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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROGRAM DOCUMENT FOR A

PROPOSED LOAN

IN THE AMOUNT OF US$135,238,245 TO

THE MUNICIPALITY OF RIO DE JANEIRO

WITH A GUARANTEE OF THE FEDERATIVE REPUBLIC OF BRAZIL

FOR THE

RIO DE JANEIRO ADJUSTMENT AND SUSTAINABLE DEVELOPMENT POLICY LOAN

May 19th, 2022

Macroeconomics, Trade And Investment Global Practice
Latin America And Caribbean Region

Federative Republic of Brazil

GOVERNMENT FISCAL YEAR

January, 1 – December, 31

CURRENCY EQUIVALENTS

(Exchange Rate Effective as of May 17th, 2021)

Currency Unit

US$1.00: BRL 4.95

ABBREVIATIONS AND ACRONYMS

ASD	Adjustable and Sustainable Development
BCB	Brazil's Central Bank
BF	*Bolsa Família*
BRT	Bus Rapid Transit
CAPAG	*Capacidade de pagamento* (credit worthiness scoring system)
CCDR	Country Climate and Development Report
CEDAE	*Companhia Estadual de Águas e Esgotos do Rio de Janeiro* (State's Water and Sewage Company)
CET1	Common Equity Tier 1
CGM	*Controladoria Geral do Município* (Municipal Comptroller General)
CPF	Country Partnership Framework
DPL	Development Policy Loan
EMBI	Emerging Markets Bond Index
FINCON	Accounting and Budget Execution System
FPM	*Fundo de Participação dos Municípios* (Municipal Participation Fund)
FUNDEB	*Fundo de Manutenção e Desenvolvimento da Educação Básica e de Valorização dos Profissionais da Educação* (Fund for the Maintenance and Development of Basic Education and the Enhancement of Education Professionals)
GDP	Gross Domestic Product
GHG	Greenhouse Gases
LAC	Latin America and the Caribbean
LEZ	Low Emission Zones
MRJ	Municipality of Rio de Janeiro
NCR	Net current revenues
NDC	Nationally Determined Contributions
NMT	Non-motorized Transport
PA	Prior action
PAFs	*Programas Aplicativos Fiscais* (State-federal Fiscal Adjustment Programs)
PDS	*Plano de Desenvolvimento Sustentável* (Sustainable Development and Climate Action Plan)
PEF	*Plano de Equilibrio Fiscal* (Fiscal Equilibrium plan)
PFM	Public Financial Management
POF	*Pesquisa de Orçamentos Familiares* (Consumer Expenditure Survey)
PPP	Purchasing Power Parity
RAIS	*Relação Anual de Informações Sociais* (Annual Social Information Report)
RGPS	*Regime Geral de Precidência Social* (General Pension Scheme in Brazil)
RPPS	*Regime Próprio de Previdência Social* (Federal Pension Scheme for Civil Servants)
SCD	Systematic Country Diagnostic
SDGs	Sustainable Development Goals
SDR	Special Drawing Rights
SMAC	*Secretariat of Environment*
SEFAZ	*Secretaria da Fazenda* (Secretariat of Finance)
SMFP	*Secretaria Municipal de Fazenda e Planejamento* (Secretariat of Finance and Planning)
SIAFIC	Integrated Financial Management Information System
SISCLIMA	Climate Monitoring System

GRID	Green, Resilient and Inclusive Development
GRS	Grievance Redress Service
IBRD	International Bank for Reconstruction and Development
IADB	Inter-American Development Bank
ICMS	*Imposto sobre Circulação de Mercadorias e Serviços* (Tax on the Circulation of Goods and Services)
IDA	International Development Association
IFC	International Finance Corporation
IMF	International Monetary Fund
IPSAS	International Public Sector Accounting Standards
ISS	*Imposto Sobre* Serviços (Tax on Services)
ITDP	Institute for Transportation and Development Policy
LRF	*Lei de Responsabilidade Fiscal* (Fiscal Responsibility Law)
SMTR	*Secretaria Municipal de* Transportes (Secretariat of Transport)
SNG	Subnational Government
STN	*Secretaria do Tesouro Nacional* (Federal Treasury)
TCM-RJ	*Tribunal de Contas do Município* (Municipality of Rio de Janeiro Audit Court)
UN	United Nations
WB	World Bank
WBG	World Bank Group

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FEDERATIVE REPUBLIC OF BRAZIL

RIO DE JANEIRO ADJUSTMENT AND SUSTAINABLE DEVELOPMENT POLICY LOAN

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SUMMARY OF PROPOSED FINANCING AND PROGRAM

BASIC INFORMATION

Project ID	Programmatic	If programmatic, position in series
P178729	Yes	1st in a series of 2

Proposed Development Objective(s)

The Program Development Objective of this programmatic series is to support the Municipality of Rio de Janeiro in: (i) strengthening fiscal management to improve medium-term fiscal sustainability; and (ii) accelerating the transition towards a low-carbon, resilient and inclusive urban development .

Organizations

Borrower:	MUNICIPALITY OF RIO DE JANEIRO
Implementing Agency:	Secretaria Municipal de Fazenda e Planejamento, Secretaria de Transporte

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Financing	**135.24**

DETAILS

International Bank for Reconstruction and Development (IBRD)	135.24

INSTITUTIONAL DATA

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Overall Risk Rating

Results

Indicator Name	Baseline	Target
Current savings (current spending as percentage of current revenues - CAPAG indicator)	100 (2020)	Less than 95 (2024)
Liquidity (Financial Obligations from Non-Earmarked Resources as percentage of gross cash balance - CAPAG indicator)	-188 (2020)	Less than 100 (2024)
ISS revenue in 2024, compared to projection with no reform (Millions of 2021 Real)	6,172 (2024, with no reform)	6,689 (2024)
Number of carbon credits generated in Rio de Janeiro (Tons)[1]	0 (2020)	1,000,000 (2024)
Pension Contributions in real terms (Millions of 2021 Real)	4,442 (2020)	5,700 (2024)
Ridership in the BRT system (Number of passengers)	60.4 million (2021)	85.2 million[2] (2024)
Percentage of sexual harassment complaints submitted to the new tracking and response system that are responded (%)	NA (2020)	At least 75 (2024)
High and medium capacity mass transit stations connected with cycleways (%)	20 (2020)	At least 40 (2024)
Monthly bicycle trips in the Low Emission District (Rio's Bike-sharing Scheme)	65,000 (Sep 2021)	85,000 (Sep 2024)
Reduction in GHG emissions (%)	- (2017)	5 (2024)

[1] This result indicator is related to indicative trigger 2.
[2] Excluding the *Transbrasil* line, to be inaugurated in 2022.

IBRD PROGRAM DOCUMENT FOR A PROPOSED LOAN IN THE AMOUNT OF US$135,238,245 TO THE MUNICIPALITY OF RIO DE JANEIRO FOR THE RIO DE JANEIRO ADJUSTMENT AND SUSTAINABLE DEVELOPMENT POLICY LOAN

1. INTRODUCTION AND COUNTRY CONTEXT

1. **The proposed Rio de Janeiro Adjustment and Sustainable Development Policy Loan (ASD-DPL) series supports the Municipality of Rio de Janeiro (MRJ) in: (i) strengthening fiscal management to improve medium-term fiscal sustainability; and (ii) accelerating the transition towards a low-carbon, climate-resilient and inclusive urban development.** Against the backdrop of the impact of COVID-19 and the efforts of the government to achieve the 2030 Sustainable Development Goals Agenda[3], the proposed ASD-DPL for US$135,238,245 (the first in a two-DPL programmatic series) supports the Government's efforts to advance a sub-set of reforms to strengthen fiscal management, and accelerate the transition towards a low-carbon, climate-resilient and inclusive urban development. This DPL is aligned with other WBG operations to help Brazil recover fiscal and environmental sustainability at the subnational level[4], and supports the municipality of Rio de Janeiro in becoming the first municipality to be admitted into the federal government's Fiscal Equilibrium Plan (PEF) that became effective in December 2021, thus advancing the implementation of a strategic federal government program for the fiscal recovery of subnational entities.

2. **Rio de Janeiro is the second largest economy among municipalities in Brazil, and one of the largest economies in LAC.**[5] With a high population density of 5,644.8 per km^2, the MRJ has 6.7 million inhabitants in 1,204 km^2. It has the second-largest municipal GDP in Brazil, only surpassed by São Paulo. Its economy accounts for five percent of the Brazilian economy, which increases to almost 12 percent if the metropolitan area is considered. It is headquarters to Brazilian oil, mining, and telecommunications companies, and also a scientific hub, with the second-largest center of research and development in Brazil, accounting for 17 percent of national scientific output according to 2005 data. Services and industry account for almost 87 and 13 percent of the municipality's value added, respectively, in 2019. Rio is one of the main international tourist destinations in Brazil and Latin America[6], receiving more than 8 million international and domestic tourists; the second largest financial center in Brazil; and a large exporter of crude oil due to the offshore exploration near the coast.

3. **Despite being an important economic hub, the MRJ fell into fiscal distress before the pandemic due to rapidly growing personnel spending, stagnant revenues, and high debt service costs.** Between 2015 and 2019, the wage bill grew 2.4 percent per year in real terms, mostly due to the increase in the average salary in the municipality as the number of public servants stayed constant since 2010. In addition, revenues declined each year by 1.7 percent in average real terms during this period, mostly explained by

[3] The Sustainable Development and Climate Action Plan for the City of Rio de Janeiro has as its central objective the construction of municipal policies aligned with the Sustainable Development Goals of the 2030 Agenda, and thus guide the actions of the City Hall throughout the different administrations.
[4] The proposed operation is the fourth under this framework, following the Mato Grosso Fiscal Adjustment DPL (P164588), the First Amazonas Fiscal and Environmental Sustainability Programmatic DPL (P172455), and the ongoing State of Goias Sustainable Recovery DPL (P177632).
[5] Rio's economy is also large when compared to other LAC countries. Its GDP in 2019 (latest data available for the municipality) was bigger than that of most of the economies in the LAC region, including Bolivia, Belize, Costa Rica, Dominican Republic, El Salvador, Dominica, Guatemala, Grenada, Guyana, Honduras, Haiti, Jamaica, Nicaragua, Panama, Paraguay, St. Lucia, St. Vincent and the Grenadines, Suriname, and Uruguay.
[6] World Travel & Tourism Council, City Travel & Tourism Impact 2017.

a reduction in transfers. The deterioration in the fiscal balance also led to an increase in debt service, which reached 8.9 percent of net current revenues (NCR) in 2019 (compared to an average of 5 percent for the Brazilian States), and a built-up of arrears to BRL 5.8 billion (22.3 percent of revenues) by the end of 2020.

4. **The COVID-19 pandemic worsened Rio's public finances, further crippling the municipality's ability to promote investments in favor of its environmental, social and economic goals, including low-carbon, resilient and inclusive urban development**. The COVID-19 crisis placed a huge toll on Rio, which experienced the second highest number of deaths among Brazilian states' capitals (36,924), only surpassed by São Paulo city (42,395).[7] Due to its intensive economy in the service sector, Rio's economic activity was severely affected, worsening the already high unemployment rate that affected the city since the previous crisis in 2015/2016 (16.4 percent at the peak in the third quarter of 2020). This had knock-on effects on its revenue effort given that the tax on services (ISS), the main municipal tax, recorded a 7.4 percent real decline in 2020, whilst spending needs accelerated. Under these circumstances, Rio continued accumulating arrears, which reached BRL 5.8 billion by end 2020 (equivalent to 22.3 of its current revenues).

5. **Its weak fiscal position in the face of its significant investment needs have made fiscal recovery a priority for the MRJ.** Faced with the need to avoid larger deficits, the city had to put aside priority spending on infrastructure, human capital, and environmental protection. Debt financing is not an option for states and municipalities in Brazil. However, they can obtain federally guaranteed credit operations if they maintain fiscal discipline, which is evaluated through the federal government's subnational credit worthiness scoring system (box 1). Given Rio's fiscal challenges, the municipality is not able to obtain federally guaranteed credit operations to deal with the needs of its citizens, including the coverage and quality of its infrastructure such as transportation infrastructure and high levels of congestion.[8] This undermines its growth potential, exacerbating poverty and inequality, and increasing costs associated with natural disasters and climate risks.

