

FINAL REPORT

COLOMBIA: FINANCING INFRASTRUCTURE FOR URBAN REDEVELOPMENT

Using Land Value Capture to Finance Urban Redevelopment: Medellín and Barranquilla Pilot Cases (TIF Phase III)

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ABBREVIATIONS AND ACRONYMS

CPI	Consumer Price Index
GDP	Gross Domestic Product
MID	Medellin’s Innovation District
LAC	Latin America and the Caribbean
POT	Land Use Plan
LVC	Land Value Capture
NG	National Government
NDP	National Development Plan
NPD	National Planning Department
PP	Land Use Partial Plan
PPP	Public Private Partnerships
SPV	Special Purpose Vehicle
TA	Technical Assistance
TIF	Tax Increment Financing
GoC	Government of Colombia
IDM	Innovation District of Medellin
EEM	Medellin Metro Company (Empresa Metro de Medellin)

1 Introduction

1. **Urban redevelopment in Colombia has traditionally been financed by the national and municipal governments.** However, rising demand for housing and improved service coverage in underserved areas has created the need to mobilize private capital for the redevelopment of blighted urban areas. To address this challenge, the Government of Colombia requested the World Bank's assistance in developing and implementing a financial instrument for urban redevelopment based on land-based finance instruments (LVC). The type of instrument developed for Colombia, tax incrementing financing (TIF), attracts private investment by selling bonds to investors. The return on the bonds is derived from the incrementally higher property taxes paid as the TIF district is redeveloped.
2. **This report contains a summary of the activities undertaken, the main findings, lessons learned and recommendations, and next steps arising from an effort to pilot the design and adoption of Tax Increment Financing (TIF) as finance source for urban redevelopment in Colombia.** Since 2011, the World Bank has been providing technical assistance (TA) to the Government of Colombia in the design and implementation of innovative urban development/redevelopment funding sources, with the TIF work being the main result of this effort. The first phase of the support assessed the feasibility of implementing TIF for urban redevelopment, with the pilot case of the urban redevelopment project "The Innovation District of Medellin" (IDM). A second phase building upon the results from the previous work, conducted an in-depth operational/financial analysis at a subzone level of the IDM. This final phase presents the results of the analytical studies of two additional case studies in Barranquilla and Medellin, including a risk analysis approach aiming to reduce the impacts on the bond issuance caused by real estate projects. At the time of preparation of this report, the two cities under review – Medellin and Barranquilla – had not yet presented their TIF proposals for approval of their respective city councils. However, the work has already provided important insights on the challenges that Colombian cities face in using TIF.
3. **The report consists of this introduction and five additional sections.** Section 2 presents background information about the World Bank's support for the formulation and adoption of TIF in Colombia, and discusses the methodology followed by the World Bank and the cities to estimate the amount of TIF funding needed to redevelop a particular part of the city (the TIF district) and contribute to the cost of the infrastructure that is a precondition for private investment. Section 3 and 4 details the main findings and results of the TIF district pilots in Barranquilla and Medellin. Section 5 also looks at the main drivers of risk in TIF projects and how they can be addressed. Section 6 summarizes some key risks and risk management strategies that should be considered for future TIF formulation and adoption efforts. Finally, Section 7 presents the next steps to be taken by the governments of Barranquilla and Medellin, and by the World Bank to continue this trajectory towards TIF implementation in Colombia. Annexes to this report presents a pipeline of possible urban redevelopment projects that could develop the TIF funding mechanism and aims to document lessons learned from the Colombian experience.

2 Executive Summary

4. **This report presents key results emerging from two (2) TIF implementation pilots in the Colombian cities of Medellin and Barranquilla.** This report covers the application of the methodology to develop TIF in Colombia, pilot results, and the next steps for the TIF implementation. The specific goals of this report include: (i) quantifying the bond-issuance scenarios for both pilot cases; (ii) analyzing the role of TIF as a finance source for the urban redevelopment; and (iii) presenting policy recommendations on strengthening, diversifying, and enhancing technical capacity and the process of

structuring a TIF instrument with a particular focus on the potential financing needed for urban redevelopment.

5. **The assessment for Medellín identified the opportunity for a TIF bond-issuance of around US\$190 million.** The analysis of the Avenida 80 Tram corridor identified potential for development of 521,000 m² over a 20-year TIF timeframe. The success of this TIF rests mainly on the ability of the Metro Company of Medellín, to lead the transformation of the TIF District. The pilot results show that most of the transformation is likely to take place in higher-income properties with higher assessed values and higher property tax rates,
6. **The assessment of Barranquilla identified a potential TIF bond-issuance of over US\$47 million.** Even though the potential area development for the TIF District was found to be over 5 million m², real estate market constraints capped actual development at around 1.6 million m² over a TIF's 20-year lifetime. The large and greenfield plots common to Barranquilla's TIF district are not expected to require much land assembly by Barranquilla's governmental agencies, but the higher competition with other greenfield areas also available for development in Barranquilla, meaning that the Puerta de Oro agency will need to strengthen its ability to encourage and drive new developments into the area.
7. **Besides the analysis and the approvals, both cities need to adopt institutional strengthening and land management recommendations before TIF can take off.** For the World Bank, there are two potential roles: the first is to follow up the final adjustments made to both TIF's finalization and approval processes and consider providing guarantees that could further mitigate risk and make the TIF more attractive to investors; the second one is to disseminate these results, insights and tools to other Colombian Cities facing financing challenges for large urban development or redevelopment projects to take the first steps into developing fully-functional and capital-market attractive TIF vehicles.

3 Background

8. **In the last decade, the GoC has strengthened the administrative and legal framework to scale up the implementation of land-based finance instruments for financing urban redevelopment.** The Bank supports this effort through (a) scoping the TIF urban redevelopment pilot project of the IDM; (b) an in-depth operational/financial analysis of the potential IDM zone; and (c) analysis of the implementation of the pilot project. Based on lessons learned, the Bank then supported the Government in developing (c) legal and regulatory reforms at the national and local levels to allow for the securitization of future revenues beyond a particular administrative period; (d) formulation of regulations on sub-sovereign debt issuance and management of TIF-type bonds; and (e) the framework for an in-depth pre-feasibility analysis of how TIF-type instrument could be used and how it should be structured.
9. **The Medellín's Innovation TIF District was a milestone, and helped identify basic requirements that cities in Colombia, should consider as necessary preconditions to engage in TIF efforts.** One lesson, deriving from the technical studies for the IDM TIF pilot case, was the need for (a) specifying the size and the demand of the real estate market in the urban redevelopment projects, (b) enabling the national and local legal and technical framework; (b) up-to-date land cadasters of the TIF areas; and (c) reliable and resilient basic infrastructure (water, sewer, electricity, roads) in the zone targeted for redevelopment. An additional lesson emerging from this effort was the need to consider the changing priorities between administrations, which could lead to the new administration's decision to discontinue support for the TIF district.

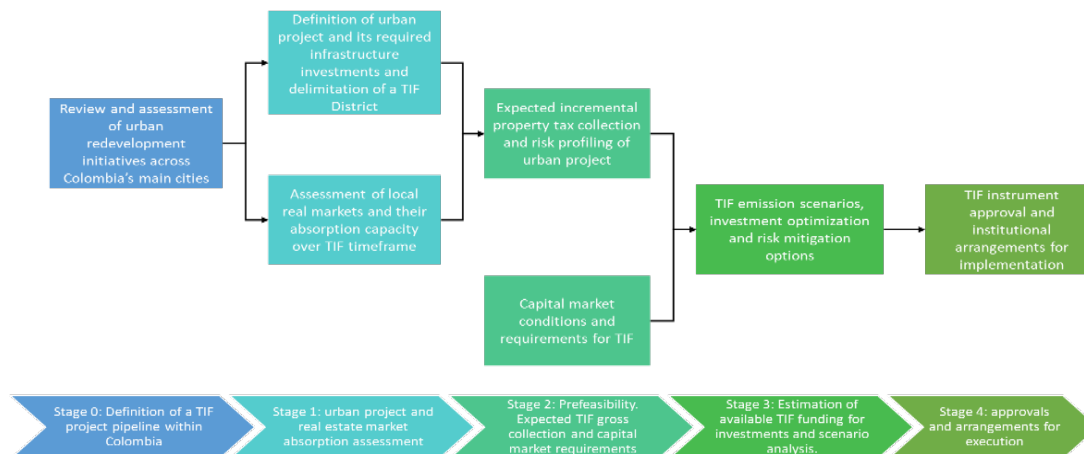
10. **The IDM pilot also helped to identify the need to** (a) tailor the size of the TIF securitization to the capital requirements and capabilities of the local capital market; and (b) minimize the impact of real estate development risks on the financial costs of the bond-issuance. The market sounding analysis for the formulation of the TIF instrument showed that potential investors had minimum investment thresholds, and that for larger TIF vehicles, they would prefer to participate with other investors. Some potential investors also inquired about the level of certainty that the redevelopment would take place. This highlighted the need to formulate the TIF based not on the cities' master plans, but on more grounded real estate market assessments, including well-supported real estate absorption capabilities.
11. **By 2020 the Government defined the securitization mechanism for being used to consolidate the TIF financing instrument¹.** The decree set out some key requirements that cities must meet in order to use TIF financing for infrastructure investments in a given area: (a) a minimum efficiency of 60 percent in property tax collection (b) the procedure for allocating the incremental property tax collected from new properties in a given area to a Special Purpose Vehicle; and (c) a set of steps that city governments must take before submitting the TIF instrument to the city council for approval; and (d) the need for the urban redevelopment project to be funded by the TIF, to have important spillover effects. In addition, some municipalities are in the process of (a) consolidating a robust pipeline of urban projects (Annex 2); (b) consolidating a community of practice for TIF projects; (c) updating and strengthening their cadaster systems and land use plans; (d) assessing their real estate markets; and (e) enhancing their technical and financial capabilities to formulate and implement urban redevelopment projects.
12. **Medellin and Barranquilla requested the World Bank support for the TIF initiatives associated with, respectively, the urban redevelopment projects of the Avenida 80 Tram Corridor, and the Waterfront of the Ribera Magdalena.** These two urban redevelopment projects were identified as interesting pilot cases due to the relationship of the former with a transit system, and the latter with the transformation of an industrial site into an economically vibrant public area on the riverfront. These projects and their TIF potential are described in detail in sections 3 and 4. These are the first TIF projects to be carried out in Colombia under the new legal and regulatory framework and have already produced additional lessons for other cities looking to design and implement this type of urban redevelopment financing instrument.

3.1 Methodological Approach of the TIF Pilot Projects.

13. **The World Bank and the Public-Private Infrastructure Advisory Facility (PPIAF)** have helped to test Colombia's new regulatory framework for TIF using a five-stage methodology (Figure 1).

¹ Decree 1382 of 2020 defined the securitization mechanism that would be used to consolidate TIF financing.

Figure 1 – Stages and activities of pilot TIF Formulation according to the Decree 1382



Source: World Bank,2022.

14. The first step in the methodology was to identify a pool of cities and urban redevelopment projects that could potentially be eligible for use of TIF. A review of the cities was conducted to determine their compliance with the following regulatory requirements: (i) being ranked in fiscal categories 1 or 2², (ii) having direct cadastral management, (iii) maintaining up-to-date property assessed values by the cadaster office, (iv) property tax collection efficiency of 60% or over, (v) inclusion of urban redevelopment projects within their Land Use Plans and the city’s current administration’s investment plans, (vi) an established urban development agency, and (vii) having a dynamic real estate market. Thirteen (13) cities were found to meet some of all these requirements, with Barranquilla, Medellin, and Bogotá, having the largest levels of compliance to push forward with TIF initiatives in the short term (Annex 2), Medellin and Barranquilla municipalities ask for the Bank's support to develop TIF. In addition, municipalities need to follow the methodology defined by the Decree 1382 of 2020. Including (a) defining a TIF district; (b) identifying the potential for real estate redevelopment within the TIF district; (c) identifying and valuing risks that may affect the realization of that potential; (d) conducting an institutional capacity analysis; and (e) determining the level of TIF funding that could be used for enabling infrastructure.

