreed upon before the United Nations

- **Institutional framework**
Analysis of governance in infrastructure to identify the main actors in the sector, from sector ministries to regulatory bodies

- **Legal and regulatory analysis**
Assessment of the laws and processes that regulate private sector investment in infrastructure in the country

- **Infrastructure market**
Understand primary private investing and financing actors and their main obstacles to participating in infrastructure projects

- **Budgetary assessment**
Identification of budget and available public funding sources

- **External advisory and financial support**
Identification of local technical, legal, and financial resources and support from external organizations