6. **Rio de Janeiro has an important contribution to Brazil's carbon footprint through its transport sector, which is central to its climate mitigation agenda.** Brazil ranks amongst the world's top ten GHG emitters. Nature-based sectors (land use change and agriculture, in particular) have been the main source of emission in Brazil, but transport also makes an important contribution with 13 percent of carbon footprint. As the second most populous city in Brazil, Rio's transport sector is the first source of emissions in the city with 35.4 percent of its total emissions in 2019[9] - followed closely by the stationary energy sector (34.1 percent) –, making it central to Rio's climate mitigation agenda. Yet, the sustainability of the Rio transport system has been challenged by a failing public transport network, preventing investment in green public transport vehicles and contributing to a steady loss of ridership since 2015. Between 2015 and 2020, the city saw an increase of 11 percent on the car fleet and of 30 percent on the motorized two-wheeler fleet. In addition, the shift towards more low-carbon mobility patterns in Rio has also been inhibited by the limited availability of adequate and safe non-motorized transport infrastructure (such as cycleways) that is integrated with the public transport system. As such, policy measures to improve the

[7] Data as of May 16th, 2022.
[8] *https://www.weforum.org/agenda/2020/07/cities-congestion-brazil-colombia-united-kingdom/*
[9] *Monitoramente das Emissões de Gases de Efeito Estufa da Cidade do Rio de Janeiro 2012 a 2019, SISCLIMA*. Instituto Pereira Passos, Prefeitura da Cidade do Rio de Janeiro, 2021.

transport system in Rio can play a pivotal role towards a low-carbon, climate-resilient and inclusive urban development. This can be achieved by: shifting more people from personal motorized vehicles to safe and reliable public transit and non-motorized transport; improving operations efficiency and vehicle technologies, including by transitioning to electric vehicles; and creating low emission zones in the city.

7. **Rio de Janeiro also faces adaptation challenges linked to its geography, which makes it susceptible to climate-linked disasters such as severe rains and floods**. Risks of landslides affect 45 percent of the city, in particular poorer areas with irregular housing; heatwaves have a greater impact in the lower-income northern region, affect more heavily the elderly and children, and can also disrupt water, energy, and transport services. In 2011, floods, landslides, and mudslides in the adjacent hilly regions of the State of Rio de Janeiro claimed roughly 1,000 lives and registered economic losses of 1.35 percent of the state's GDP[10]. In 2022, another major landslide took place in the region, with over 230 deaths in the nearby city of Petropolis. In the city of Rio, the 2010 flooding and mudslides killed at least 66 people and displaced thousands of families.[11] Considering the projected increase in temperature and changes in precipitation patterns, climate-induced natural disasters are expected to become even more frequent and severe. Brazil's average annual temperatures are expected to rise by 1.7°C to 5.3°C by the end of the century, and annual precipitation is projected to increase in southern areas of Brazil, including Rio de Janeiro. In the current scenario, the municipality estimates that rises in sea level could affect about 10 percent of the city by 2080. This can be mitigated by disaster risk prevention and preparedness measures such as the development of contingency plans for coastal management and extreme heat events, and by fostering green and reliant infrastructure.

Box 1: Creditworthiness Scoring System (CAPAG)

Subnational governments' borrowing capacity is tightly regulated, and states and municipalities cannot issue debt securities. Much of the stock of subnational debt is in the form of long-maturity debt with the federal government as part of a 1997 bailout, and is governed by State-federal fiscal adjustment programs (PAFs). Since 2016, the repayment conditions for these loans have been restructured, lowering near-term payments required from states. Subnational governments also have significant debts with public banks (BNDES, Banco do Brasil, and CEF), multilateral lenders (mostly IBRD and IADB), bilateral development partners, and, occasionally, commercial banks. The federal government's system for authorizing federally guaranteed subnational debts (CAPAG) was reviewed in 2017, with technical assistance from the World Bank, limiting federal discretion and requiring adequate fiscal space (measured by the current savings rate) from subnational governments to qualify for federal guarantees.

States and municipalities cannot issue debt securities directly, they require federal guarantees. The creditworthiness scoring system (CAPAG) is conducted by the Federal Treasury (STN) for federally guaranteed subnational borrowing. The STN assesses three different indicators: (i) indebtedness; (ii) current savings; and (iii) liquidity. Depending on the combination of the evaluation of these indicators, each subnational government will receive a score between A and D. In order to have borrowing access with federal guarantees, the SNG must have a CAPAG A or B score (those are the creditworthy SNGs). Annex 5 contains more details on the intergovernmental fiscal arrangements in Brazil.

[10] Climate Risk Profile: Brazil (2021): The World Bank Group.
[11] Climate Change Adaptation Strategy for the City of Rio de Janeiro, 2016.

8. **The proposed series supports the Municipality of Rio de Janeiro in: (i) strengthening fiscal management to improve medium-term fiscal sustainability, and (ii) accelerating the transition towards a low-carbon, climate-resilient and inclusive urban development, through two pillars:**

i. **This first pillar of this DPL seeks to strengthen the fiscal sustainability of MRJ through its adherence to a federal program that requires the implementation of fiscal adjustment reforms.** Under the current subnational credit worthiness scoring system (CAPAG), the municipality is excluded from obtaining federally guaranteed credit operations. This DPL supports the municipality's adhesion to the Fiscal Equilibrium Plan (PEF), a federal program that aims to improve fiscal sustainability of subnational entities. Only SNGs that do not have CAPAG rating A or B are allowed to join the PEF, which has as final goal of delivering a SNG with CAPAG A or B by the end of the program. The adhesion of the municipality of Rio de Janeiro to the PEF requires compliance with agreed fiscal targets. Compliance with the PEF and the agreed targets will allow the municipality to regain its credit worthiness to obtain credit loans. Failure to comply with the PEF targets would prevent it from securing access to new credit lines and federal government guarantees for new loans. To meet the agreed fiscal targets in the program, this DPL is supporting complementary fiscal reforms, including: (i) the adoption of a law that triggers fiscal adjustment measures in case of fiscal distress; (ii) a legislative reform to simplify the tax on services (ISS)[12] and improve collection from tax evaders; and (iii) a legislative pension reform that increases the contribution rate from 11 to 14 percent for active and inactive civil servants, pensioners, and beneficiaries of special pensions. Together, these reforms are expected to contain recurrent spending growth and increase revenues, with the following expected results: (i) a reduction in the ratio of current expenditures to current revenues from 100 percent in 2020 to less than 95 percent by 2024; (ii) an increase in ISS revenues of 8.5 percent relative to a no-reform scenario; and (iii) an increase in real pension revenues from R$4.4 billion in 2020 to R$5.7 billion in 2024 (30 percent real increase). The foreseen second operation aims to build on this first DPL by deepening pension reforms with measures to strengthen pension record management and audits. It is also expected to support reforms to improve fiscal accountability through the adoption of the international public sector accounting standards (IPSAS) and improved internal audit capacity. Finally, it proposes the introduction of a tax incentive to firms that achieve mitigation outcomes, thus using fiscal space opened through pillar one's savings to introduce green fiscal policy measures.

ii. **Prior actions under Pillar 2 will support the Municipality of Rio in shifting to a low-carbon and more inclusive urban development through more sustainable mobility and strategies to mitigate and adapt to climate change**. The MRJ acknowledges the need to advance in greening the transport system, the highest emitting sector of greenhouse gases in the city, and its vulnerability to climate change shocks. To address these challenges, the city is introducing reforms to increase the reliance on sustainable mobility modes and reduce GHG emissions, along with the city's strategy to improve building energy efficiency, waste management, low-carbon and resilient infrastructure, and disaster risk management solutions to strengthen its climate resilience. Actions in this pillar support: (i) critical legislation to improve the operational efficiency, multimodal integration, and safety for women in the Bus Rapid Transit (BRT) system to attract passengers to public transport; (ii) measures to promote low-carbon transport through

[12] Rio's main source of own revenues.

regulations that expand the cycling network and make the urban environment more conducive to walking and cycling; (iii) the approval of legislation that promotes climate mitigation and adaptation practices in urban mobility, energy, green infrastructure, and waste management (Low Emission District); and (iv) the adoption of a municipal sustainable development and climate action plan, including measures to advance e-mobility, and climate risk prevention and preparedness measures such as contingency plans for coastal management and extreme heat events. Key expected results from this pillar include an increase of at least 40 percent in ridership in the BRT system by 2024, at least 40 percent of mass transit stations being connected to cycleways, and at least 75 percent of sexual harassment complaints submitted to the new tracking and response system that are responded. To deepen the impact of these actions, the second DPL is expected to further strengthen the sustainability of public transport services by enacting regulations that separate bus operations from the fleet provision. It is also expected to support the legal and regulatory framework required for implementing the "Municipal Cycleway Plan" and the "Low Emission District" to further expand low-carbon mobility and connect low-income areas. Finally, the second DPL would continue supporting reduction of GHG emissions by greening the municipal government's transport and energy consumption matrix.

9. **The proposed Rio de Janeiro Adjustment and Sustainable Development Policy Financing series is aligned with the World Bank's Green, Resilient and Inclusive Development (GRID) strategy to accelerate climate change mitigation and adaptation and lay the foundations for a strong, durable, and inclusive recovery.**[13] Fiscal reforms supported in this DPL will allow the municipality to improve its medium-term fiscal sustainability and support the post-Covid-19 recovery, while: (i) creating fiscal space to finance investment projects, including fiscal incentives to develop a voluntary carbon market; and (ii) and regaining access to borrowing with support from federal government guarantees to promote investments in favor of its environmental, social and economic goals, contributing to building greater environmental and economic resilience. Reforms in the second pillar will support the Municipality of Rio in shifting to a low-carbon and more inclusive urban development through more sustainable mobility and strategies to mitigate and adapt to climate change. This pillar is expected to steer Rio in improving public and non-motorized transport to avoid the migration of riders to higher-emitting transport modes, supporting the post-COVID-19 recovery as people return to their workplace. Furthermore, the proposed reforms to modernize and increase safety in the BRT system are expected to incentivize women's ridership in the public transport system, contributing to closing gender gaps and a more inclusive transport sector.

10. **The proposed DPL series is closely aligned with the World Bank's and Latin America & Caribbean's respective Climate Change Action Plans (CCAP) 2021-25, which aim to advance the climate change aspects of the GRID approach and, thus, pursue poverty eradication and shared prosperity with a sustainability lens.** Moreover, the policy priorities supported by the series, in particular, the second pillar of the first operation in the series, are consistent with the objectives and priorities defined in the Country Climate and Development Report (CCDR) for Brazil, currently under preparation.

2. MACROECONOMIC POLICY FRAMEWORK

[13] World Bank. 2021. From COVID-19 Crisis Response to Resilient Recovery: Saving Lives and Livelihoods while supporting Green, Resilient and Inclusive Development. Paper for the Development Committee.

2.1. RECENT ECONOMIC DEVELOPMENTS

11. **Brazil experienced one of the heaviest tolls from COVID-19 globally, but a rapid vaccine rollout since mid-2021 is supporting a gradual return to normality.** By March 15, 2022, Brazil had the third largest number of confirmed COVID-19 cases in the world (almost 30 million cases), and the second highest death toll (655,878 deaths).[14] Virus containment measures, across the world and domestically, constituted simultaneous global supply and demand shocks, leading to a contraction of the Brazilian economy by 3.9 percent in 2020. However, the roll-out and subsequent acceleration of the vaccination campaign are contributing to the normalization of daily life and economic activity.[15]

12. **After a pandemic-induced recession in 2020, the economy bounced back in 2021, but the economic recovery remains fragile.** After a steep slump in economic activity at the onset of the pandemic, a gradual recovery began to take place in the third quarter of 2020 as global demand for commodities and manufactured products boosted output and as the roll-out of the vaccine campaign encouraged economic activity. GDP growth was propelled by a strong recovery of 4.7 percent in the services sector in 2021. Despite shortages in inputs and higher production costs, industry showed a strong recovery of 4.5 percent. After two consecutive quarters of contraction, placing Brazil in a technical recession, the favorable performance of the GDP in the fourth quarter of 2021 (0.5 percent q/q) resulted in a carryover effect of 0.3 percent.