15. The World Bank supports the cities effort to develop TIF instrument according to the requirements of the Decree. For each city, specialized consultants were engaged to:

- **Conduct a preliminary real estate market analysis of the urban redevelopment project and estimation of incremental property tax to be collected within the TIF’s lifetime.** The analysis included: (a) how much redevelopment could be expected to occur in the TIF district within the normal lifetime of the TIF (15 or 20 years), considering the city’s real estate market and the physical and cadastral conditions of the proposed district; and (b) an estimate of the amount of incremental tax that could be collected during that timeframe, considering average taxes for different types of properties.
- **Estimate the net amount of resources that could be made available for infrastructure investment,** considering TIF preparation costs, the capital market interest and other conditions and requirements. This estimation included (a) the use of financial models to project the amount

² Large and middle size cities.

of incremental property tax that could be used to support investments; (b) precise the cost and sources of financing for those enabling investments and the financing gap for the infrastructure investments of the urban redevelopment project; (d) identify the potential for additional property tax revenue to be generated by redevelopment in the TIF District; (e) estimate the amount of incremental tax that can be collected during that timeframe, based on average prices for different uses and their applicable property tax rate, and (f) identify potential risks to that revenue, based on the land and real estate development dynamics in the TIF District. Barranquilla and Medellin’s urban redevelopment project’s scope include the cost and the infrastructure investments that could be financed with TIF funding

- **Conduct an institutional capacity analysis to** (a) evaluate the capability of the city’s institutional frameworks to address development challenges; (b) establish the Special Purpose Vehicles that investors may require for the management of the incremental property tax that will repay their investment; (c) provide recommendations to address these institutional shortcomings.
- **Conduct a capital market analysis to understand the context in which the TIF initiative will be launched.** This analysis examined the recent performance of similar private bond schemes and assessed how the TIF scheme would compare to more traditional bonds issued by the city government.

4 Results of the Application of the Methodology for the Urban Redevelopment Project of the Riverfront “Malecon” of Barranquilla

4.1 Background of the Urban Redevelopment Project

16. After decades of growing away from the Magdalena River, the city is developing the riverfront to accommodate future growth. The early development and growth of Barranquilla took place on the left bank of the Magdalena River, supported by the transfer of people and freight between the seafaring ships and the river boats that connected the Caribbean Sea with Bogota and other central areas of Colombia. The development of road and air transport, along with evolving sea and inland waterway transport technologies, had led the city to grow away from the river. Barranquilla’s 2014 land-use plan sought to reclaim that connection with the Magdalena River and use the development of riverfront plots to encourage the regeneration of the aging and deteriorating urban center.³

Table 1 – Barranquilla ‘s Riverfront Urban Redevelopment Project

	Subzone	Approx Area (Hectares)	Share of Strategic Operation
1	Mallorquín	76.79	5.56%
2	Las Flores	39.14	2.84%
3	Portuaria Norte	283.18	20.52%
4	Siape	18.19	1.32%
5	Avenida del Río	216.9	16.29%
6	La Loma – Barranquillita – Barlovento	431.01	31.23%
7	Portuaria Sur – Zona Franca	306.79	22.23%
	Total	1,372	100%

Source: Decree 0304 de 2021, Barranquilla

³ The Urban Redevelopment “Ribera Magdalena” Project is how the city wants to reconnect with the river. Within the Land Use Plan, Barranquilla considered the formulation and adoption of a Strategic Plan that would drive and guide that reconnection with the river. The Strategic Operation Stretches from the Magdalena River’s mouth onto the Caribbean Sea to the south of Barranquilla’s Port Society’s Port across 1,372 Hectares

17. **The area proposed as the TIF district concentrates strategic subzones of the urban redevelopment project to drive the transformation, including Avenida del Río, and La Loma – Barranquillita – Barlovento.** Due to their proximity to the City’s deteriorating center, their physical and cadastral conditions, as well as some public sector interventions, the long term-transformation process of the strategic urban redevelopment area is expected to start in Subzones 5 and 6. The TIF District will focus on these two subzones.

Map 1 - Urban Redevelopment Proposal of Barranquilla’s Riverfront



Source: Barranquilla’s Cadaster Office

The public sector is leading the transformation through multiple public investment efforts. The first of these is the Gran Malecon (Grand Promenade), creating both a development axis and an attractive gate to connect Barranquilla’s inhabitants with the river. The *Malecón* is complemented by three development and transformation triggers: (a) the Puerta de Oro convention center; (b) the Arena Barranquilla development, combining a grand arena with other mixed-use projects; and (c) a large-scale development in the La Loma sector. The first two interventions, the Promenade and the Convention Center have millions of visitors coming to the area yearly.

Figure 2 - Public Interventions in the Riverfront Area: Gran Malecon and Puerta de Oro Convention Center.



Source: Barranquilla’s Cadaster Office, Puerta de Oro’s website (<https://www.puertadeoro.org/>).

18. **Urban infrastructure needs to be built or improved to accommodate the new uses and increased population expected to live, work and use the redevelopment area .** The Gran Malecon intervention has provided key access road access and public spaces along the riverbank, in areas that were previously gated or closed-off ports or industrial sites. However, as the area sees new development taking place, additional roads and public spaces will need to be built. Smaller access roads, local public spaces, and a few urban services may be provided or built by the private sector via planning requirements or through PPP arrangements. But some of the larger enabling infrastructures will have to be provided by the public sector, creating an additional burden on usually scarce public sector funding.
19. **The need to build, intervene, and maintain green spaces across the area of the strategic operation is an opportunity to consider, tackle and mitigate climate risks.** The Ribera Magdalena operation

encompasses areas of environmental importance and interest that could be incorporated within the supporting green and public space network proposed for the area, to manage climate-change-related problems such as flooding from the river due to increased rainfall in the central areas of Colombia.

4.2 Potential Infrastructure of the Urban Redevelopment Project

20. **Barranquilla has identified unfinanced infrastructure investments for the urban redevelopment area of ca. US\$194 million.** Within the zoning and planning regulations, Barranquilla has included provisions that require the developers coming into the area to provide much of the required infrastructure. However, there are still some large-scale interventions for which funding sources have not been secured and therefore could be eligible to receive TIF funding. The city has secured US\$140 million for the infrastructure investments, remaining US\$54million of the needed infrastructure could be financed by TIF.

21. **Funds obtained from TIF securitization will contribute to the construction of access roads, green and public spaces, and utility network improvements.** Table 4 lists the interventions that Barranquilla’s administration has identified as key requirements. The conditions of the TIF District, which included greenfield plots and large industrial plots, mean that there is no prior urban infrastructure (i.e. access roads, public and green spaces, utility networks) that could be used. These urban infrastructures must be built anew, and although some of the cost of that new infrastructure will be borne by developers coming into the area, there will be some larger infrastructures that will require public investment, along with innovative funding sources, like TIF, to support them

Table 2 –Infrastructure investment required for the urban redevelopment project of Barranquilla

	Public space	m2	Works cost (US\$)	Funding source	Zone
1	"La Loma" Metropolitan Park phase 1	117,150	\$ 48,138,344	TIF	4
2	"La Loma" Metropolitan Park phase 2	126278	\$ 16,838,200	others	4
	Roads	m	Works cost (US\$)	Funding source	Priority development area
1	Calle 82	280 ml	\$ 11,779,075	Loans/ LVC	1
2	Calle 76	488.7 ml	\$ 5,409,111	Others LVC	2
3	La Loma bridge		\$ 4,343,693	TIF	4
4	Calle 66 - Military compound area		\$ 1,788,580	Others LVC	Military compound
5	Calle 71 - Military compound area		\$ 3,296,097	Others LVC	Military compound
	Utilities	m2	Works cost (US\$)	Funding source	Priority development area
1	Solution to northeastern basin sewage disposal		\$ 71,543,187	Loan	1
2	La Loma - Sewage pumping station 3	45.951	\$ 2,555,114	TIF	4
3	Water provision		\$ 7,665,341	Others LVC	1 and 2
4	Water provision (solving the need for the whole of the strategic operation)		\$ 20,440,910	Others	3 and the rest of the S.O.
Total			\$ 193,797,652		
Total for financing by TIF			\$67,430,000		

Source: Trígono Banca de Inversión (2022a)

Map 2. Urban infrastructure and services needed for the Urban Redevelopment Project of Barranquilla

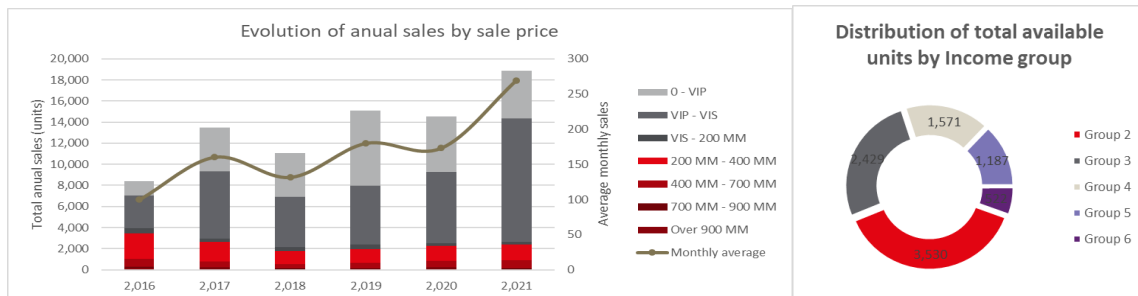


Source: Puerta de Oro Development Company and Barranquilla's Cadaster Office

4.3 Real Estate Potential of the Urban Redevelopment Area

22. The city has seen sustained growth of real estate demand despite the economic slowdown from COVID-19, with the demand for housing driven by the city's growing working class and by the housing deficits of the past decades. Sales of residential units have been driven by affordable and priority housing, which represents a significant share of the market (Figure 3). Sales of residential units in 2020 decreased slightly from 2019. The significant growth observed in 2021 against 2020 may reflect delayed demand or people looking for new places to live after the pandemic.

Figure 3 - Evolution of Housing Unit Sales and Distribution across Income Groups



Source: JLL Americas (2022)

23. Retail space has increased significantly over the last two decades, but growth could slow or stagnate as market saturation is reached. Until 2000, the majority of the existing 35,000 m2 of retail real estate was located on commercial streets or in downtown Barranquilla. By 2020, the gross leasable area (GLA) had grown more than tenfold to 438,000 m2, with the retail footprint extending toward the city's affluent northwest and the lower-income areas of I Barranquilla and Soledad. There appears to be a retail void in the western part of the city, which has recently been growing in population and economic activity, with multiple industrial parks and free-trade zones being built along Barranquilla's first ring road.

24. Demand for office space has traditionally been low in Barranquilla, and this trend is expected to continue. Other large Colombian cities, such as Medellin and Bogota, have a strong demand for office space to accommodate the many people employed in government and corporate command and control

functions. Barranquilla’s traditional dependence on manufacturing and port activities has not supported significant growth in office demand.