13. **The labor market deteriorated significantly in 2020 and is yet to return to pre-pandemic levels, though it is showing signs of recovery.** As a result of the pandemic, the unemployment rate jumped from 12.1 percent in 2019 to 13.5 percent in 2020 on average, while labor force participation declined from 63.6 percent in 2019 to 59.6 percent in 2020. The labor market began slowly recovering in early 2021 and has been showing signs of improvement to date. Unemployment declined to 11.1 percent by December 2021 and labor force participation increased to 62.5 percent. Nevertheless, the return to work was accompanied by an increase in the share of informal workers, pushing the informality rate to 40.7 percent.[16]

14. **High commodity prices and the large depreciation of the Real in 2020 reduced the current account deficit for the year.** The current account (CA) deficit dropped to 1.8 percent of GDP in 2020 and remained relatively stable at 1.7 percent of GDP in 2021 supported by high commodity prices and the 9.1 percent depreciation of the Real. Net FDI flows, the primary source of CA financing, amounted to 1.8 percent of GDP, comfortably financing the external deficit. Moreover, portfolio inflows recorded a large surplus of US$25 bn in 2021. International reserves amounted to US$358.4 bn by January 2022 (a US$3.8 bn decrease compared to December 2021 and a 2.8 increase compared to 2020), equivalent to 22.1 percent of GDP and more than 15 months of imports. In the first quarter of 2022, metal and energy

[14] The country ranks 10th in the number of cases per million people (137,579), and 1st in the number of deaths per million people (3,064).
[15] As of May 16th, 2022, Brazil had applied the first dose of the vaccine to 86.2 percent of the population, and 77.7 percent of the population had been fully immunized (second dose or single dose).
[16] Recent World Bank business pulse and COVID-19 phone surveys indicate cuts in pay or hours works affecting a significant share of workers. These trends, coupled with higher inflation, have contributed to a 10.7 percent decrease in average real income of workers by December 2021 (YoY).

commodities prices soared on account of the conflict in Ukraine, which could exert inflationary pressures but improve Brazil's trade and current account balance.

15. **Sovereign risk premiums have been increasing in recent months due to deterioration of the country's risk profile.** Persistent inflationary pressures, a devalued currency, and concerns around fiscal policy in the lead-up to the 2022 general elections have resulted in higher sovereign risk premiums. These factors have contributed to a significant deterioration of Brazil's Emerging Markets Bond Index (EMBI), which increased from 261 in end May 2021 to 331 in March 2022. When compared to other emerging economies (excluding Argentina), Brazil's country premium is high among its peers, pushing up financing costs for the government and the private sector.

16. **Supply side shocks, coupled with a pick-up in demand, pushed inflation above the Central Bank's inflation target upper band in 2021 (10.1 percent), leaving a high base for 2022.** Inflation reached 10.5 percent in February 2022, far above the Central Bank's inflation target upper band for the year (5 percent). Not only did headline inflation increase, but core inflation also exceeded the upper band at 8.4 percent, indicating persistence in inflation. Food inflation (9.1 percent), accelerated and remains at a significant level, affecting mainly poor households. Inflation has been exacerbated by a severe drought that is provoking water scarcity in hydroelectric plants that, along with a tariff increase, is affecting household energy prices. Higher oil prices and currency depreciation are also contributing to inflation as gasoline inflation stands at 32.2 percent. The conflict in Ukraine is leading to a pick-up in commodity prices (oil, fertilizers, food) which exert further inflationary pressures.[17]

17. **Monetary policy, which had taken an accommodative stance during the pandemic, swung to a tightening cycle in efforts to contain inflationary pressures.** With inflation on the rise, Brazil's Central Bank (BCB) accelerated the pace of monetary tightening beyond neutral levels to anchor inflation expectations. As of March 16, 2022, the policy interest rate had increased 1 percentage point (p.p.), after three consecutive rounds of 1.50 p.p. increases, and stood at 11.75 percent (up from a historically low 2 percent in early 2021). Furthermore, BCB signaled its willingness to continue the monetary tightening to anchor inflation expectations for 2022 and 2023.

18. **The banking sector's stability was not significantly affected by the COVID-19 crisis and Brazil's banking system remains strong.** The capital-asset ratio ("Basel Index") stood at 16.5 percent in December 2021, comfortably higher than the regulatory minimum.[18] Capitalization, measured by the Common Equity Tier 1 Ratio (CET1 or core capital) returned to pre-pandemic levels and most institutions are meeting all prudential requirements using exclusively CET1 capital (95.8 percent). Financial institutions provisioned aggressively for potential credit losses and non-performing loans (NPLs) remained at low levels (2.4 percent in Q3 2021).

[17] Ukraine and Russia account for nearly a third of global wheat exports (28 percent) and a fifth of corn exports (18 percent), exporting a large share of the corn and wheat they produce (54 percent). In the case of wheat, 85 percent of what is imported by Brazil comes from Argentina. Despite Russia and Ukraine accounting for a small share of exports (2 percent), Brazil could face higher prices. The war has increased the prices of many commodities, including oil and natural gas. The rise in international energy prices tend to increase fuel prices, which are the most important components of the CPI (about 4 percent). A 10 percent increase in the price of oil has an impact of 0.4 percentage points on the CPI. Finally, Russia is also a powerful supplier of agricultural inputs and is among the largest exporters of nitrogen fertilizers (such as ammonia and urea) in the world. Russia was responsible for 22 percent of the 41.1 million tons of fertilizers imported by Brazil in 2021.

[18] 8 percent international and 11 percent in Brazil.

19. **Fiscal policy moved to a decisive expansionary stance in response to the pandemic, but as the economy bounced back in 2021 the authorities curtailed most of such support.** The pandemic quickly shifted the fiscal policy agenda towards mitigating the short-term impacts of the pandemic on poor households and the private sector. Accordingly, a 11.2 percent of GDP fiscal stimulus package cushioned the plunge and supported a consumption-led recovery. Around 37 percent of the fiscal package (R$321.8 bn) went towards cash transfers to vulnerable households through the *Auxílio Emergencial* (AE) program that reached over 66 million individuals, most of whom are in the informal sector. This cash transfer expansion mitigated the pandemic's impact on poverty in 2020, lowering it from 19.6 percent in 2019 to 12.8 percent in 2020 (estimated based on the US$5.50, 2011 PPP line). In 2021, the government reduced the cash transfer program to 1.6 percent of GDP as economic conditions started to improve.

20. **The COVID-19 response in 2020 led to higher primary deficit and public debt levels. In 2021 fiscal consolidation resumed, leading to a fiscal primary surplus.** The COVID-19 response package contributed to a rise in the primary deficit from 0.8 percent of GDP in 2019 to 9.5 percent in 2020. General government gross debt[19] increased by 13.5 percentage points between 2020 and 2019. However, by the end of 2021, the primary balance showed a 0.7 percent of GDP surplus, driven by the rollback of COVID-19 related expenses and recovering tax collection. Subnational governments contributed to this balance with a surplus of 1.1 percent of GDP, while the central government had a deficit of 0.4 percent. By January 2022 the primary fiscal balance reached a surplus of 1.2 percent of GDP and gross public debt amounted to 79.6 percent of GDP.

2.2. MACROECONOMIC OUTLOOK AND DEBT SUSTAINABILITY

21. **GDP growth is expected to slow to 0.7 percent in 2022 and is subject to significant downside risks.** Economic activity is expected to slow down in 2022. High inflation, monetary tightening, and indebtedness diminish consumer purchasing power and limit the available credit in the economy. The expected increase in poverty and the slow recovery in the labor market will also weigh on demand. Furthermore, concerns about anemic growth, slowed policy reform momentum, fiscal risks and political uncertainty (on the back of the upcoming general elections in October 2022) might postpone private investment decisions. The external environment is also expected to turn less favorable given the ongoing monetary tightening in advanced economies, higher commodity prices, and market uncertainty arising from the conflict between Russia and Ukraine. Altogether, GDP is expected to grow moderately to 0.7 percent in 2022 and mildly accelerate through 2024 on the back of inflation easing and reduced uncertainty with the end of the elections. These medium-term projections assume that growth would be largely driven by household consumption, while government consumption and public investment would be limited by the required fiscal consolidation to return to sustainable debt levels. Private investment would grow supported by external savings (thereby increasing the current account deficit). The weak performance in total factor productivity (TFP) observed over the last decade is expected to continue in the absence of renewed momentum for structural reforms.

22. **Poverty rates are expected to increase in 2021 and remain at similar levels through 2023.** Poverty rates are expected to increase to about 18.7 percent in 2021 (up from about 13 percent in 2020), mainly on account of reduced coverage and generosity of the cash transfer program, the slow recovery in

[19] Public debt is defined as the general government gross debt, including Central Bank repo operations. This definition differs from the one used by the IMF, which includes all Treasury securities held by the Central Bank, not only those related with repo operations (IMF, 2017).

the labor market, and the spike in inflation. In 2022, about 18 million low-income households will be supported by the new *Auxílio Brasil* program, but sustained inflation and weak labor outcomes in the industry and services sectors (home to over 90 percent of the workforce) may lead poverty rates to increase in 2022 and stay largely stagnant in the coming years. Expected higher agricultural commodity prices mainly due to the ongoing conflict in Ukraine could lead to further increases in food prices, with the impacts being felt mainly by the already vulnerable households.

23. **The CA deficit is projected to stabilize at 1.7 percent of GDP in the medium-term as external conditions adjust and growth returns to its pre-pandemic trend.** The increase in commodity price growth due to the war in Ukraine and the stronger exports value are expected to decrease the CA deficit to 1.3 percent of GDP by 2022. In the medium term, the CA deficit will return to pre-pandemic trends, as commodity prices growth decreases, and global demand growth normalizes. The deficit is expected to be mostly financed by net FDI flows and net portfolio investments, driven by the rise of inflows traded in the domestic market. Brazil's external position is buffered by the country's moderate exposure to currency depreciation since 21.5 percent of the country's external debt (public and private) is in local currency, just 31.2 percent of the external debt matures within one year, and the share of foreign currency-denominated public debt is low at 6.7 percent of GDP. [20] The external financing needs in 2021 were also moderate and ended the year at around 11.4 percent of GDP.

24. **Inflationary pressures are expected to start easing by 2023 onwards as a result of the monetary policy response and as supply constraints loosen.** After the sharp increase in 2021, inflation is expected to gradually start decelerating in the second semester of 2022 and converge to the Central Bank target by 2024 (3 percent). The expected deceleration is due to the dissipation of supply shocks that affected prices in 2020 and 2021, the dissipation of the commodity price shocks of 2022, and a more aggressive monetary policy stance that is expected to peak in 2022 and reduce domestic demand growth. Lower inflation in 2022 will mainly come from tradable items and regulated prices. However, inflationary risks persist in 2022, especially given the impact of the conflict in Ukraine on commodity prices and global supply chains, and the markets' risk outlook during an electoral year. In the medium term, inflation is expected to ease towards the Central Bank target from 2023 onwards.

25. **On the fiscal side, baseline projections are anchored in the constitutional spending cap and assume the continued roll-back of the COVID-19 fiscal package.** Brazil's spending cap is a fiscal rule that links primary spending growth to inflation for 20 years (between 2016 and 2036) and imposes a reduction of 3 percentage points of GDP on all primary expenditures by 2030. The spending cap rule is constitutionally mandated and any change to it requires two rounds of votes in each Lower House and in Senate. Despite recent adjustments to the spending cap to widen the fiscal space to cover the cost of cash transfers in 2022 (see box 2), the authorities remain committed to compliance with the fiscal rule, which continues to anchor the fiscal outlook as indicated by the large fiscal adjustment achieved over the past year (lowering the primary deficit from a record-high of 9.5 percent of GDP in 2020 to a primary surplus of 0.8 percent in 2021). Indeed, non-compliance with the spending cap, a constitutionally mandated rule, triggers automatic measures to reduce mandatory expenditures.[21] Therefore, baseline projections reflect a gradual fiscal consolidation in the medium-term, leading the primary balance to a 0.5 percent surplus by 2024, based on compliance with the spending fiscal rule and a gradual increase in revenues. These

[20] Including public and private sector, Brazil's exposure amounted 35.1 percent of GDP as of September 2021.
[21] Including limiting the minimum wage increase to inflation, freezing the salaries of civil servants or vetoing new hiring of public servants.

baseline estimates reflect the recent changes to the spending cap and the postponement of part of the *precatórios'* payments of 2022.

Box 2: Recent changes to Brazil's spending cap rule

Continued need to support poor households and the costs of settling federal government judicial debt arrears (known as *precatórios*) raised spending pressures and placed the spending cap rule for 2022 under strain. In recognition of the need to strengthen social safety nets and provide sufficient support to the poor during the recovery phase of the pandemic, the Brazilian authorities adopted *Auxílio Brasil* in 2021, a program that updates and replaces the *Bolsa Familia* program. The new program widens access to cash transfers by increasing the average benefit amount (from R$190 to R$ 217.18) as well as the number of beneficiaries (from 14 million to 17.6 million), thus including many households that had been on the waiting list for *Bolsa Familia*.

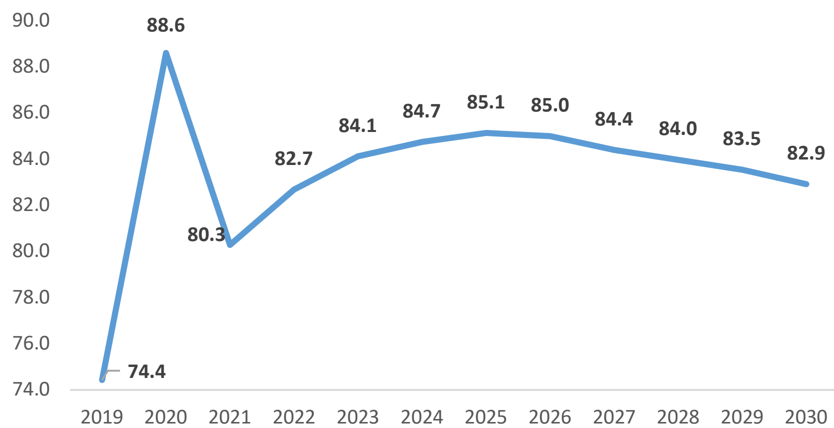
To accommodate these needs whilst maintaining the spending cap, the federal government adopted a five year payment schedule for the *precatórios* and adjusted the formula for calculating the spending limit under the cap. The authorities agreed to limit the value of the first *precatórios'* payments in 2022,[22] and to pay the balance in installments over the coming five years. The authorities also adopted the rate of inflation between January and December 2021 to estimate the annual increase in the spending limit (instead of July to June in previous years) which afforded a higher spending limit. These two measures are expected to add up to 1 percent of GDP in additional fiscal space in 2022 (R$91.6 billion, of which R$47 billion is due to the change in the fiscal rule), that will mainly finance the new *Auxílio Brasil* program (with an estimated cost of R$84.7 billion).

These changes have raised concerns about the credibility of the fiscal rule and resulted in higher risk premiums, but are mitigated by the fiscal outlook. Though the change in the spending rule has a small impact on debt sustainability analysis, it raised market concerns about the government's commitment to the fiscal rule, raising sovereign risk premiums. In particular, concerns that, in the run up to the electoral cycle, new spending pressures in 2022 could further weaken fiscal discipline contribute to heightened risk perceptions. These concerns are mitigated by the comprehensive budget allocation for the *Auxílio Brasil* program in 2022, and continued consolidation in the primary balance in 2022 after the above-mentioned outlays are taken into account.

26. **Public debt is expected to peak at around 85.1 percent of GDP by 2025 before declining steadily to 82.9 percent by 2030 (figure 1).** After a large increase in 2020 (of more than 10 percentage points), public debt decreased to 80.3 percent of GDP in 2021 on the back of the economic recovery and the improvement in the government's primary balance. Public debt is expected to increase gradually between 2021 and 2025 on the back of higher refinancing costs, while the primary balance improves. The public debt to GDP ratio would begin declining as the primary fiscal balance shifts to a higher surplus from 2024 onwards, stabilizing debt by 2025. Public financing needs are projected to stay between 28.7 percent and 30 percent of GDP from 2022 until 2024.

[22] Limited to the amount paid in 2016 - R$30 billion - adjusted by inflation.

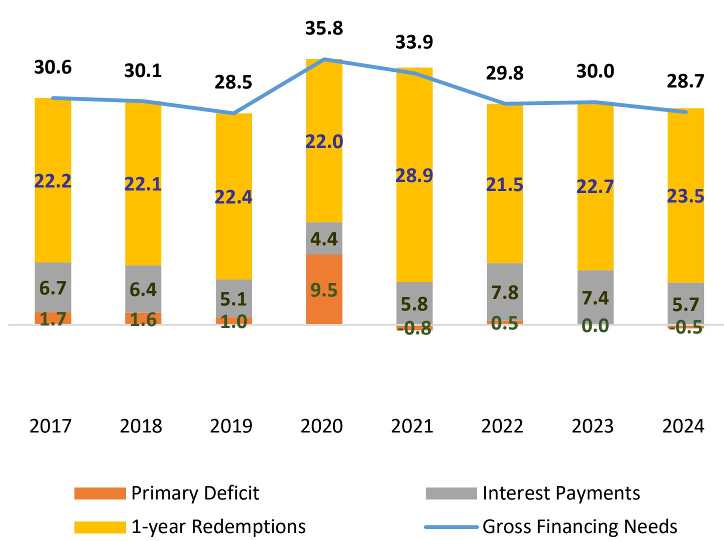
Figure 1: General Government Gross Debt (percent of GDP)



Source: World Bank calculations.

27. **Debt sustainability is vulnerable to the pace of fiscal adjustment as well as growth and real interest rate shocks.** The main macroeconomic shocks that pose risks to debt sustainability include higher than projected primary balances, lower GDP growth, real interest rates increase, and real exchange depreciation. If all these shocks affect the economy simultaneously, debt indicators would deteriorate significantly with public debt potentially reaching about 118 percent of GDP by 2030 (figure 3). Debt rollover risks are also significant as public gross financing needs are expected to range between 28.7 and 30 percent of GDP between 2022 and 2024 (figure 2). Rollover risks are mitigated by sizeable federal cash balances (19.3 percent of GDP) and a deep domestic public bonds market.[23]

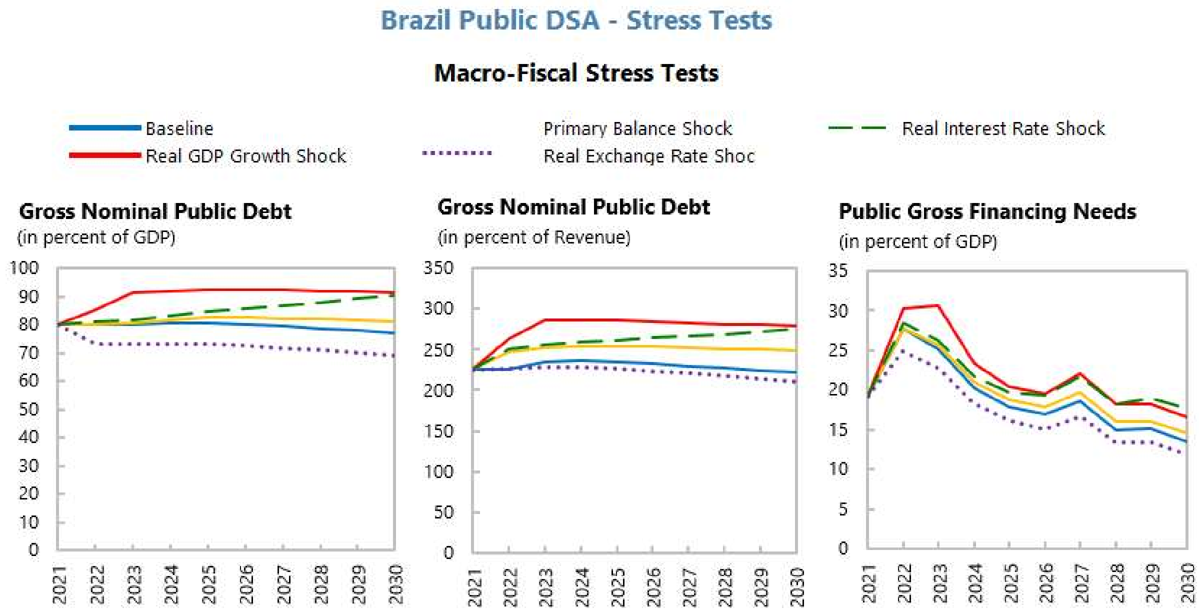
Figure 2: Gross Financing Needs of General Government Gross Debt (percent of GDP)



Source: Central Bank of Brazil and World Bank calculations.

[23] Domestically-issued public bonds corresponded to 90.3 percent of the gross public debt (74.9 percent of GDP) by October 2021.

Figure 3: Public Debt Sustainability Analysis, Macro-Fiscal Stress Tests



Source: World Bank staff.

28. **Macroeconomic risks are substantial, arising mainly from the fiscal and the growth outlook in a context of heightened uncertainty.** Recent changes to the federal spending ceiling rule to accommodate higher social and electoral expenditures in the 2022 budget have undermined the credibility of the fiscal rule and increased sovereign risk premiums along the yield curve, in a context of political uncertainty on the back of the upcoming general elections in 2022. Risks of growing demand for social transfers in a complex economic context (weak growth, high inflation, and sluggish labor market) could further delay the fiscal adjustment needed to ensure medium-term debt sustainability. Credible commitment to comply with the federal fiscal rule will be critical for market confidence and to motivate the subnational government's fiscal consolidation.

29. **Downside risks to baseline growth projections are also significant**. In the short term, the war in Ukraine could cause further commodities price hikes, supply shortages and increased risk aversion that could trigger additional exchange rate depreciations and inflation pressures in Brazil, inducing a more aggressive monetary policy stance that is likely to reduce further the economic growth. A deterioration in the external context, such as an economic slowdown in Brazil's main trading partners and a tighter monetary policy worldwide to tame global inflation, could limit external demand, provoke capital outflows in "flight-to-quality" investment decisions and weaken the Brazilian currency, putting additional pressures on domestic inflation. The medium-term growth outlook is also subject to risks if total factor productivity remains at current levels. A higher potential growth trajectory would require renewed momentum for structural reforms to support higher investment and productivity.[24] Climate risks, including the higher

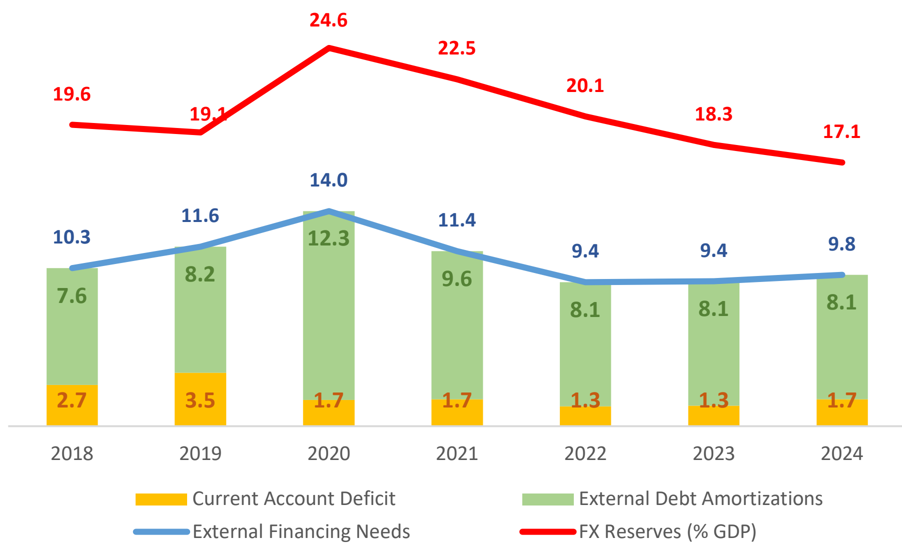
[24] Key among them is the complex and burdensome tax system, which the government plans to reform by replacing the current myriad of indirect taxes with a single Value-added Tax (VAT). Also, inadequate infrastructure is a significant bottleneck for economic integration and trade facilitation.

rates of deforestation, could also affect Brazilian exports in the context of global demand shifts towards environmentally sound export products.