25. **Barranquilla has multiple greenfield and brownfield locations that could support large developments.** The location of the Urban Redevelopment Project along the riverfront provides easy access to the city center, with its administrative and more traditional commercial activities, as well as to the more modern commercial and service areas of Prado and Country. Other areas in Barranquilla could accommodate new developments, such as the Riomar, Alameda del Río, and Circunvalar, but their fringe locations, close to Barranquilla’s ring road, make them less able to access key urban agglomeration areas.

4.4 TIF District and Potential Built Areas

26. **The proposed TIF district has easy access to the north and south areas of Barranquilla, where 75 percent of the city’s retail space is concentrated.** As the TIF district gets built up and residents and visitors arrive in the area, the number of retail spaces is expected to grow even larger. The proposed TIF district could accommodate 9,000 to 17,000 households, up to 12,000 tourists a day, and 3,000 employees/workers, which together could support up to 8,000 m² of retail space. However, the area’s redevelopment is focused on four (4) priority development areas, with better accessibility and with land plot sizes and land ownership conditions that would lead developers to focus on them rather than on other areas of the district.

Map 3 – TIF District Area of Barranquilla



Source: Barranquilla’s Puerta de Oro Agency.

Table 3 –TIF District area

Subzone	Area (Ha)	No of plots	Zoning requirements	Nearby enabling interventions	Developable area (m ²)	% Non-Residential
1	16.99	23	- Development through licensing	- Gran Malecon – Norte - Puerta de Oro Convention Center - Arena del Río	939,802	25%

Subzone	Area (Ha)	No of plots	Zoning requirements	Nearby enabling interventions	Developable area (m ²)	% Non-Residential
2	26.33	5	- Development through licensing closer to the river. - Renovation in existing industrial sites on the via 40	- Gran Malecon – Norte - Puerta de Oro Convention Center - Arena del Río	1,315,843	13.8%
3	29.73	133	- Renovation, based on another adopted Zonal Plan has started the transformation.	- POZ Vía 40	1,485,233	9.9%
4	54.86	28	- Development.	- Gran Malecón south section. - “Shark fin” monument.	1,345,665	35%
Total	128.02	189			5,086,542	28%

Source: World Bank based on cadastral and land-use zoning information provided by Barranquilla’s government.

27. **Based on the real estate market dynamics for Barranquilla, the availability of greenfield plots for development, and the relative competitiveness of the TIF district area against other locations, the most likely scenario is one that combines 21,400 residential units, 6,200 m² of retail, and 18,000 m² of office space.** One crucial conclusion is that development in Barranquilla’s riverfront will likely be constrained by market growth, a condition that marks a departure from other Colombian cities in which development is constrained by land availability. Developments will take place in priority development areas 1, 2, and 4, with no relevant growth expected to take place in Area 3 due to its smaller plot sizes plus the higher effort that will be required to achieve development at scales possible in the other three areas.

Table 4 – Potential built areas for the Project (2023-2053)

Scenario	Low	Base	High
Residential (units)	4,220	21,390	23,667
Retail (m ²)	1,333	6,233	10,103
Office (m ²)	0	18,000	30,000

Source: JLL Americas (2022)

28. **When contrasting this real estate market envelope with the ca. 5 million square meters of the area to be achieved in new development, the real estate market growth constraint becomes apparent.** The high development scenario only expects 23,667 possible residential units and only 40,000 m² of the commercial and office space to be built during the 20-year timeframe of a TIF instrument. It becomes clear that the limitation is market growth, rather than land availability.

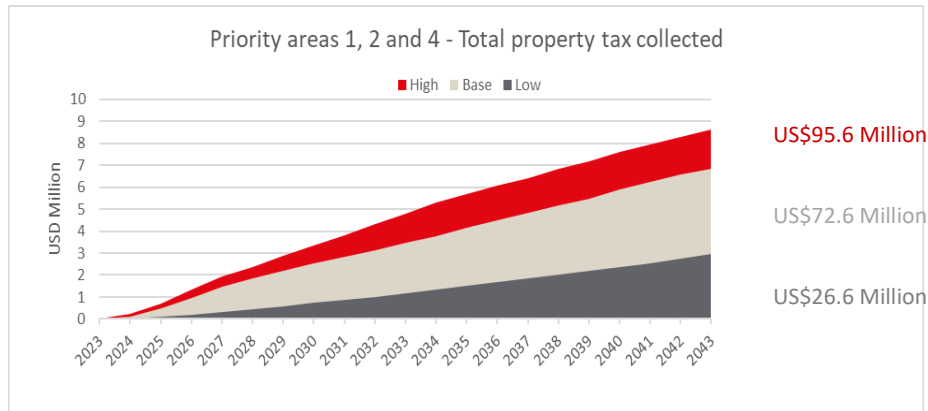
4.5 Expected Property Tax Revenue Collection and TIF Bond-Issuance Scenarios

29. **The significant share of affordable housing units that are expected to be developed in the TIF district will limit the income to be obtained from new properties in the area,** due to (a) the reduced tax rate that is applied to affordable housing units: lower incomes have a rate of 4.7 per thousand, whereas higher-income housing and commercial properties have a rate of 11.0 per thousand; and (b) they limit the assessed value on which that property tax rate is applied. Considering that the residential developments to be built in Area 4 comprise roughly one-third of all residential area to be built across the TIF district, this may become a limitation.

30. **The analysis for the three priority development areas in the base scenario over 20 years estimates a total property tax income of US\$72.6 million.** Numbers are obtained considering (a) property tax collection efficiency of 77 percent based on the historical efficiency of the broader TIF district; (b) the corresponding average prices and tax rates applicable to the types of developments expected in the three

priority development areas; and (c) the high/optimist scenario increases the total amount to US\$95,6 million⁴.

Figure 3 - Expected Property Tax Collection in Barranquilla



Source: JLL Americas (2022).

31. Estimating the actual amount of funding available for investments in infrastructure needs to take into account macroeconomic variables, city-specific data, and the project’s investment schedule. Macroeconomic indicators include the national inflation rate, the capital market’s base interest rates, and the spreads that reflect increasing risk conditions. City-specific data includes varying ratios that include the property tax collection efficiency, the ratio between a property’s commercial value and the assessed value, and the city’s rate of property price increases which reflect their particular conditions of land and property supply and demand. The last piece of the estimation is the scheduling of the infrastructure investments, as their timing may require funding to be made available earlier within the development or redevelopment process of the TIF District, forcing earlier bond sales that may require more interest to be paid than if investments were to be made at a later moment. Table 4 presents the macroeconomic and city-specific variables used for Barranquilla.

Table 5 – Input data for Barranquilla’s estimation of TIF bond-issuance scenarios.

Item	Barranquilla
Commercial value / Assessed Value	65%
% Acknowledgement of assessed value used for Property Tax estimation	100%
Property Tax Collection Efficiency	65%
Annual property value increase	4.89%
Long term – Inflation	3%
TIF bond rate (exp)	8.5%

Source: *Trígono Banca de Inversión* (2022a)

32. With TIF security issuing conditions and other transaction covenants, however, it is likely that only 50 to 70 percent of this expected income should be considered in the preparation of the TIF bond. The seventy percent maximum would allow for compliance with the mandated 30 percent debt coverage ratio without requiring additional guarantees. Figure 4 presents what would be the total income available to prepare the TIF bond across all three scenarios if only 50 percent of the income

⁴ Note: exchange rate of Col\$3,913.72 per US Dollar across the 20-year timeframe.

were used. Figure 4 also shows the contributions of each area (1, 2 and 4) would contribute to total income.

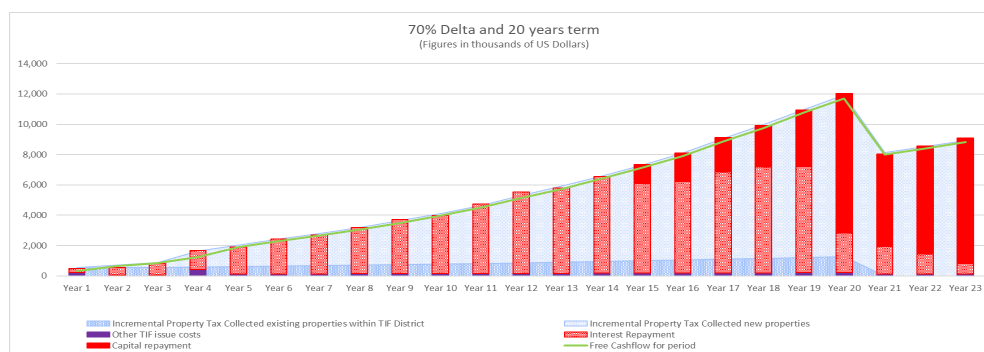
33. **The long lead-time for any new development be built and start paying property tax could have a significant impact on the amount of securitized tax revenues available for infrastructure investments.** The process of designing and constructing a new building implies years between the moment a project is conceived and the time when all the units have been sold or rented. Securitizing the incremental property tax revenues too early in the development cycle may mean that no income will be available to pay the financial costs of the operation over the initial years, which would lead to an increasing amount of debt and an increased perception of risk by the parties that bought the securities.
34. **Large urban redevelopment projects are implemented over time, so complete funding is not required on day one.** Considering that the operation is expected to take more than 20 years – the timescale considered for Barranquilla’s real estate market analysis – not all urban infrastructure or services will need to be delivered during the lifetime of the TIF securities. Depending on the scale and scope of the project, construction and funding requirements may thereby be programmed in a staggered manner to avoid paying interest on funds that are not yet needed.
35. **In light of these considerations, several scenarios were prepared for Barranquilla.** The scenario that combines early securitization and revenue from existing, stabilized assets shows the bond-issuance of US\$26.7 million. The scenario that provides the highest amount of funding to support interventions postpones infrastructure investments (and security disbursement) through year 3, and uses the revenues of existing, stabilized assets to prevent interest from capitalizing beyond manageable levels, reaching a total of US\$47.9 million in needed funding. An intermediate and possible scenario uses the securitization of the Area 4 property tax revenue, and the securitization of property tax of areas 1 and 2 in year 3 reaching a total of US\$42.57 for 20 years.

Table 6 – TIF scenarios considering the use of 70% of incremental property taxes for TIF repayment

Scenario	Description	Available TIF considering 15- year TIF lifecycle (Mill USD)	Available TIF considering 20- year TIF lifecycle (Mill USD)
Acid	The total amount available over the expected horizon is securitized at the beginning	16.81	26.65
Optimistic	All TIF available funding is securitized, but the securitization takes place in year 3, and TIF operation is complemented with revenue from stabilized assets	33.50	47.09
Intermediate 1a (not using stabilized assets)	Immediate securitization of Area 4 property tax revenue, securitization of property tax of areas 1 and 2 in year 3.	24.02	35.77
Intermediate 1b (not using stabilized assets)	Immediate securitization of property tax revenue from areas 1 and 2, securitization of property tax of area 4 in year 3.	19.57	29.95
Intermediate 2a (using stabilized assets)	Immediate securitization of Area 4 property tax revenue, securitization of property tax of areas 1 and 2 in year 3.	29.64	42.57
Intermediate 2b (using stabilized assets)	Immediate securitization of property tax revenue from areas 1 and 2, securitization of property tax of area 4 in year 3.	24.96	36.72

Source: Trígono Banca de Inversión (2022a)

Figure 4 - Intermediate TIF securitization scenario for Barranquilla



Source: Trígono Banca de Inversión (2022a)

36. Based on these scenarios, it was considered that the most appropriate could be the Intermediate one, as it was able to balance the need to get funding for infrastructure required early on in the development of the Project but are also able to postpone other ones seeking to reduce risk and the payment of interests. The “acid” scenario was considered to generate too little TIF funding for infrastructure investments, but the most favorable investment also had the problem of needing to postpone all infrastructure interventions for a few years.

4.6 Institutional Background and Capacity of Barranquilla to implement TIF

37. Barranquilla has experienced a turnaround over the last two decades. In the early years of the 21st century, Barranquilla’s government was struggling financially and institutionally. The Colombian Government’s Fiscal Performance Index⁵ classified Barranquilla as a city “at risk” through 2004, due in part to its decisions to privatize or contract out some key infrastructures and services to unqualified providers. Since 2005, the city has been on an improvement path that led it achieving a “solvent” rating in 2010. Property tax collection is one of the areas in which Barranquilla has improved significantly over the years. In 2007, the city’s income from property taxes was about COP95 billion. In 2021, the year after the COVID-19 pandemic, the city was able to collect more than four times that amount, about COP423.5 billion, demonstrating the city’s strong improvement in property tax assessments and collection efforts.

38. Barranquilla’s Urban Development Company (EDUBAR) and Puerta de Oro have been at the center of the city’s recent public sector-led transformations and will play a significant role in the transformation of the TIF district along the riverfront. EDUBAR was established in the 1990s to lead and manage the regeneration of the historic center city but has since evolved into an urban development agency executing Barranquilla’s master plan, land acquisition process, and development agreements with private sector. EDUBAR also operated for several years in Colombia’s Caribbean region. Puerta de Oro was established during the 2010s as a private enterprise to formulate and implement city projects including the Waterfront *Gran Malecón* and the *Puerta de Oro Convention Center*

⁵ Yearly reports and classifications of the Fiscal Performance Index since 2000 can be found and downloaded at <https://www.dnp.gov.co/programas/desarrollo-territorial/Estudios-Territoriales/Indicadores-y-Mediciones/Paginas/desempeno-fiscal.aspx>

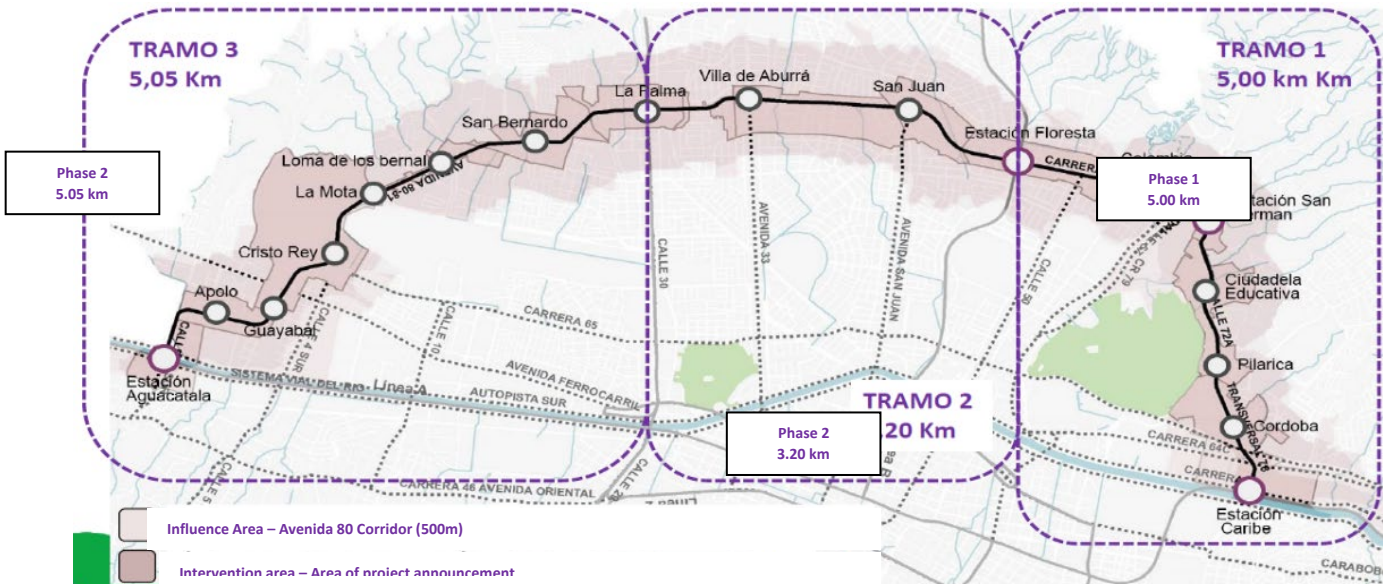
39. **The experiences and strengths of EDUBAR and Puerta de Oro will help to lead and encourage real estate developments within the TIF district.** Puerta de Oro’s skills and track record in supporting private sector investments, and implementing PPP agreements, are likely to be one of these agencies main strengths, encouraging real estate developers to push forward with new buildings and facilities like the *Vive Rio* residential development or the Avenida del Río mixed use development. EDUBAR’s strengths in the design and execution of land assembly, environmental and social interventions compliant with local and multilateral bank safeguards, will be crucial to ensure development of the Ribera Magdalena strategic operation
40. **Institutional strengthening and coordination will be required to drive the development of the large TIF district, even more so considering the availability of land for new development in the city.** Actions to help ensure the project at the desired scale and timing include: (a) reforming Puerta de Oro’s statutes and the associated regulations to enable this agency to become an urban development agency (i.e., conduct land consolidation efforts) and execute urban infrastructure and services projects; (b) expanding EDUBAR’s authority for land consolidation within urban renewal projects; and (c) preparing and signing an agreement between EDUBAR and Puerta de Oro in which the former is able to use its land consolidation experience in support of the urban transformation effort.
41. **Finally, Barranquilla maintains a stable long-term outlook, and its latest bond issue in the local market, for up to US\$166 million received a AA rating.** Currently, the municipality’s medium-term fiscal framework forecasts that during the years 2022 and 2027, it will not be in compliance with the sustainability indicator established by law, which means that it could be difficult to add fiscal space to the City. Barranquilla has issued public debt bonds in 2020 for amounts of US\$28.7 Million - 5 years, US\$ 21.5 Million - 10 years and US\$56.5 Million - 20 years.

5 Results of the application of the methodology for the Urban Redevelopment Project of the Medellín’s Avenida 80 Tram Corridor

5.1 Background of the Urban Redevelopment Project

42. **With the experience of its IDM pilot project, the city of Medellín is now considering applying the TIF methodology to redevelop Avenida 80 along the tram corridor,** with the aim of improving accessibility to the urban transport system, creating pedestrian spaces and conditioning nearby areas for future redevelopment. The transformation of Avenida 80 into an important mobility axis for Medellín’s western areas was one of the key medium-capacity transit projects included in Metro de Medellín’s 2006–2030 Master Plan.
43. **The Avenida 80 Tram corridor is 13.25 kilometers long and has a total of 17 stations expected to be developed in three phases.** The Medellín Metro Company delimited an area of influence of 1,370 hectares for the project that crosses 32 (mostly residential) neighborhoods, with commercial and service activities located along the main roads and industrial and warehousing activities on the northern end of the corridor. In 2017, the city of Medellín adopted partial plans to incentivize an orderly development of the corridor but triggering the large-scale transformation process has proven difficult as public and private actors need to work together to conduct effective a land management effort.

Map 4 - Urban Redevelopment Project of the Avenida 80 Tram Corridor



Source: Empresa Metro de Medellín, 2022

44. **Redevelopment near transit corridors is a priority of Medellín’s 2020-2023 administration.** The Avenida 80 Urban and Transport Corridor was selected as the next TIF district, and Medellín Metro Company (EMM) was appointed to lead the project, in cooperation with Medellín’s Planning, Finance and Cadastral offices. The city has committed all necessary resources to meeting the requirements for submitting the project to the City Council for approval before December 2022.
45. **The Avenida 80 Tram Corridor project was first envisioned by the Medellín Metro Company (Empresa Metro de Medellín, EMM) in its Strategic Plan 2016-2030.**⁶ EMM is focused on projects that contribute to sustainable urban development and develops mobility solutions for the city based on three guiding principles: (a) generation of economic, social, and environmental value; (b) sustainable mobility; and (c) financial sustainability. Based on the IDM pilot, EMM has become interested in using the TIF instrument to promote redevelopment, environmental conservation, landscape quality and social welfare in strategic locations.

5.2 Potential Infrastructure of the Urban Redevelopment Project

46. **Medellín’s planning department identified unfinanced infrastructure investments for the TIF District area of US\$220 million.** With a significant part of the TIF District being designated as a consolidation area, there may not be a need to make investment in basic infrastructure (e.g. roads, utilities, public spaces), but also that there is limited ability to require developers to invest in infrastructure provision, being up to the local government to find alternative funding sources. Table 7 lists Medellín’s infrastructure requirements according to the Avenida 80 implementation phases. These requirements are mostly focused on increasing or improving some of the existing urban infrastructure

or services to accommodate the additional population expected to live in the area after the redevelopment. The city secured sources for phase 3 and 4 for US\$120 million for the infrastructure investments, remaining US\$100 million of the needed infrastructure could be partially financed by TIF.

Table 7 - Infrastructure investments required for Medellín's TIF District area

Subzone	Public and recreational space	Works cost (US\$)	Funding Source
1	Sports facilities	\$ 6,387,785	TIF
1	La Malpaso Creek eco-park	\$ 5,000,000	TIF
1	San Pablo Forests Park	\$ 255,511	TIF
1	Ecuadorian corner	\$ 11,738,864	TIF
2	Public Space El Pesebre - La Iguaná	\$ 5,000,000	TIF
3	Educational facilities	\$ 370,492	Loan/LVC
3	Sports Facilities	\$ 7,665,341	Loan/LVC
Other	Environmental studies and interventions	\$ 10,220,455	Loan/LVC
Tram Phase	Mobility infrastructure investments	Works cost (US\$)	Works cost (US\$)
1	Pedestrian mobility plan	\$ 2,599,062	TIF
2	Cycle path La Hueso creek	\$ 413,928	TIF
2	La 30 Road interchange	\$ 2,735,355	TIF
2	La 33 Road Interchange	\$ 1,963,898	TIF
2	Pedestrian mobility plan	\$ 7,217,685	TIF
2	Removal of the Viva Laureles pedestrian overpass	\$ 25,551	TIF
2	Removal of the Nueva Villa de Aburrá pedestrian overpass	\$ 25,551	TIF
3	La 70 Road and Pre-feasibility Studies	\$ 158,417,056	Loan
3	La 70 Road Interchange	\$ 3,430,195	Loan/LVC
3	La Mota (Avenida 80 Corridor)	\$ 781,030	Loan/LVC
3	Pedestrian mobility plan	\$ 2,280,695	Loan/LVC
Other	Additional Infrastructure	\$ 3,905,483	Loan
	Total	\$ 220,433,939	\$ 220,433,939
	Total Infrastructure to be financed by TIF (Phase 1)	\$21,873,00	\$45,000,00

Source: Trígono Banca de Inversión (2022a)

5.3 Real Estate Market Potential of the Urban Redevelopment Area

47. **Residential market.** The residential market in Medellín, in line with the national trend, experienced a 65 percent increase in sales (m²) in 2020-2021 compared to 2019-2020, reaching the best record in history. The square meters sold of affordable housing increased by 106 percent, and of other housing by 35 percent. The Medellín market is booming, and this trend is expected to continue over the next few years

48. **Retail market.** With 3.5 million people (8 percent of the Colombian population) living in its metropolitan areas, Medellín has 17 percent of the country's leasable retail area, and is the country's second largest market for shopping centers. The shopping center industry stands out for the significant presence of multi-layer and multi-format supply in the vast majority of the city's districts. Each area of the city has a particular character that is reflected in its commercial inventory, including specialization in different niche sectors

49. **Office market.** Medellín has a very low office vacancy rate compared to other cities in Colombia. The supply is limited because of low demand and the high cost of available (high quality) spaces. The vacancy rate is expected to decline further in 2023 and 2024 due to minimum production of new office buildings and increasing demand. However, demand will begin to increase in 2024 for two reasons: (a) companies little affected or favored by the public health crisis (e.g., back-office operations) will continue to expand and need more office space; and (b) some users will migrate to higher quality buildings, more efficient configurations and spaces configured for hybrid work. Demand for office space should recover its momentum in the medium term (5 to 10 years), which will require supply to recover quickly to adapt to the new market trends.