30. **At the same time, Brazil's macroeconomic framework has several policy and institutional buffers to weather shocks.** Brazil's fiscal and debt position is buffered by low government debt exposure to exchange rate risks. FX-denominated government debt represents 6.7 percent of GDP and 94.1 percent of the debt was held in the domestic market in January 2022, with about 31.2 percent of the outstanding debt maturing within one year (38 percent in December 2020). Also, Federal Treasury cash cushions accounted for 19.3 percent of GDP in January 2022, reducing rollover risks. Brazil enjoys a credible and independent Central Bank (whose Board members are granted fixed term mandates), a sound and stable financial sector, and high levels of foreign reserves. The floating exchange rate regime also provides an effective first line of defense against external shocks. Central Bank reserves stood at a high 22.1 percent of GDP (US$358.3 billion) in January of 2022, enough to finance almost 15 months of imports, compared to projected external financing needs for private and public debt of about 9.4 percent of GDP in 2022 (figure 4). Central Bank FX position is partially reduced by FX Swap operations in an amount of US$97 billion, resulting in a net FX long position of US$243.9 billion (15 percent of GDP).

31. **Overall, Brazil's macroeconomic policy framework is deemed adequate for this proposed operation.** Brazil successfully mitigated the impact of the pandemic on the poor and achieved high vaccination rates by the end of 2021. These efforts increased fiscal pressures and raised debt, including a further risk of additional demand for social transfers in 2022 as growth slows and the electoral cycle advances. Public debt and rollover pressures are expected to remain high in the next few years, with debt payments within one year projected to stay above 30 percent of GDP. As the economy recovered from the 2020 recession, fiscal adjustment efforts resumed in 2021 and 2022 despite the high costs of the pandemic response (the approved 2022 approved included an increase in social transfers in 2022). The authorities have reiterated their commitment to observing the federal spending cap (anchor for the fiscal framework). Compliance with the spending cap will be supported by the constitutional pension reform adopted in 2019, a civil service pay freeze, and tight control of discretionary spending, including at the subnational level. Also, the Central Bank independence law was approved in February 2021. The recently approved financial sector reforms helped to boost competition in the financial markets, financial inclusion and market access. The labor market reform enacted in 2017 and recent reforms approved in 2020 and 2021 have supported market entry and private sector participation in key infrastructure sectors (water and sanitation, telecom, and energy). In the medium-term, additional fiscal and structural reforms would be needed to boost potential GDP growth.

Figure 4: Brazil's External Financing Needs and International Reserves (percent of GDP)



Source: Central Bank of Brazil and World Bank calculations.

Table 1: Key Macroeconomic Indicators

	2018	2019	2020	2021	2022e	2023f	2024f
Real economy	**Annual percentage change, unless otherwise indicated**						
GDP (nominal - R$ billion)	7,004	7,389	7,468	8,679	9,585	10,325	10,916
Real GDP	1.8	1.2	-3.9	4.6	0.7	1.3	2.0
Per Capita GDP (In real US$)	5,679	5,706	5,445	5,659	5,662	5,702	5,783
Contributions:							
Consumption	1.7	1.7	-4.6	2.8	0.7	1.0	1.3
Investment	0.9	0.7	-0.1	3.2	-0.1	0.4	0.8
Net exports	-0.5	-0.5	1.1	-0.8	0.1	-0.1	-0.1
Statistical discrepancy and change in inventories	-0.4	-0.6	-0.4	-0.5	0.0	0.0	0.0
Imports, GNFS	7.7	1.3	-9.8	12.4	-0.5	2.0	3.0
Exports, GNFS	4.1	-2.6	-1.8	5.8	0.5	1.5	2.0
Unemployment rate (ILO definition)	12.4	12.1	13.5	13.2	13.1	12.9	12.1
CPI (end of period)	3.7	4.3	4.5	10.1	5.9	3.6	3.0
CPI (Average)	3.7	3.7	3.2	8.3	8.6	4.5	3.3
Fiscal Accounts	**Percent of GDP, unless otherwise indicated**						
Expenditures	40.8	41.2	46.0	39.3	40.9	39.9	37.9
Revenues	33.3	34.6	31.8	34.3	32.6	32.5	32.6
Overall Balance	-7.4	-6.6	-14.2	-5.0	-8.3	-7.4	-5.2
Primary Balance	-1.6	-1.0	-9.5	0.8	-0.5	0.0	0.5
General Government Gross Debt (Authorities' definition) 1/	75.3	74.4	88.6	80.1	82.7	84.1	84.7
Selected Monetary Accounts	**Annual percentage change, unless otherwise indicated**						
Base Money	1.8	4.8	36.3	-5.2	-	-	-
Credit to non-government	5.7	7.6	15.6	17.8	-	-	-
Interest rate - Selic (period average)	6.6	6.0	2.8	4.9	-	-	-
Balance of Payments	**Percent of GDP, unless otherwise indicated**						
Current Account Deficit	2.7	3.5	1.7	1.7	1.3	1.3	1.7
Imports, GNFS	14.0	14.4	15.7	18.5	18.4	18.8	18.5
Exports, GNFS	14.3	13.9	16.5	19.7	20.1	20.4	19.7
Net Foreign Direct Investment	4.0	2.5	2.8	1.7	2.3	2.3	2.3
Gross Reserves (in US$, eop)	374.7	356.9	355.6	362.2	365.0	367.8	368.2
In months of next years imports	19.3	16.0	15.9	19.1	14.7	13.2	11.7
As % of short-term external debt 2/, 3/	213.1	179.8	204.6	208.4	200.8	182.4	171.0
External Debt (in US$, eop) 3/	665.8	675.8	639.3	639.3	668.7	741.5	791.9
External Debt 3/	34.7	36.1	44.2	39.7	36.8	36.8	36.8
Terms of Trade (% change)	0.3	-3.2	0.2	7.2	1.8	0.0	-1.0
Exchange Rate (average)	3.7	3.9	5.2	5.4	-	-	-

Notes: 1/ Brazilian Central Bank definition (2008 methodology), that excludes the Federal securities in the BCB portfolio and includes the stock of BCB repo operations.
2/ Includes the long-term debt repayments due in the next 12 months as short-term debt.
3/ Includes securities issued in Brazil held by foreign residents and intercompany loans.

Table 2: Balance of Payments (percent of GDP)

	2018	2019	2020	2021	2022e	2023f	2024f
Financing Requirements	**2.8**	**3.5**	**1.1**	**2.2**	**1.4**	**1.4**	**1.8**
Current Account Deficit	2.7	3.5	1.7	1.7	1.3	1.3	1.7
Trade Balance (GNFS) 1/ 2/	-0.4	0.5	-0.8	-1.2	-1.7	-1.7	-1.3
Primary and Secondary Incomes	3.1	3.0	2.5	2.9	3.0	3.0	3.0
Net Errors and Omissions	0.1	0.0	-0.5	0.5	0.1	0.1	0.1
Financing Sources	**2.8**	**3.5**	**1.1**	**2.2**	**1.4**	**1.4**	**1.8**
Capital Account Balance	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Net Foreign Direct Investment	4.0	2.5	2.8	1.7	2.3	2.3	2.3
Net Portfolio Investment	-0.4	-1.0	-0.9	0.4	0.1	0.1	0.4
Net All Other Flows	-0.7	0.6	-2.1	1.0	-0.9	-0.9	-0.9
Change in reserve assets	-0.2	1.4	1.0	-0.9	-0.2	-0.1	0.0
External Financing Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nominal GDP (USD billion)	1,916.2	1,872.8	1,448.0	1,608.8	1,815.9	2,013.5	2,150.4

1/ GNFS: Goods and Non-factor Services.
2/ A negative sign in Financial Requirements means a reduction of Financial needs, i.e, a surplus in the account, and vice versa.

Table 3: General Government Fiscal Indicators (percent of GDP)

	2018	2019	2020	2021	2022e	2023f	2024f
General Government Overall Balance	(7.4)	(6.6)	(14.2)	(5.0)	(8.3)	(7.4)	(5.2)
General Government Primary balance	(1.6)	(1.0)	(9.5)	0.8	(0.5)	(0.0)	0.5
Total Revenues (and grants)	33.3	34.6	31.8	34.3	32.6	32.5	32.6
Total Primary Revenues (and grants)	33.3	34.6	31.8	34.3	32.6	32.5	32.6
Tax revenues	31.3	31.4	30.6	31.6	30.4	30.3	30.4
Taxes on goods and services	14.5	14.2	13.7	14.3	13.6	13.5	13.7
Direct Taxes	8.5	8.9	8.7	9.8	8.8	8.8	8.7
Social insurance contributions	7.6	7.7	7.7	6.8	7.5	7.5	7.4
Taxes on international trade	0.6	0.6	0.6	0.7	0.6	0.6	0.5
Other taxes	0.0	0.0	(0.0)	-	-	-	-
Non-tax revenues	2.1	3.2	1.3	2.6	2.2	2.2	2.2
Transfers and Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Expenditures 1/	40.8	41.2	46.0	39.3	40.9	39.9	37.9
Total Primary Expenditures 1/	35.0	35.6	41.3	33.5	33.2	32.5	32.2
Current expenditures	39.5	40.0	44.6	37.9	39.2	38.5	36.4
Wages and compensation	11.4	11.6	11.5	10.1	9.9	9.7	9.3
Goods and services	5.0	5.2	5.2	5.2	5.2	5.2	5.1
Interest payments	5.8	5.5	4.6	5.8	7.8	7.4	5.7

Current Transfers	17.3	17.7	23.1	16.8	16.3	16.3	16.3
Pensions to the private sector workers	7.6	7.8	8.2	7.7	7.8	7.8	7.9
Pensions to the public servants	4.6	5.1	5.3	4.7	4.7	4.6	4.6
Social Assistance	3.0	2.9	7.3	3.1	2.2	2.3	2.3
Other Current Transfers	2.1	1.9	2.3	1.3	1.6	1.6	1.6
Investments (net)	1.3	1.2	1.4	1.4	1.7	1.4	1.4
General Government Gross Debt (Authorities' definition) 2/	75.3	74.4	88.6	80.1	82.7	84.1	84.7

Notes: 1/ Congress passed a constitutional amendment in 2016 limiting the growth of the federal primary spending to the rate of consumer price inflation of the previous year (measured in June). This spending ceiling will be in effect for 20 years and, as long as nominal GDP growth exceeds consumer price inflation, the federal primary expenditure will decline as a share of GDP in the medium term.
2/ Brazilian Central Bank definition (2008 methodology), that excludes the Federal securities in the BCB portfolio and includes the stock of BCB repo operations.

2.3. RECENT ECONOMIC DEVELOPMENTS AND FISCAL SUSTAINABILITY IN THE MUNICIPALITY OF RIO DE JANEIRO

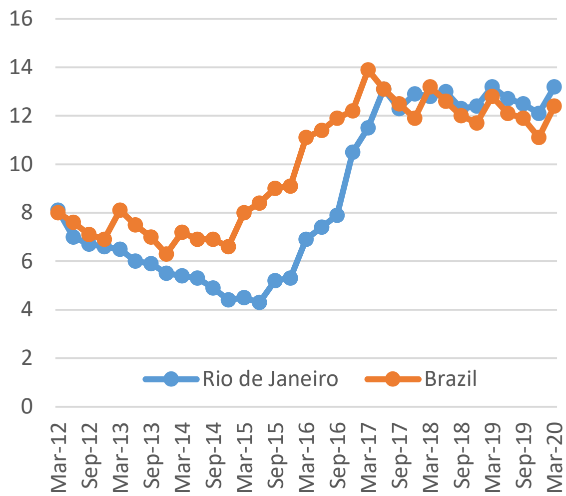
32. **The Municipality of Rio de Janeiro is one of the main international tourist destinations in Brazil and Latin America.** MRJ is Brazil's second-largest metropolis. It covers 1,204 per km^2, and it is also the second most populated city in the country with 6.7 million inhabitants, and a high population density of 5,644.8 per km^2. The Brazilian economy is heavily concentrated in the service sector, which accounts for approximately 75 percent of economic activity. The economy of the city of Rio de Janeiro is even more intensive in this sector, which represents 87[25] percent of the Municipality's value-added. Rio de Janeiro is a major hub for international travel and offers tourists the chance to experience beaches, outdoor activities, and a vibrant metropolitan city, making the country more attractive than other regional destinations. The sector is at the core of the city since it generates skilled and low-skilled employment in related activities such as hotels, restaurants, and entertainment. The services sector was still recovering from the negative impacts of the 2015/2016 recession prior to the pandemic. The 2015/2016 Brazilian crisis significantly affected the city, raising the unemployment rate from 4.3 percent in the second quarter of 2015 to an average of 12.8 percent in 2019. Another relevant data is the almost 300 thousand formal jobs lost between 2015 and 2019. The services sector experienced a further hit in 2020 given the impact of COVID-19 restrictions and lower mobility, and the broader drop in national demand.[26] In 2019, its GDP per capita was BRL 52,833, 8.1 percent below its 2009 level. GDP per capita is expected to have taken a further hit during the pandemic, dropping by an estimated 2.9 percent in 2020.[27]

33. **Federal mitigation measures (mainly the *Auxílio Emergencial* program) prevented the poverty rate in the municipality of Rio de Janeiro from increasing during the COVID-19 pandemic in 2020, but unemployment levels increased.** In 2019, about 7.7 percent of RJM's population lived under the poverty line (US$5.5 per day, 2011 PPP). Simulations suggest that poverty rate may have fallen in 2020 despite the

[25] Including the public administration.
[26] The correlation between the Brazilian GDP and the municipality's GDP is very high (0.98 correlation).
[27] 2020 and 2021 GDP numbers for Rio de Janeiro were estimated by World Bank staff using regression methods. GDP per capita calculations are a result of an economic growth of -2.5 percent in 2020 followed by a 3 percent increase in 2021, and a populational growth of 0.4 percent in both 2020 and 2021.