50. **Within an expected TIF timeframe of 20 years, actual development would be almost 521,000 m² considering four typologies.**

Map 5 – TIF District Area of the Avenida 80 Corridor Project

- **Execution of approved urban renewal operations:** Four urban renewal operations could initiate and develop during the lifetime of a TIF. These four polygons could support 58,000 m² of areas for sale.
- **Metro Company’s Urban Operations:** Metro Company of Medellín, has been structuring six redevelopment areas (Caribe, Margaritas, San Bernardo, Colombia, Floresta and San Germán). Total areas for sale will be 153,319 m², of which 57% will be allocated to residential space.
- **Organic Urban Renewal:** The third driver of urban renovation across the area of influence of the Avenida 80 Tram is the normal process through which older residential stock, usually made up of single-family homes, gets knocked down and replaced with condominiums. This “organic renewal process” had evolved over 30 years across Medellín, finding that only 6.6% of all “eligible” land plots had undergone the transformation. Additional 175,000 m² could be developed through this.
- **The last driver considered was the “metro effect” understood as the increased likelihood of land plot redevelopment due to the nearby presence of a transit station.** The implementation of the Avenida 80 tram could lead to an additional 135,000 m² for being developed along the corridor.

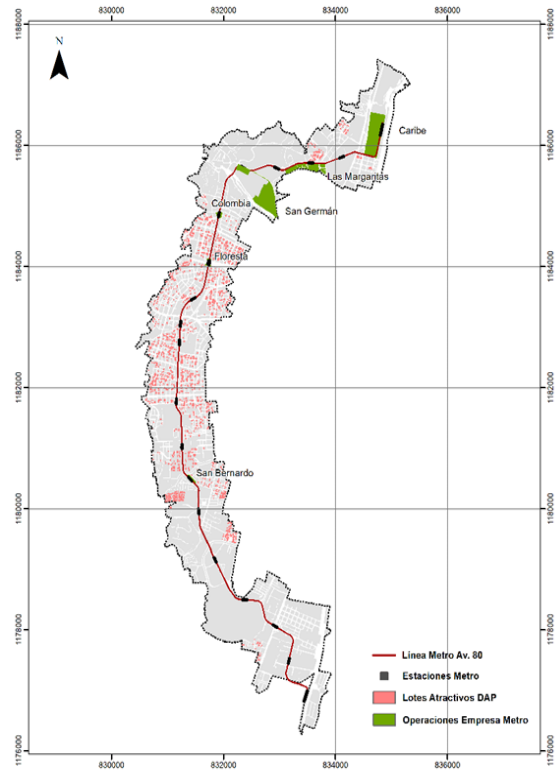
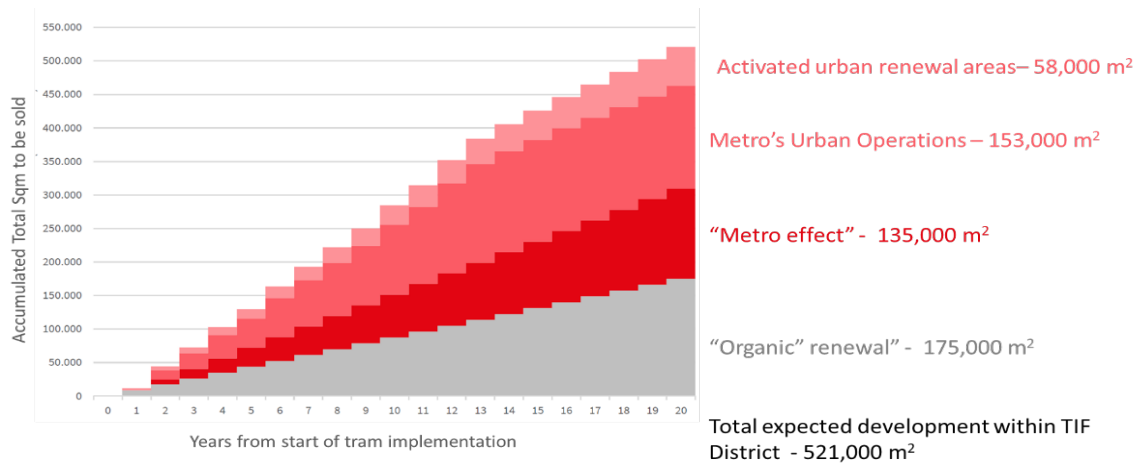


Figure 5 - Redevelopment drivers of the Avenida 80 Tram-Corridor Project.



Source: JLL Americas (2022).

5.4 TIF District and Potential Built Areas

51. **To establish the placement and absorptive capacity of the potential built areas, the municipality identified 8,746 lots that could be developed in the short to medium term.** It then carried out an attractiveness analysis of those lots, based on characteristics such as the value and characteristics of future dwellings; socioeconomic background; and proximity to transport, public spaces, and places of work.

- **Through an attractiveness analysis, 703 plots were prioritized.** The total built area for the 703 lots was projected to be 433,065 m² of sale area, of which 427,097 m² would be used for housing and 5,968 m² other uses. 4,430 housing units would be generated. Based on the zoning regulations (POT), 67,268 m² would be used for public space and 3,948 m² for the construction of public facilities.
- **In addition, over the six (6) real estate projects (partial plans) near the corridor currently being developed by EMM.** 153,319 m² of saleable area would be generated, of which 87,888.11 m² would be used for housing and 65,431 m² for other uses. These projects, in different stages of development, will further contribute to increasing property values and tax collection in the project's area
- **For the TIF District would be considered the 586,000m².** Summarizing the buildability capacity of the 6 partial plans and the 703 lots.

5.5 Expected Property Tax Revenue Collection and TIF Bond Issuance Scenarios

52. **The market assessment showed that the real estate dynamics in the IDM pilot's area of influence will be driven by four factors: urban renewal plots, EMM's urban operations, redevelopment blocks, and the metro effect.** Considering these drivers, the corridor has the potential to drive residential and complementary retail development. Under current conditions, however, and even with the new mass transit system, it is unlikely that metropolitan retail or office developments will be generated in this area.

- **The construction of a transportation system such as light rail can speed up redevelopment and densification in consolidated neighborhoods.** However, these processes occur organically and

gradually. One way of speeding up this process is for local authorities to actively manage urban operations that allow land consolidation and the production of large-scale real estate projects.

- **The zone of influence along Avenida 80 will generate organic redevelopment, which will be enhanced by the entry into operation of the light rail (Metro effect),** by the processes of urban renewal managed by the city, and by the other urban operations managed directly by EMM.
- **In summary, it is estimated that over the course of two decades following the entry into operation of the light rail, the Tram Corridor project could generate more than 521,000 m2 of new saleable land (Table 2).** Table 8 shows the contribution of each driver to the total.

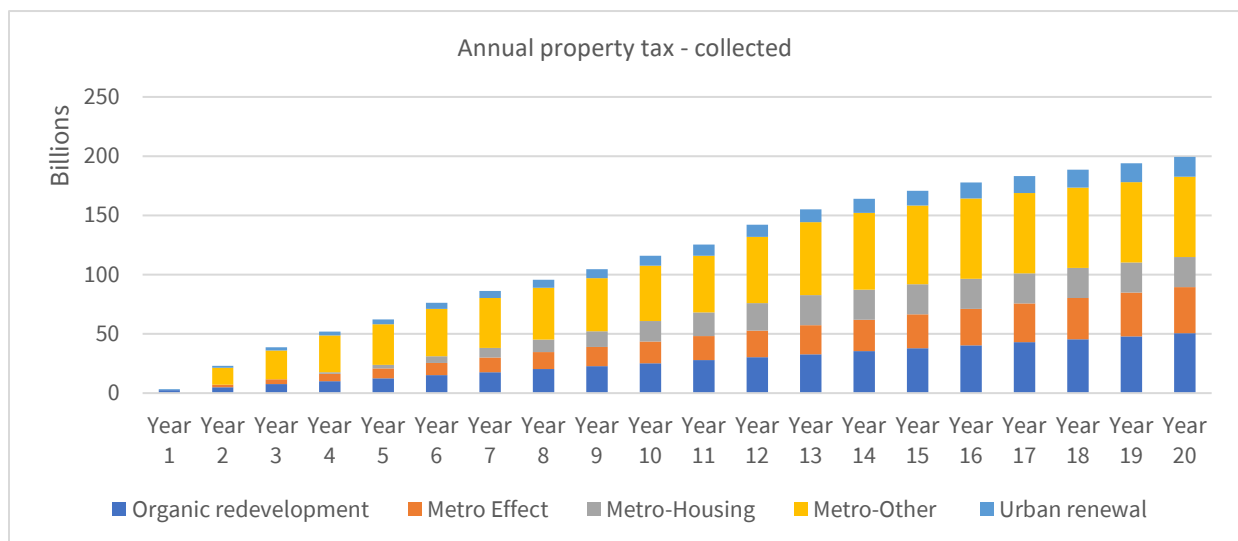
Table 8 - Market Drivers of the TIF District of Medellin

Drivers	Area produced for sale
Urban Renewal	58,000
Urban Operations of the Metro	153,000
Organic redevelopment in Consolidated land	175,000
Metro Effect	135,000
TOTAL M2 to support TIF	521,000

Source: JLL based on Galeria Inmobiliaria.

52. The estimate of potential tax collection was based on the following assumptions: (a) Medellin has a collection efficiency of 80 percent, the financing of the metro is covered by different sources and the value of the works to be financed through the TIF and the flow of these works are still not defined (to date, works are close to COP700,000 million or US\$180 million); and (b) only 50 percent of the amount effectively collected annually is allocated to amortization of the TIF bond.

Figure 6 – Incremental Property Tax collected over the 20-year expected lifetime of TIF in Medellin



Source: JLL (2022).

53. The same capital market and macroeconomic indicators used for Barranquilla were used as inputs for Medellin’s estimation of net amount available for infrastructure investments. However, other input was changed to reflect the conditions of Medellin’s property market and the property tax efficiency and practices. Figures for long term inflation and long-term interest rates

were the same as those used for Barranquilla, an assumption that is reasonable as investors considering either TIF instruments are likely to be the same and be faced with the same general macroeconomic conditions. However, other financial model inputs were changed to adapt to the particular conditions of Medellin. The most relevant of these decisions was the decision to use 50% of the total incremental property tax as the basis for the model's estimation, rather than the 70% used in Barranquilla. The annual property value increase input used for Medellin is also different than the one used for Barranquilla, being these indicators specific for each city.

Table 9 - Inputs used in financial model to estimate the TIF bond-issuance scenarios for Medellin

Item	Medellin
Commercial value / Assessed Value	70%
% Acknowledgement of assessed value used for Property Tax estimation	100%
Property Tax Collection Efficiency	82%
Annual property value increase	4.73%
Long term – Inflation	3%
TIF bond rate (exp)	8.5%

Source: JLL (2022)

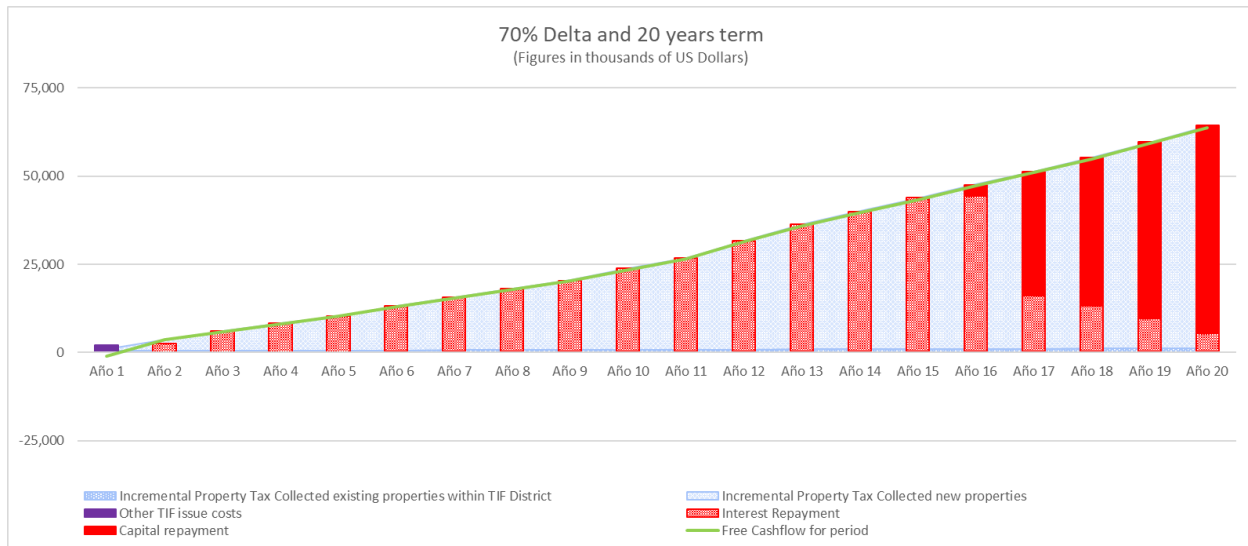
54. Considering the potential urban infrastructure and service needs of the EMM and the municipality, the analysis estimated six scenarios for the project financing. The scenarios combine early or late securitization with different scenarios depending on the construction of the metro and the property tax revenue.

Table 10 - TIF scenarios for Medellin

Scenario	Description	Available TIF considering 15-year TIF lifecycle (Mill USD)	Available TIF considering 20-year TIF lifecycle (Mill USD)
Acid without stabilized assets	Immediate and complete bond issuing	121.32	182.28
Acid with stabilized assets	Immediate and complete bond issuing	126.73	188.82
Favorable without stabilized assets	Total TIF Bond issued in year 3	192.91	266.63
Favorable with stabilized assets	Total TIF Bond issued in year 3	198.28	273.40
Intermediate without stabilized assets	Immediate and complete bond issuing, but with delay in Tram construction of 1 year	122.93	184.22
Intermediate with stabilized assets	Complete bond issuing in year 3, but with delay in Tram construction of 1 year	193.68	268.31

Source: Trígono Banca de Inversión (2022a).

Figure 7 – Medellín’s Intermediate securitizations scenario



Source: Trígono Banca de Inversión (2022a).

55. This scenario analysis, combined with the long implementation time expected for the Avenida 80 tram, and the fact that the area of interest already has all basic supporting infrastructure, could allow Medellín to pursue the “favorable” scenarios in which investments are postponed. Considering that the infrastructure that will support the redevelopment is already in place, and the high risk for new developments coming into this area, a good choice for Medellín would be postponing all infrastructure investments to a later time but advance in the creation of the TIF District and instrument, and in the collection of incremental property taxes, improving and strengthening the institutional framework and encouraging redevelopment along the Avenida 80 corridor. This strategy could help to help a more favorable redevelopment dynamics in the area that increase the investor’s confidence on the TIDF in this very challenging area. Postponing infrastructure investments will also help to increase the TIF funding available for infrastructure investments, that may be beneficial to cover additional investments that may arise and that may not be easily transferrable to the private developers due to the zoning of most of the TIF district for consolidation.

56. Land availability limitations in Medellín will require a higher involvement of local government institutions to ensure that the transformation of the areas does take place, and new property tax revenue is obtained from the new developments. Even though the results of the financial modelling for Medellín’s TIF instrument seem to be able to deliver a higher amount of funds to be used for infrastructure intervention, it is crucial to remember that the fact that the TIF District area is already consolidated and has significant ongoing activity particularly in industrial sites require a more hands-on intervention of Medellín’s government to drive that change. Without this leadership, there is a risk that (re)development will not come to the Avenida 80 Tram corridor at the scale or speed desired, or even required, to finance all the proposed interventions.

5.6 Institutional Background and Capacity of Medellín to implement TIF

57. Medellín has consistently performed well in Colombia’s fiscal reviews and classifications. Medellín has been in the top two fiscal performance groups since 2002. One key advantage for Medellín is that the city owns the large utility provider EPM (Empresas Publicas de Medellín), which provides electricity, water and telecommunications services to the municipalities around Medellín, and have had

operations in other areas of Colombia and even abroad, with the profits from these operations benefiting the city's coffers.

58. **Property tax collection has been steadily increasing and has maintained high collection efficiency.** In 2016, Medellín collected COP551.7 billion from property taxes alone. By 2020, that figure had risen to COP670.9 billion. Across that period, tax collection efficiency, measured as the ratio of effective property tax income over expected property tax income, estimated from assessed values and applicable tax rates, remained over 80 percent (2020 had the lowest collections of the period because of economic impacts of COVID-19). The reported efficiency of 80 percent does not take account of early payment incentives, which can be up to 10 percent of the expected property tax.
59. **Traditionally, urban infrastructure and service investments in Medellín have been at the forefront of urban development and regeneration in Colombia.** To this day, Medellín is the only city in Colombia with an operational metro transit system. Medellín has also been a pioneer in formulating and implementing high-impact transport and urban infrastructure and services to encourage urban regeneration. Empresa Metro de Medellín was the first to develop cable car-type solutions to facilitate access in lower-income population areas to the metro system and the surrounding areas of the city.
60. **EMM has been developing its capabilities to drive urban transformation around mass transit nodes in pursuit of a more sustainable urban model for Medellín and the whole Valle de Aburra Metropolitan Area.** For many years, EMM focused its efforts on the design and operation of transit services and systems. Having stabilized the metro's operation by the mid-2000s, the company ventured into the development of other transit services, adding cable car and bus services to their operation. EMM has been developing its own urban team to promote or facilitate real estate improvements close to mass transit that could help to improve and maintain ridership within the system, and to promote some urban regeneration or renewal around the stations.
61. **The company's commitment to real estate development, and its experience and capacity, can help to drive the transformation of the Avenida 80 Tram Corridor.** However, EMM needs to be legally enabled to assume urban operations across the tram's entire area of influence. Currently it does not have the authority to operate in some of the areas of the corridor. Also, some types of development incentives could be adopted to make the corridor more appealing to developers who may be looking at other locations, without necessarily compromising property tax collection and its use to support infrastructure developments along the corridor.
62. **For the securitized instrument, is important to understand the debt capacity of the municipality as an issuer.** For risk rating agencies, Medellín maintains a stable long-term outlook and maintains a BB+ rating (Fitch, 2021). Currently, the municipality's medium-term fiscal framework has an initial borrowing capacity in 2022 of USD 48.9 million, which is expected to increase until it reaches (USD 550 million (considering 2022's average exchange rate) in 2031 based on a projected 27 percent increase in municipal income. Demonstrating a good track record, Medellín issued public debt bonds in 2014 for amounts of US\$67,4 million considering 2014 average exchange - 10-year term) and US\$56,8 million considering 2014 average exchange 30-year term), and in 2006 for amounts of US\$ 59.7 million using 2006 average exchange rate, and US\$48.2 million.

6 TIF Risks and Management Strategies

63. **Managing development (and therefore repayment) risk has to be at the center of any TIF initiative if it is expected to attract capital market investors into the securitization scheme.** The

IDM's effort in Medellin left as a lesson learned the need of a solid risk analysis associated with the real estate project and the risks inherent to the financial instrument. This section covers the main elements of the risk analysis both Barranquilla and Medellin should be covering implementing the TIF instrument.

64. **Uncertainty about the size and timescale of the developments within the TIF district is expected to have a significant impact on the overall performance of the TIF instrument to obtain funds to support infrastructure investments.** Table 9 presents the four main concerns of investors when considering securities, and the type of credit risk approach used by credit rating agencies when conducting a risk assessment.

Table 11 - Sources of Risk Associated with TIF-like Vehicles

Cashflow predictability drivers	Type of credit risk assessment to be applied by credit assessment firms
Confidence in a real estate development project's timing and success	Project finance
Confidence about the assets maintaining or increasing their value	Future flows
Confidence of frequent cadastral updates of the properties' assessed values	Future flows
Confidence of revenue effectiveness	Future flows

Source: Trígono Banca de Inversión (2022a).

65. **Project finance credit risk assessments seek to establish the issuers' ability to generate a stable cashflow based on the legal framework, soundness of the business plan, and the capacity of the sponsors or managers to deliver the project.** Although there are other aspects to consider, the main concern of a credit risk assessment is to establish whether a proposed project will, under normal market and legal conditions, deliver on its planned outputs, and will generate a large enough cashflow to repay the debt within a given timeframe. The conditional nature of repayment cash streams, and of the timely delivery of assets, makes projects based on future cashflows riskier than operations in which the repayment source is supported in an existing operation. In the case of TIF bonds, credit risk assessment companies will look closely at real estate market forecasts, construction risk and the relationship between a proposed intervention and the area where the TIF revenue is generated.
66. **Credit assessments of future flows are mainly concerned with the ability of the creditor or bond holder to maintain or increase the funding sources that will be used to repay the bond.** The issuance of new debt instruments under future flows schemes is linked to the creditworthiness and the track record of the debt holder, which in turn takes into account the size, quality and behavior of the cashflow sources used considered to repay the debt. Future flows analyses have a place in TIF operations when assessing the ability of the local government to set and periodically update a TIF area's assessed values, and the effectiveness with which the local government is able to define and collect property taxes.
67. **The certainty of cashflows to support future flows operations makes them less inherently risky than project finance operations.** Having a verifiable source of repayment removes market, development and delivery risks. Under traditional higher-risk, higher-return conditions, it would be expected that riskier project finance schemes are subject to demands for higher returns, which would mean higher financial costs (i.e., higher interest or discount rates).
68. **Mitigating risk in future flows operations means undertaking institutional and policy measures that maintain or improve future revenues over time and across different stress test scenarios.** Measures that prevent the required revenues streams from being disturbed, diverted or reduced can contribute to reducing risk in future flows operations. In the particular case of TIF operations, measures to ensure frequently updated assessed values for properties within the area of interest, along with

measures to maintain or improve property tax collection rates, can help to reduce risk, and thereby reduce the amount of total TIF revenue that needs to be allocated to financial costs. Additional requirements, such as covenants/guarantees that require a certain debt-service to total-revenue ratio to be maintained, also help to make investors more confident that the probability of not meeting the payment schedule is minimal.