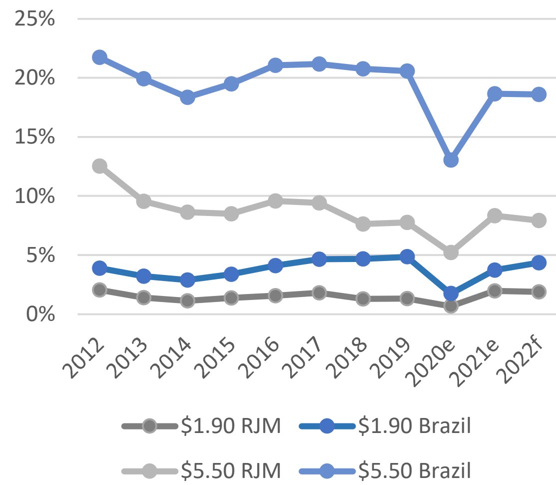
decline in economic activity due to cash transfers provided by *Auxílio Emergencial* emergency cash transfer program. In 2021, with the sluggish recovery in the labor market, inflationary pressures, and the lower amount of cash transfers, poverty is estimated to have increased back to pre-pandemic levels. The COVID-19 crisis also affected unemployment rates in the municipality of Rio de Janeiro, which rose from 12.4 percent in the third quarter of 2019 to 16.4 percent at the peak of the pandemic in the third quarter of 2020, before declining slightly to 15.4 percent by mid-2021.

Figure 5: Unemployment rate in the MRJ and Brazil, percent



Source: IBGE and World Bank.

Figure 6: Poverty Rates in the MRJ and Brazil



Source: World Bank tabulations and simulations using SEDLAC (World Bank and CEDLAS) data. *Notes:* e – simulated ; f – forecasted.

34. **Rio de Janeiro has enjoyed a relatively strong own revenue effort, but declining federal transfers led to stagnant total revenues.** In 2020, own revenues accounted for almost 60 percent of total revenues (or an equivalent to 0.2 percent of national GDP), while transfers accounted for the rest. Unlike most states in the Northern region or less developed municipalities, the MRJ is less dependent on transfers due to its strong revenue effort. Tax revenues were the main source of own revenues for the municipality at approximately 51 percent, having increased by 20 percent between 2015 and 2019. In contrast, transfers from the federal government declined by 17 percent over this period, contributing to a 1.7 percent annual decline in total revenues, in real terms.

35. **An important source of revenues for the municipality are oil royalties.** The southeastern region of Brazil concentrates the majority of Brazilian oil reserves, and approximately 95 percent of them are concentrated in the Campos (Rio de Janeiro and Espírito Santo state) and Santos (São Paulo state) basins, which reflects in the allocation of royalties. Under current Brazilian legislation, the Union keeps 40 percent of revenues, producing states 22.5 percent, and producing municipalities 30 percent. The remaining 7.5 percent is distributed among all municipalities and states of the federation according to the rules of the Municipal Participation Fund (FPM) and the State Participation Fund (FPE). Resources coming from royalties should be used for expenses such as education, health and infrastructure. Since 2011, there have been discussions about the distribution of royalties. In particular, the less favored SNGs are requesting a

more equitable redistribution, independently of whether or not they participate in the oil and gas exploration. However, major oil producers and royalty recipients say the loss of income would have severe effects on their finances and the provision of public services, and as a result this debate has not been settled.

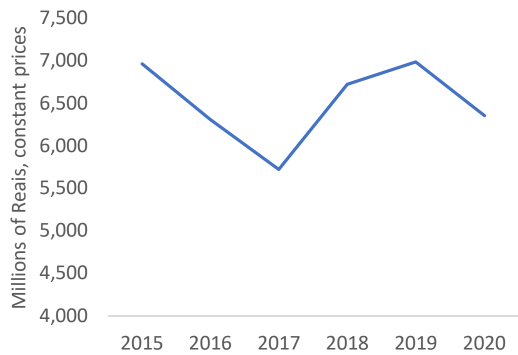
36. **The increasing amount of oil royalties have slowed down the decline in aggregate transfers**. Oil transfers have cushioned the decline in transfers. They have increased more than 3,400 percent between 2000 and 2015, and more than tripled since 2015, totalizing BRL 500.6 million in 2021. In 2015, the total amount of royalties was half of the received by the *Fundo de Participação dos Municípios* (FPM), the main federal transfer for municipalities (excluding the FUNDEB that must be used in education[28]), but in 2021, oil royalties accounted for more than 1.2 times the amount received by the FPM. This is helping counterbalance the overall decline observed in transfers since 2015.

37. **In this context, rapidly rising personnel expenditure pushed Rio de Janeiro's municipality into fiscal distress before COVID-19.** Between 2015 and 2019, the wage bill grew by 2.4 percent per year in real terms, mostly due to the increase in the average salary in the municipality, given the fact that the number of public servants stayed constant since 2010. Salary increases impact pension expenditure because of the parity for active and inactive public servants that joined the public service before 2003. Since 2015 the number of public servants retiring in the state started to increase (more than 5 thousand people between 2017 and 2019, which accounts for around 7.8 percent of the 2018 total public servant force). Additionally, the city's finances were affected by an average annual real decline in revenues of 1.7 percent during the same period. Faced with the need to maintain fiscal accounts, the city had to put aside priority spending on infrastructure, human capital, and environmental protection, all key areas to achieving sustainable and inclusive growth under the GRID approach. More specifically, between 2015 and 2019, spending on health and education, which are protected by minimum constitutional spending, were reduced in real terms 3 and 7 percent, respectively. On the other hand, spending on sanitation and environment management had a decline of 36 and 48 percent, respectively. Overall, spending in goods and services suffered a 20 percent real decline during the same period of time (Figure 8).

38. **The COVID-19 crisis further exacerbated the fiscal situation of the municipality.** As in the rest of the country, Rio de Janeiro faced higher spending needs as part of its response to the COVID-19 pandemic, including a BRL 850 million increase in health budget in 2020 (around 18.1 percent of the original health budget for the year) to cope with the outbreak. As part of the federal response program, BRL 651 million in emergency financing were transferred from federal to municipality coffers in 2020, complemented with a federal debt moratorium that saved about BRL 1 billion in debt repayments in 2020. This federal support helped the state to meet its financing needs and safeguard investments in 2020. Fiscal concerns deepened in 2021 once extraordinary federal assistance ended and debt repayments were reinstated. The incomplete recovery of Rio's economy, especially its services sector, poses a further drag on the fiscal outlook.

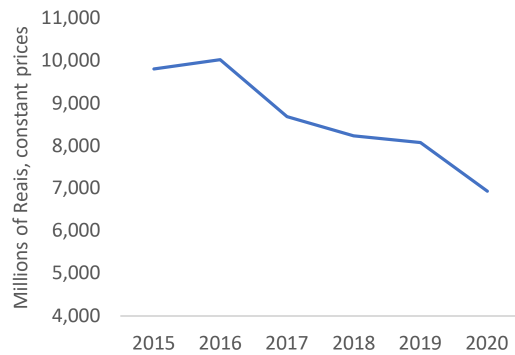
[28] The Fund for the Maintenance and Development of Basic Education and the Enhancement of Education Professionals (FUNDEB) was approved in 2006 as Constitutional Amendment No. 53 (EC No. 53/2006) to replace the Fund for the Maintenance and Development of Elementary Education and Enhancement of the Magisterium (FUNDEF), created in 1996. The fund consists of a set of 27 funds (26 States and 1 from the Federal District) that serve as a mechanism for distributing resources for education.

Figure 7: Tax on Services (ISS)



Source: Municipality of Rio de Janeiro Secretary of Economy and World Bank calculations.

Figure 8: Consumption of Goods and Services



Source: Municipality of Rio de Janeiro Secretary of Economy and World Bank calculations.

39. **As the municipality's spending profile deteriorated, public debt, debt service costs and arrears increased.** The municipality's public debt at the end of 2020 stood at BRL 18.7 billion (about 80 percent of the municipality's net current revenue[29]), increasing to BRL 19.1 billion by the end of 2021.[30] Although the municipality's debt is below the limit allowed under Brazil's Fiscal Responsibility Law (120 percent) and its short-term debt (maturity until 2024, when PEF will be ended) represents less than 1 percent of the total contractual debt, its debt profile poses challenges since debt service is high (8.9 percent of net current revenues in 2019, compared to an average of 5 percent for Brazilian States). The stock of arrears in 2020 stood at BRL 5.8 billion (22.3 percent of revenues) and they are projected to be reduced to BRL 0.9 billion by 2022 (3.4 percent of revenues) due to reforms implemented to join the PEF. With this, the municipality's gross financing needs are projected to reach up to BRL 0.9 billion in 2022, and BRL 0.5 billion in 2023 (equivalent to 3.5 and 1.7 percent of revenues, respectively). While the first DPL in the series will finance around 34 percent of the gross financing needs plus stock of arrears in 2022, the second one would be able to finance up to 70 percent in 2023. Hence, the WB financing will be central to reduce arrears, and to guarantee resources for investment in social, infrastructure and environment.[31]

40. **These conditions motivated the newly elected municipal government to pursue a fiscal adjustment path by adhering to the Federal Government Fiscal Equilibrium Plan (PEF) in 2021.** The current municipal government took office in early 2021, inheriting a weak fiscal position. To improve the fiscal situation, the municipal government committed to join the PEF, a federal program that supports Subnational Governments in strengthening fiscal sustainability through the achievement of fiscal targets agreed with the Federal Treasury (box 3).[32] Since the implementation of the PEF is aligned with the political cycle in the city of Rio de Janeiro (2021-24), risks of policy reversal are mitigated by design.

[29] Net current revenue is defined in the Fiscal Responsibility Law as the sum of tax revenue, social security contributions, property, industry, agriculture, and services, subtracted by the amounts of constitutional transfers.
[30] Around 30 percent of the overall debt is in foreign currency. The remaining amount is domestic debt owed to the federal government or domestic banks.
[31] The World Bank programmatic financing of around BRL 665 million and BRL 818 billion in 2022 and 2023, respectively, does not significatively impact Rio de Janeiro's gross public debt. The gross debt in 2021 was BRL 19.1 billion, of which BRL 5.9 billion was external debt. The total operation represents 7.7 percent of total debt, and 26 percent of the external debt.
[32] A subnational government that joins the PEF needs to agree with treasury on fiscal targets, but how those targets are achieved is not specified, to provide flexibility. Thus, the SNG can choose the best way to restore its fiscal sustainability (see box 3 for more details).