- 69. The higher uncertainty and complexity of project finance projects means that more effort will be required to achieve (and maintain) low credit risk and financial costs.** Such projects need to consider risk mitigation strategies for future flows, as well as measures to demonstrate market interest in the proposed venture, its viability, and the technical and institutional capabilities needed to develop and deliver the project. Credit risk assessments look for satisfactory evidence that the market will react as expected, and that stakeholders involved in execution and delivery have the necessary credentials and experience to be successful.
- 70. Mitigation strategies can include ensuring the competence of the parties involved in the development and construction of the project and blending different sources of income or guarantees to reduce the risk of default.** Investors can mitigate their own risk by assuming a second- or third mover stance, waiting for other parties to assume the risk of testing or developing the market before committing to invest in the project. Other ways to reduce risk include breaking a large project down into smaller pieces, thereby creating a scheme in which a large commitment is replaced by many smaller commitments. The completion of each piece then reduces the risk of successive actions, although this type of scheme may involve higher management and transaction costs. Another way to reduce the risk of project finance operations is by providing guarantees or assigning income streams from other projects. This will help to mitigate the risk of default due to project delivery delays.
- 71. TIF operations are typically project finance projects, and measures to reduce market and construction/ delivery risk are required for them to be attractive to investors.** The real estate market analyses presented in sections 3 and 4 for Medellín and Barranquilla, respectively, helped to determine the possible size and scale of the development that could take place in TIF districts. Structuring and applying TIF projects in areas that have already started transformation or considering smaller TIF operations associated with specific investments that are clearly linked with the new developments or redevelopments, will be instrumental in making TIF operations more attractive to investors.
- 72. Postponing investments could be used to mitigate the risk associated with TIF operations, particularly if developments or redevelopments that are expected to be triggered by the TIF operation will not be realized for several years.** Some local authorities may be inclined to advance urban infrastructure projects in order to speed up development in the area of interest. Executing these interventions too early, however, may lead to many years without income or payment of interest, allowing interest to compound and quickly escalating financial costs. TIF funding can be optimized if measures are taken to postpone some investments to later stages of the development or redevelopment lifecycle, reducing the time until revenues are generated and reducing the market risk of the operation.

7 Key findings and takeaways from the TIF implementation pilots of Barranquilla and Medellín.

- 73. The process of creating a financial vehicle that can attract capital market investors for urban development projects, and then preparing a TIF proposal for a city council's authorization, requires a lengthy process of market analysis and planning.** The TIF pilots conducted in Medellín,

and Barranquilla have shown that preparing and launching a TIF instrument in Colombia is less about promoting a grand city plan and more about understanding how to design a financial instrument that (a) attracts investors while mitigating potential risks; and (b) also helps to fund public infrastructure investments.

- 74. The TIF pilots of Medellín and Barranquilla prove that a TIF transaction could be viable under certain assumptions.** To develop the TIF instruments, it was critical to have a real estate market absorption analysis to assess the viability of the urban development projects and have a realistic idea of future revenues. Ties with a solid real estate market, and transparent and mature fiscal capacity, can easily handle bond issues and other financing instruments that have credibility in the investment market.
- 75. A solid risk analysis of a real estate project is crucial to provide credibility to investors.** The analysis should focus on determining the municipality's ability to generate a certain level of cash flow, based on the legal framework and available financial information. In the case of a TIF District, this implies the analysis of market risk, construction risk, and the relationship of the real estate development with the expected income that will be a source of payment for the securitization.
- 76. The methodology at a local level for the selection of strategic projects should include a detailed analysis of demand risk.** In the analysis of the TIF, the perspective that the demand of the real estate market in the area effectively leads to the successful commercialization of the square meters projected should be included.
- 77. For the financial market, it is much safer that the agent that issues the titles from a securitization process does not assume the risks of construction that may arise in the project area.** Strategic redevelopment projects in the TIF area of influence need to be managed by an urban development agency experienced in different types of urban projects.
- 78. Differences in the assessed value of the properties of different TIF districts, or of the property tax applied to different uses or social groups can make TIF income vary in a significant manner. Having these elements in mind can help to curb expectations.** It was interesting to find that Medellín's TIF could potentially collect three times as much income as Barranquilla's most optimistic scenario even though the latter considered the development of three times as many sellable areas. A closer review revealed that the difference came from the diverse types of property products expected to be developed in each city. A significant share of Barranquilla's developments was expected to be focused on affordable housing, which has a lower assessed value and a lower property tax rate than the more upscale developments expected along the Avenida 80 Corridor in Medellín.

8 Next Steps

8.1 Next steps for Medellín and Barranquilla

79. Conduct a capital market sounding assessment to determine, based on global, national and local conditions what are the likely interest rates and risk premiums that will apply to the TIF vehicle under evolving capital market conditions or also due to the changing risk profile of the TIF vehicle as the transformation of the TIF district migrates from an expectation to a certainty.
80. Using the financial model developed under this Technical Assistance, review, prioritize and optimize the infrastructure investment profiles seeking to maximize the amount of incremental property tax collection that gets effectively used in funding the development of the required supporting infrastructure.

81. In accordance with the conditions set forth in Decree 1382 of 2020, finalize, and submit to Medellín's City Council the documentation required to get an approval for the Avenida 80 Tram Corridor TIF District and its associated financing vehicle.
82. In parallel to the approval, adopt institutional strengthening recommendations, with particular attention paid to the expansion of the geographical scope of action of Empresa Metro de Medellín to lead the transformation of the corridor. Participation of Empresa Metro de Medellín as an urban Operator is desirable as the consolidated nature of the proposed TIF district is likely to require land assembly efforts, that only institutions with *Urban Operator powers* that few organizations possess,
83. In parallel to the approval, conduct institutional strengthening work particularly on Puerta de Oro to ensure its ability to create and maintain a high rate of development and transformation of the area, and also to prepare, tender and execute the enabling infrastructure investments.
84. Set up and implement the trust funds and funds management vehicles required to collect and manage the incremental property taxes collected from the TIF district, in accordance with the requirements of the capital market investors into the TIF scheme and the risk management schemes adopted for the vehicle.

8.2 Potential steps for the World Bank:

85. Follow-up progress made by both cities in the optimization of the TIF vehicles and of their approval process through each city's councils and maintaining open channels with both cities' finance and planning secretaries to develop and provide dedicated guarantees that may be required by them in order to reduce the identified sources of risk.
86. According to the needs of these two cities, consider the preparation and provision of the required guarantees.
87. With the consent from the Colombian Government, prepare, schedule and conduct a workshop with the governments of those Colombian cities that were identified to be at an advanced stage of preparation to consider TIF initiatives, in order for them to take and apply the lessons learned from this process.

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Annex 1. General capital market considerations.

88. **At the time of this writing in June 2022**, multiple events were contributing to maintaining the high rate of inflation in Colombia, with knock-on effects on capital markets, international supply chains and logistics costs. In 2021, inflation was 5.62 percent for the entire year, but was 6.55 percent in the first five months of 2022.⁷
89. **In an attempt to curb inflation, Colombia's Central Bank, *Banco de la República***, increased its interest rate from 3 to 6 percent between January and May, after making incremental rate adjustments on January 31st and April 1st.⁸
90. **The risk-free interest rate (DTF rate), defined in Colombia by the Department of Treasury and Finance, also increased from 3.3 percent to 7.66 percent in the week beginning June 6th, 2022** (ANIF, 2022). Considering that the DTF is the basic rate against which many other interests or return rates are pegged, the more than doubling of the DTF in the last few months is creating higher financial costs for consumers and may lead private institutions to postpone their investments to reduce costs and risks.
91. **Notwithstanding these conditions, capital markets have been active in acquiring both public and private bonds.** Records of debt operations in Colombia show solid performance in both 2021 and 2022, with operations of more than US\$1 billion and a bid-to-cover ratio of 1.56 in 2021; and operations of more than US\$500 million and a debt-to-cover ratio of 1.46 as of June 2022. The figures for 2021 include two public sector operations, one in Barranquilla for more than US\$100 million and another in Bogotá for about US\$40 million. The bonds for these operations were issued in December 2021, at time when 5- and 10-year rates were 2.96 and 3.6 percent, respectively. Barranquilla had a premium 2.09 for the 5-year and 3.1 percent for the 10-year bonds. The bonds issued by Bogota had premiums of 4.35 percent for 12-year bond and 4.53 percent for the 20-year bond. (Pivot Banca de Inversión, 2022).
92. **With inflation likely to be reduced or stabilized in the short to medium term, the TIF bond issue operation considered a lower market return rate of 8.5 percent a year and a long-term inflation rate of 3.0 percent a year, following Central Bank targets.** TIF approval may take place within the next few months, but the bond issue will come later, after plans for the infrastructure projects required for the TIF districts are finalized. This delay provides an opportunity to identify and mobilize other funding sources for priority infrastructure projects.
93. **The additional time until TIF bonds are prepared and issued can also help to mitigate risks by allowing additional time for developers coming into the area to start construction.** As will be discussed in more detail below, the TIF districts in both cities are at an early stage of development, with construction not scheduled to start for at least two more years. The additional time taken to prepare and issue the TIF bonds after city council approval could also work in favor of the infrastructure investment, as uncertainty about the timing and scale of the real estate developments is reduced, as is the expected return on investment.

⁷ DANE, 2022.

⁸ (Banco de la República, 2022)

Annex 2: Methodology and selection criteria for projects

94. The entry criteria established in Article 278 of Law 1955/2019 were taken into account for selection of municipalities: i) Being a municipality of special category, 1 and 2, ii) having a Direct Cadastral Management, and iii) reporting efficiency in the collection of property tax higher than 60%. Additionally, the following selection criteria were considered



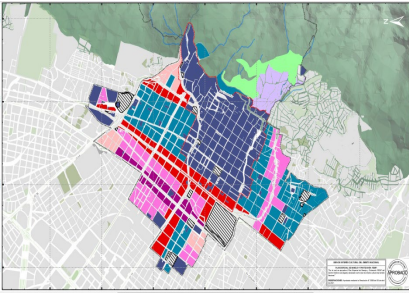
Additional criteria selection to that of Law 1955/2019	Description
Expression of interest to entities of the national order	This shows the political will and interest in making use of innovative instruments within the possibilities of financing urban development.
Advances in the implementation of other LVC instruments	It allows defining the solidity and technical capacity of local teams to make use of TIF as a complement to financing
Updating of Land Use Plans (POT):	Facilitates the identification of projects within the treatment of urban renewal, their possible definition as "project/operation/strategic action" and the relevance of the use of the instrument.
Real Estate Dynamics:	Allows understanding of the current demand and possible projection of demand for certain real estate products.
Cadastral Update:	Facilitates the estimation of the number of properties, their uses and values to have the baseline required for the calculation of the potential collection in the areas of influence that are delimited for the application of the instrument.
Existence of an urban renewal/development office	Demonstrates technical and management capacity for the identification, structuring, follow-up and monitoring of projects.



95. Following urban redevelopment projects were identified as potential projects (Pipeline) for TIF

City	Collection Efficiency	Updated POT	Other LVC	Urban Renewal Office	Project	Stage For TIF Impl.	Score*
Barranquilla Category: SPECIAL	96% (2)	YES (2)	Partially (1)	YES (2)	District Waterfront recovery project	Implementation Supported by WB	7
Bogotá DC Category: SPECIAL	105% (2)	YES (2)	SI (2)	YES (2)	Strategic Urban Interventions / Special Protection and Management Plan, Historic Center	Identification (DNP – MofH)	8
Bucaramanga Category: 1	103% (2)	YES (2)	Partially (1)	NO (2)	No project identified	Identification (MofH)	7
Cali Category: SPECIAL	112% (2)	YES (2)	Partially (1)	YES (2)	Intelligent Diistrict: Ciudad Paraíso, El Hoyo y El Piloto	Implementation Supported by Asocapitales	7
Cartagena Category: SPECIAL	98% (2)	NO (2)	Partially (1)	YES (2)	District Waterfront recovery project	Identification (DNP)	7
Dosquebradas Category: 2	104% (2)	NO (0)	Partially (1)	YES (2)	No project identified	Identification (DNP)	5
Envigado Category: 1	93% (2)	YES (2)	Partially (1)	NO (2)	Peldar Partial Plan	Identification (MofH)	7
Medellín Category: SPECIAL	101% (2)	YES (2)	YES (2)	YES (2)	Corredor Calle 80	Implementation Supported by WB	8
Pereira Category: 1	104% (2)	YES (2)	Partially (1)	YES (2)	Río Otún Waterfront	Identification (MofH)	7
Santa Marta Category: 1	95% (2)	YES (2)	Partially (1)	NO (2)	Recovery of the Bay Ridge	Identification (DNP)	7
Soacha Category: 1	107% (2)	NO (0)	Partially (1)	NO (2)	No project identified	Identification (DNP)	5
Villavicencio Category: 1	88% (2)	YES (2)	Partially (1)	NO (2)	Urban Renewal Project “Arpa de Aguas”	Identification (MofH)	7

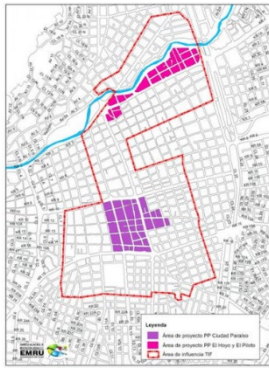
* Scores: 0 = non-existent / does not meet the criteria, 1 = partially meets the criteria, 2 = meets the criteria completely.

Table N1. Characterization of Potential Projects (pipeline) identified:

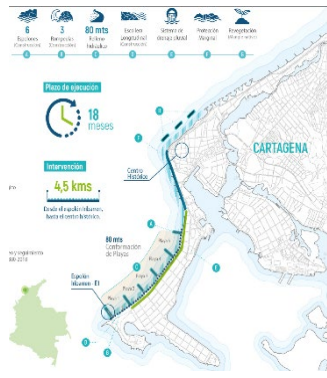
PROYECT DETAILS / CHARACTERIZATION	PROBLEM / ACTIONS PROPOSED
<p>City: Barranquilla Project: District Waterfront recovery project</p>	
<p>The objective of the project is for the city to look towards the Magdalena River again. It will combine the development of riverside greenfield plots and old residential, industrial or port estates to create a vibrant, sustainable community. The project is set to be implemented through the “Ribera Magdalena” Strategic Urban Operation and two Zonal Plans named Avenida del Río and La Loma-Barranquillita that will introduce strategic guidelines for the development of this area.</p>	<p>Stage: Implementation Supported by World Bank Expected date for TIF presentation to city council: August 2022</p>
	
<p>City: Bogotá Project: Strategic Urban Interventions (SUI) Montevideo, Toberín, Chapinero</p>	
<p>Strategic Urban Interventions: defined in POT 2021 as "large-scale urban redevelopment projects".</p>  <p>There are 25 SUI all over the city, they must be regulated in the following 24 months and define the details for implementation of financial instruments</p>	<p>Stage: Identification The preliminary identified SUI correspond to areas with a high percentage of urban renewal treatment and preferably in areas with commercial or industrial activities, which facilitates property and social management (few owners), and a better financial structuring is expected. It is necessary to resume contact with the District Planning Secretariat, in order to define the possibilities of including one or more projects to be financed through TIF, in addition to offering technical assistance to the Treasury Secretariat to facilitate the presentation before the City Council since the requested modifications to the Decree are not viable in the short term.</p>
<p>City: Bogotá Project: Special Protection and Management Plan – Historic Center</p>	
 <p>As a National Asset of Cultural Interest, the Historic Center of Bogotá has its Special Protection and Management Plan, approved in April 2021, that defines:</p> <ul style="list-style-type: none"> Urban renewal by reactivation along BRT corridors network (RU1). Urban renewal by reactivation along corridors of the network of the First Metro Line of Bogotá (RU1M). Urban renewal by reactivation of strategic sectors (RU2). Urban renewal by redevelopment through partial plans (RU3). 	<p>Stage: Identification Although article 552 of the POT defines TIF as a financing instrument, the strategic projects and their application have not yet been specified.</p> <p>In sectors with a high percentage of residential use, social and property management processes are difficult, so the times and costs for project development can increase.</p>
<p>City: Bucaramanga Project: North Zonal Plan (Plan Integral Zonal del Norte)</p>	

 	<p>The “Plan Integral Zonal” establishes a roadmap to improve the living conditions of more than 120,000 in the northern part of the city.</p> <p>Among the operational and execution components of the PIZ is promoting the improvement of the urban habitat, social cohesion as a support for territorial human development, creating capacities and opportunities for quality employability, strengthening governance and promoting environmental quality.</p> <p>The PIZ defines 30 projects that include public space, social facilities, environmental recovery, among others.</p>	<p>Stage: Identification Expression of interest to DNP and MinVivienda. No further actions.</p>
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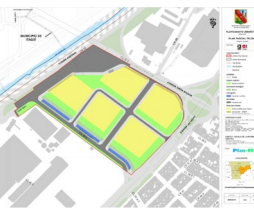
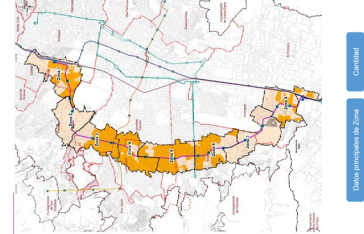

City: Cali
Project: Intelligent District: Ciudad Paraíso, El Hoyo y El Piloto

	<p>Located in the city center. Potential to connect different areas of the city. Includes strategic urban renewal interventions to spatially connect the center of Cali. These interventions would be in:</p> <ul style="list-style-type: none"> - Road and pedestrian infrastructure: Co-financing of the San Antonio Boulevard and pedestrian infrastructure (100,000 million) and Co-financing of Paseo Bolívar (40,000 million) -Housing: Housing project and child development center (40,000 million) -Economic development: Peasant market (10,000 million) -Social development: Street Inhabitant Center (20,000 million) <p>The Project has costs assumed by the State and the private developer: 330,000 million of public investment and 3.5 billion of private investment.</p> <p>The TIF is contemplated as a residual financing mechanism for other works not included in the LVC and budget mechanisms.</p>	<p>Stage: Implementation. Supported by Asocapitales Expected date for TIF presentation to city council: July - August 2022</p>
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City: Cartagena
Project: District Waterfront recovery project

	<p>The project seeks to mitigate the erosion process along the entire coastline from the Iribarren spur, in El Laguito, to the Historic Center, to unify efforts to mitigate and prevent coastal erosion in the coastal area of the District of Cartagena de Indias.</p> <p>4.5 km of coastline will be intervened, and the work includes 6 spurs, 3 breakwaters, 1 longitudinal breakwater will be built, which is basically an underwater dike that serves as a defense against the waves of the sea.</p> <p>The work also includes a storm drainage system and the construction of 80 meters of new beaches in Bocagrande.</p> <p>The work will be executed by the National Unit for Disaster Risk Management and will have an investment of 160 billion pesos. 100 billion pesos contributed by the National Government and 60 billion pesos contributed by the city</p>	<p>Stage: Identification. Expression of interest to DNP and request for technical assistance, with no further actions.</p> <p>The city was in charge of project preparation and presentation but there was a change in the Planning Office Director.</p> <p>DNP plans on resuming contact during second semester 2022</p>
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City: Dosquebradas
Project: Dosquebradas Center Partial Plan

	<p>It is an Urban Renewal Partial Plan of public-private initiative. The planning area will be “Comuna 11”, an area of multiple uses, characterized by the physical deterioration of sectors such as El Crucero, La Carmelita, and Los Molinos.</p> <p>This project aims to renovate and develop the Dosquebradas Center with new public spaces, institutional buildings, public spaces, commerce, and housing, which motivates the attendance of citizens in the sector and also stimulates the economy.</p>	<p>Stage: Implementation Expression of interest to DNP and MinVivienda. No further actions.</p>	
<p>Ctiy: Envigado Project: Peldar Partial Plan</p>			
	<p>The Project will transform one of the most interesting urban areas in the Aburrá Valley, close to the Viva shopping center, the Metro station in that municipality and a strategic site for road connectivity in the south of the city.</p> <p>The area will enable new uses such as residential, commercial, services, and light industry, new public spaces, improvement of the road network, and the enabling of green areas associated with parks, squares, and avenues. The percentages were determined as follows: 60% for residential use and 40% for other uses.</p>		<p>Stage: Implementation Expression of interest to DNP and MinVivienda. No further actions.</p>
<p>City: Medellín Project: Corredor Calle 80</p>			
	<p>Medellin’s Mayor’s office has appointed Medellín’s “Empresa Metro” (EM) as the leader to develop this TIF District. The project’s area of influence is 1,370 hectares and crosses 32 middle-income neighborhoods. There is a presence of residential (mostly), commercial, and service activities along the main roads and it also incorporates industrial and storage activities in the north of the corridor.</p>	<p>Stage: Implementation Supported by the World Bank Expected date for TIF presentation to city council: August 2022</p>	
<p>City: Pereira Project: Otun River Waterfront recovery</p>			
	<p>The project is focused on the relocation of 43,465 people who live on the banks of the Otún River, public spaces that must be recovered.</p> <p>The total cost of the project in all its phases is close to 380 billion pesos.</p> <p>The proposals for the study and design phase must contain the real estate management mechanism for the relocation of the two thousand homes, the enhancement of land use, and the planting of plant species, among other aspects.</p>	<p>Stage: Implementation Expression of interest to DNP and MinVivienda. No further actions.</p>	
<p>City: Santa Marta Project: Recovery of the Bay Bridge</p>			



The Project includes the recovery of 27,626 square meters of public space with an investment of more than 14 billion.

The Management was in charge of the Sustainable Urban Development and Renovation Company of Santa Marta, EDUS, and the work was carried out by

the firm A Construir S.A.

The project was designed and executed under universal design parameters to guarantee the inclusion of the population with disabilities; It will have a new public lighting system, drains, and commercial modules, among others.

Stage: Identification

Expression of interest to DNP and MinVivienda. No further actions.

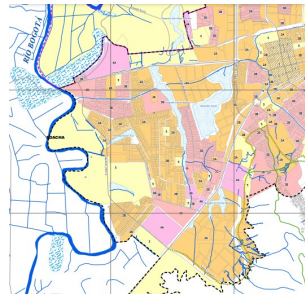
City: Soacha

Project: South Highway Urban Renewal



The 2020-2023 Development Plan and the revision of the Land Use Plan (POT) contemplate urban renewal areas on the highway.

The current POT considers the Economic Activity Parks as areas that respond to new demands of industrial location and generation of new activities, which require to reorder or renew areas for the industries and related services that they demand, located mainly on the most important highways.



Stage: Identification

Expression of interest to DNP and MinVivienda. No further actions.

The Land Use Plan (POT) is being reviewed and the new version contemplates 3 urban renewal zones. It would be necessary to wait for the approval to update the delimitations and prioritization of projects

City: Villavicencio

Project: Urban Renewal Project “Arpa de Aguas”

The project will have three stages of execution in 20 years, which seek to mitigate the risk of flooding of the tributary during rainy season, generating serious problems for the surrounding communities.

It will be an intervention of 5 km, with the offer of 4 km of new public space in the city, where the relocation of human settlements will be necessary during execution time. There are 66 hectares and 150 thousand meters of public space with urban furniture, recreation areas and cultural and residential spaces.



Stage: Identification

Expression of interest to DNP and MinVivienda. No further actions.