41. **The fiscal adjustment, which includes both revenue and expenditure measures, places the municipality's gross public debt on a firm downward trajectory.** As the first part of fiscal adjustment, Rio de Janeiro has adopted a set of frontloaded fiscal measures to qualify for the PEF: (i) the concession of the State's Water and Sewage Company (CEDAE); (ii) centralizing all public resources in a single account managed by the Executive Branch; (iii) creation of a "defined contribution" pension plan for new civil servants; and (iv) renegotiating arrears. The municipality agreed to the concession of the State Water and Sewage Company of Rio de Janeiro (CEDAE), which assured BRL 4 billion to the municipality coffers in 2021 as part of an agreement that will generate up to BRL 6 billion in cash-flows until 2026. Additionally, to meet the fiscal targets within the PEF by 2024, the government is also implementing additional adjustment measures that include cuts in primary expenditures (pension reform), increases in revenues (tax reform), and the establishment of a new fiscal mechanism that triggers fiscal adjustment measures at both revenues and expenditure side when the municipality is under fiscal distress. Most of these measures have medium-term fiscal effects that will help the Municipality to improve its fiscal sustainability (captured by the CAPAG credit rating system) and achieve the targets of the PEF. Altogether, these measures are projected to provide fiscal savings of US$4.123 million until 2025 (table 4), improve the municipality's fiscal sustainability, and put its gross public debt on a firm downward trajectory. The stock of gross public debt is estimated to decrease from US$3.7 billion in 2020 to US$2.9 billion in 2024 (or from 80.1 to 56.8 percent of net current revenue). Given the federal rules in place (LRF, CAPAG rating) and the new municipal fiscal framework, gross public debt is expected to continue this downward trajectory in the medium term.

Table 4: Estimated savings per kind of fiscal adjustment measure (2021-2025)

Savings (USD 2021 Million)	2021	2022	2023	2024	2025	Total Savings
Reducing Recurrent Spending	**415**	**508**	**523**	**539**	**555**	**2,540**
Wage Bill	283	364	378	392	406	1,823
Pensions	0	0	0	0	0	0
Other Current Expenditures	132	143	145	147	149	717
Increasing Revenues	**862**	**180**	**138**	**261**	**197**	**1,638**
Tax Reform	96	88	88	89	90	450
Pension Contribution	13	29	30	31	33	135
Concession (CEDAE)	753	63	20	141	75	1,052
WB's operation impact on Debt Service	**0**	**-1**	**-17**	**-17**	**-20**	**-55**
Total	**1,277**	**687**	**643**	**783**	**733**	**4,123**

Source: Municipality of Rio de Janeiro Secretary of Economy and World Bank calculations.

Table 5: Municipality of Rio de Janeiro Projected Fiscal Balances (2018–24, USD millions of 2021)

Estimates Includes Expected Impacts of Prior Actions and Others Measures Required by the Fiscal Equilibrium Plan (accrual accounting)

2021 BRL Million	2018	2019	2020	2021e	2022f	2023f	2024f
I. Revenues Include	**4,751**	**4,873**	**4,846**	**5,885**	**5,246**	**5,210**	**5,366**
Own Revenues	2,966	3,158	2,887	3,837	3,165	3,149	3,304
of which: ISS tax	1,242	1,292	1,174	1,242	1,224	1,226	1,236
of which: interests	32	28	12	46	46	46	46
of which: CEDAE's concession				753	63	20	141
Transfers	1,784	1,715	1,959	2,047	2,081	2,061	2,061
of which: oil royalties	72	74	69	93	-	-	-
of which: COVID-19 related transfers			652				
II. Total Expenditures	**5,018**	**4,939**	**4,959**	**4,735**	**5,215**	**5,072**	**5,005**
Current Expenditures	4,662	4,791	4,773	4,659	4,653	4,772	4,890
Active Personnel Spending	1,798	1,910	1,947	1,788	1,796	1,871	1,948
Pensions	1,034	1,103	1,099	1,076	1,084	1,134	1,184
Interests	178	179	56	141	115	105	94
Other Current Expenditures	1,652	1,598	1,671	1,653	1,657	1,662	1,665
Investment	357	148	185	76	562	300	115
III. Primary Balance (I-II- Interests, net)	**-122**	**85**	**-69**	**1,245**	**100**	**196**	**409**
% of revenues	-2.6%	1.8%	-1.4%	21.2%	1.9%	3.8%	7.6%
IV. Overall Balance (I-II)	**-268**	**-65**	**-113**	**1,149**	**31**	**137**	**360**
% of revenues	-5.6%	-1.3%	-2.3%	19.5%	0.6%	2.6%	6.7%
V. Net Financing	**80**	**-188**	**-99**	**-212**	**-50**	**17**	**-116**
Loans	220	39	13	3	158	238	98
of which: World Bank Operation					123	156	
Amortizations, net	-153	-239	-151	-221	-214	-228	-220
Asset Sales	13	12	40	6	6	6	6
VI. Gross Financing Needs (IV+Amortizations, net)	**421**	**304**	**264**	**-928**	**182**	**90**	**-140**
% of revenues	8.9%	6.2%	5.4%	-15.8%	3.5%	1.7%	-2.6%
VII. Financing Surplus/Gap (IV+V)	**-188**	**-253**	**-211**	**937**	**-18**	**154**	**244**
% of revenues	-4.0%	-5.2%	-4.4%	15.9%	-0.3%	3.0%	4.6%
VIII. Stock of Arrears	**266**	**813**	**1,081**	**192**	**180**	**132**	**0**
% of revenues	5.6%	16.7%	22.3%	3.3%	3.4%	2.5%	0.0%
VII. Stock of Debt	**3,434**	**3,157**	**3,742**	**3,538**	**3,384**	**3,203**	**2,921**
% of revenues	72.3%	64.8%	77.2%	60.1%	64.5%	61.5%	54.4%

Source: SEFAZ and World Bank calculations. *Notes:* (i) Primary deficit and overall deficit in 2020 without the federal fiscal support to combat the COVID-19 pandemic would be USD 720 and USD 764 million, respectively.

2.3. IMF RELATIONS

42. **Federal authorities maintain an ongoing dialogue with the International Monetary Fund (IMF) on Brazil's macroeconomic policy**. On September 10, 2021, the Executive Board of the IMF concluded the Article IV consultation with Brazil. During the preparation of this DPL, the World Bank and the IMF

discussed fiscal and structural issues related to this operation. The Bank and the Fund have also collaborated closely with the federal government, including on public financial management, public investment management, and a Financial Sector Assessment Program. The IMF has provided technical assistance to Brazilian authorities in other areas, such as fiscal transparency and fiscal frameworks for subnational governments (see Annex 2 on IMF Relations); while the Bank prepared a Public Expenditure Review in collaboration with the federal government and an intergovernmental fiscal transfers report.[33]

3. GOVERNMENT PROGRAM

43. **The municipality's medium-term plan (PPA-*Plano Plurianual*) aims to improve the quality of life, while promoting sustainable development and fiscal responsibility**. The government prepared the PPA with social participation between public authorities and civil society. The six areas of the Strategic Plan are: (i) economic development; (ii) climate change and resilience; (iii) governance (maintaining fiscal responsibility, reducing the state bureaucracy and increasing the efficiency of public spending); (iv) cooperation and peace (engaged citizens and the promotion of security and protection for the municipality's citizens); (v) equality and equity; and (vi) longevity, well-being and connected territory. The Strategic Plan 2021-24 has 54 initiatives and 93 goals, divided into six cross-cutting themes. Rio de Janeiro's long-term goals and plans are aligned with global objectives of reducing emissions and climate agenda, as in Rio +30.[34] Finally, the municipality's government is currently elaborating a new medium-term plan, for the 2022-25 period, based on the 2021-24 Strategic Planning and the Sustainable Development and Climate Action Plan (PDS) to guide the actions of the city hall, under the same strategic areas. This DPL is fully aligned with the PPA.

4. PROPOSED OPERATION

4.1. LINK TO GOVERNMENT PROGRAM AND OPERATION DESCRIPTION

44. **The Development Objective of this programmatic DPL series is to support the Municipality of Rio de Janeiro in: (i) strengthening fiscal management to improve medium-term fiscal sustainability; and (ii) accelerating the transition towards a low-carbon, resilient and inclusive urban development**. The proposed programmatic DPL series is anchored in the federal government's development strategy and in the municipality's' post-COVID-19 recovery plan. The operation is an entry point for World Bank policy engagement on the medium-term reform agenda of the municipality of Rio de Janeiro by enhancing fiscal and environmental sustainability, and by strengthening the foundations for a green, and inclusive economic recovery post-COVID-19.

45. **The pillars of the proposed programmatic DPL series are closely aligned with the guiding themes of the government's PPA**: **improve the quality of life, while promoting sustainable development and fiscal responsibility**. Pillar 1 is related to the PPA area of governance, as it supports the strategic initiative "fiscal equilibrium". Pillar 2 supports a number of strategic areas under the PPA including: quality of the transport system, revive the center, women and gender equity, low emission district and climate

[33] World Bank. 2017. A Fair Adjustment: Efficiency and Equity of Public Spending in Brazil, Report N. 121480, pp. 121–126.
[34] Rio+30 is an international conference to occur on the second half of 2022 in RJM that will celebrate and reassure the commitments made by several countries during the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992.

management, and resilience and risk management. The DPL is also aligned with the Municipality's Strategic Planning and the Sustainable Development and Climate Action Plan (PDS).

46. **The design of the proposed DPL programmatic series incorporates lessons learned from previous subnational DPLs in Brazil.** Between FY09 and FY21, the World Bank approved more than 25 subnational DPLs in Brazil, many of which contained fiscal pillars. Key lessons from their evaluations include: (i) fiscal measures need to focus on key fiscal outcomes and need to be front-loaded so as to limit moral hazards; (ii) ownership and leadership at the highest levels of government are needed to successfully implement reforms, and the beginning of the political cycle is the most promising time for reforms; (iii) selectivity in the choice of sectors is key to keep the operation focused and deliver meaningful results; (iv) DPLs can serve as a vehicle for deepening policy dialogue on fundamental issues, with the Bank providing technical knowledge; and (v) close collaboration with relevant federal agencies (particularly the National Treasury— STN) strengthens the design of a fiscal program and the monitoring of subnational governments' fiscal status. This programmatic DPL series builds on these lessons.

4.2. PRIOR ACTIONS, RESULTS AND ANALYTICAL UNDERPINNINGS

Pillar I: Strengthening fiscal management to improve medium-term fiscal sustainability

47. **The first pillar of this operation supports Rio's adherence to the Fiscal Equilibrium Plan (PEF), a federal program for subnational fiscal adjustment.** To qualify for the PEF, the municipality is implementing a package of measures among the list of eight potential measures (see Box 3 for details of the program). Rio de Janeiro's choices aimed to reduce recurrent spending pressures, increase revenues, and lower arrears in the short run:

- **Reducing recurrent spending**: adoption of a complementary pension fund, and centralized financial management;[35]
- **Increasing revenues**: concession of state companies and/or the sale of assets (CEDAE); and
- **Lowering arrears and debt service costs**: renegotiation of arrears.[36]

48. **The municipality is committed to meet the agreed fiscal targets within the PEF by 2024 (whose implementation period is aligned with the political cycle of the municipality). This DPL series supports reform measures that will contribute to the success of the PEF program and strengthen the municipality's medium-term fiscal sustainability.** Prior actions supported by this pillar include: (i) the adoption of a new fiscal regime to contain spending and strengthen the fiscal framework in the medium term (PA#1); (ii) a tax reform that will mobilize tax revenues and improve the business environment to contribute to business creation and the post-COVID recovery (PA#2); and (iii) a pension reform that will increase pension revenues and contribute to the reduction of the pension deficit in the medium term (PA#3). The new fiscal regime is the main reform in the context of the PEF because it is linked to the CAPAG rating such that it promotes a clear forward guidance on what should be done to recover the CAPAG B

[35] One of the potential eight actions was the reduction of tax exemptions. This was included in the new fiscal regime approved in 2021 (PA#1).
[36] The reform approved by the municipality created the legal framework for the renegotiation of arrears. It includes the possibility of transforming arrears into contractual debts, and the possibility to promote auctions to pay the arrears with discounts. By February 2022, the municipality of Rio de Janeiro has managed to negotiate the transformation of around R$623 million into contractual debts, of which only R$14 million will be paid with no installments.

assessment every time the municipality is downgraded to CAPAG C.[37] In recovering its credit rating, the municipality will be able to access new credit lines and become eligible to receive federal government guarantees for new loans. Figures 9 to 12 below show the expected impact of these reforms on key fiscal indicators. The simulations show that with the reforms adopted, the municipality of Rio de Janeiro is expected to graduate to CAPAG B by 2022, before the end of the program, indicating the adequacy of the plan to improve fiscal sustainability.

Box 3: Fiscal Equilibrium Plan (PEF)

The Fiscal Equilibrium Plan was established in 2021 to support the fiscal consolidation of states and municipalities (SNGs) which are in fiscal distress but that are not highly indebted. The plan offers borrowing federal guarantees for SNGs that are not creditworthy (those with CAPAG C or D) in exchange for the ex-ante implementation of fiscal adjustment measures prior to joining the plan, and compliance with a set of fiscal targets while the plan is in place. The PEF is designed to be aligned to the political cycle. Thus, it can last up to four years. Ideally, an elected governor or mayor can promote a fiscal adjustment at the beginning of their mandate, receive federal guarantees to take credit operations during their mandate, and recover a CAPAG A or B rating by the end of the four-year cycle. Note that the SNG could join the PEF at any moment during the time in office of a governor/mayor, but the program will end at the end of the mandate.

Prior to joining the PEF, SNGs that are eligible need to implement at least three of the following eight fiscal adjustment measures:[38] (i) privatizations or concessions of state-owned companies (or, at least, acquisition of legislative authorization to privatize); (ii) centralizing all public resources in a single account managed by the Executive Branch; (iii) creation of a “defined contribution” pension plan for new civil servants, in substitution to current “defined benefit” plans; (iv) renegotiating arrears; (v) reduction of tax exemptions by at least by 20 percent; (vi) adopting an annual primary expenditure ceiling, which should not grow more than the annual inflation, measured by the variation of the National Consumer Price Index; (vii) harmonizing the states’ civil service benefits with those of the federal government; and (viii) approving a pension reform similar to the federal pension reform of 2019.

Upon joining the PEF, the SNG must present a credible and feasible fiscal plan with clear targets for the program period, which will be assessed by the federal government’s treasury. The fiscal targets are linked to meeting the federal government's creditworthiness thresholds for current savings and liquidity (95 and 100 percent, respectively) through incremental annual adjustments.[39] While the fiscal targets are agreed upon joining the PEF jointly with STN, how those targets are achieved is not specified to provide flexibility to SNGs. Thus, the SNG can choose the best way to restore its fiscal indicators.

The first guarantee to obtain credit operations is allocated once the SNG approves, upfront, three or more of these fiscal measures and joins the PEF.[40] Subsequent guarantees are obtained conditional on the SNG meeting its pre-defined fiscal targets agreed with the Federal Treasury (STN). A final guarantee is allocated once the SNG regains credit worthiness (CAPAG A or B classification) in the last year of the program. If the SNGs approve four or more fiscal measures from the list above, it will be granted with room to borrow amounts equivalent to 3 percent of the SNG’s Net Current Revenue (NCR) each year while the PEF is in place and the fiscal targets are met.

[37] This is considered an SNG in fiscal distress.

[38] These measures need to be agreed and validated by the treasury in order to join the PEF.

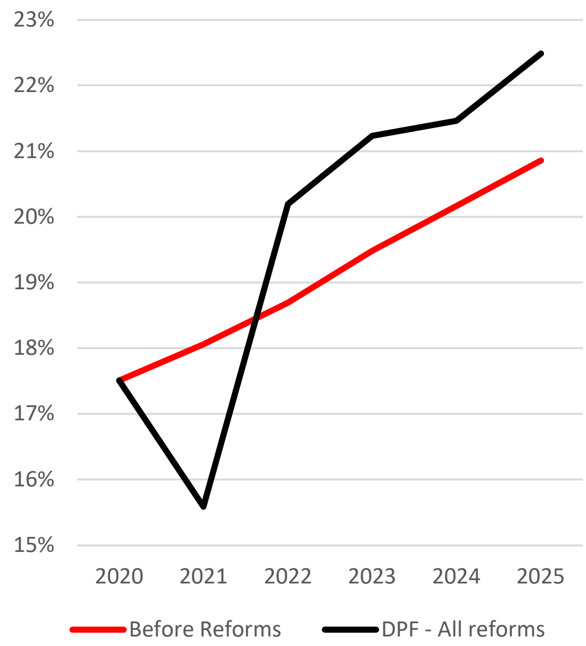
[39] For example, If the current savings indicator is at 98 percent when adhering to the PEF, the indicator is 4 percent above the 95 percent limit. Hence, the indicator will need to improve 1 percent per year.

[40] The PEF is different from past fiscal adjustment programs tried in Brazil because it requires the SNG to do a set of fiscal reforms prior to the program, and the benefit in each year is conditional on the SNG meeting fiscal targets. In the past, most of the fiscal adjustment programs granted benefits before the implementation of reforms. In case the SNG did not implement the reform or failed to meet the agreed fiscal targets, the SNG was supposed to be sanctioned. However, sanctions were not always feasible or applied, and as a result they were not credible.

If the SNG approves only three fiscal measures, it will be granted a lower percentage level of its NCR during the program.

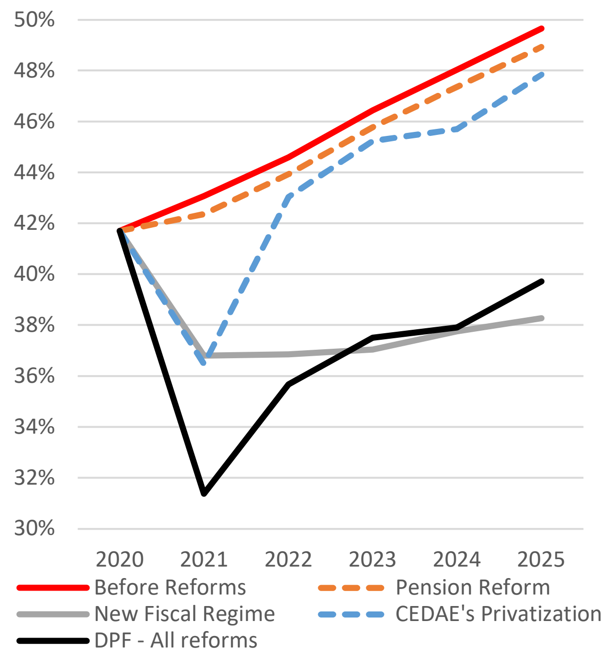
If the SNG does not meet the fiscal target in a year, the federal guarantee is not conceded for that year. However, in the next year, the SNG can achieve a fiscal adjustment that compensates for the previous year. In this case, the SNG would be granted with the past and current federal guarantee. If this is not the case, the previous tranche is lost. In the last year of the PEF, the SNG must deliver a CAPAG A or B rating in order to receive the last tranche, and for the program to be considered successful.

Figure 9: Pension Contributions (percent of NCR)



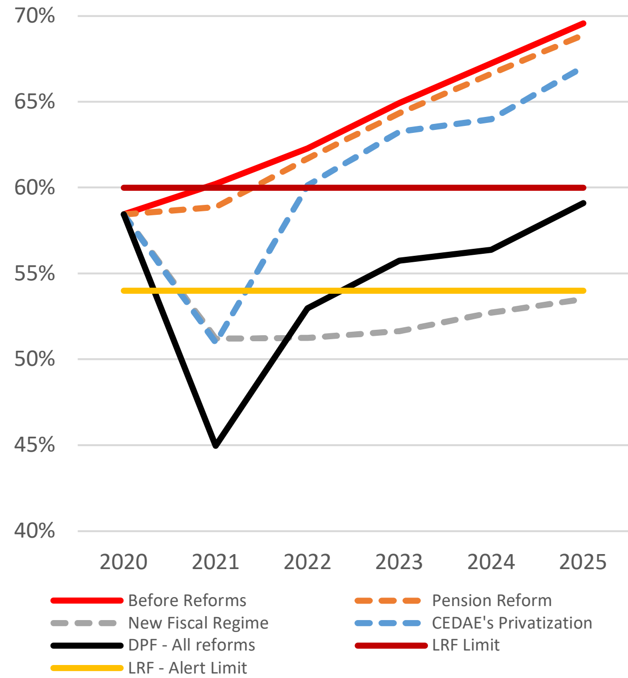
Source: SEFAZ and World Bank calculations.

Figure 10: Wage Bill (percent of NCR)



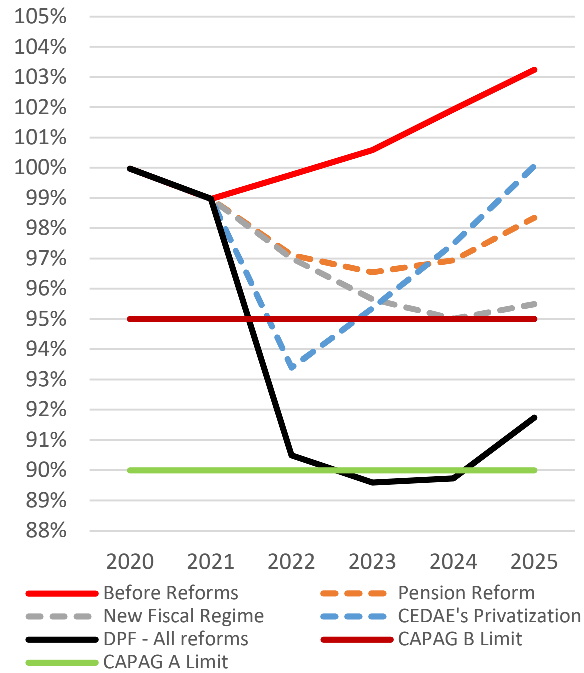
Source: SEFAZ and World Bank calculations.

Figure 11: LRF – Personnel Spending indicator (Personnel Spending as share of NCR)



Source: SEFAZ and World Bank calculations.

Figure 12: CAPAG – Current Savings indicator (3 years weighted average of the ratio between current expenditures and current revenues)



Source: SEFAZ and World Bank calculations.

Prior Action #1: The Borrower has enacted legislation to improve fiscal sustainability by: (i) joining the federal government's plan for the fiscal recovery of subnational entities (*Plano de Promoção do Equilíbrio Fiscal*), and committing to reduce current savings and improve liquidity; and (ii) adopting a new fiscal framework with revenue and expenditure adjustment measures that are triggered in case of fiscal distress, as evidenced by (i) Complementary Law (*Lei Complementar*) No. 235, dated November 3,2021, published in the Borrower's official Gazette on November 4 2021, and (ii) an official letter from the Mayor (*Ofício GBP*) No. 406, dated December 14, 2021 with the attached Borrower's *Plano de Promoção do Equilíbrio Fiscal*.

Indicative Trigger #1: The borrower has enacted a set of decrees and resolutions to improve accountability of the Government through: (i) the adoption of the international public sector accounting standards (IPSAS); and (ii) the strengthening of the internal audit capacities of the Municipal Comptroller General (CGM).

49. **Rationale:** Rio de Janeiro's fiscal woes are mainly related to a rapid rise in recurrent spending, caused by its growing wage bill and pension costs, as well as increases in other recurrent outlays. As spending pressures mounted, the municipality was unable to contain them in the absence of a credible fiscal anchor to guide budget decisions. The previous fiscal framework has become unsustainable. The municipality began 2021 with a large fraction of 2020's wage bill unpaid. In this context, it is very difficult for the government to provide high-quality public services and to comply with climate action (mitigation

and adaptation needs), infrastructure, and social investments that the city demands. On top of this, the municipality was classified as CAPAG C, which means that it is not authorized to receive federal guarantees to take new loans, limiting even more the actions of the government. In 2020 the federal government created the Fiscal Equilibrium Plan (PEF), which aims to allow states and municipalities in fiscal distress, but with moderate level of indebtedness, to access credit operations in exchange for upfront structural fiscal adjustment measures (see box 3 for more details). As Rio de Janeiro now attempts to improve the sustainability of its fiscal framework, it needs to adopt instruments that add credibility and predictability to its fiscal adjustment path, and that will create space to invest in climate adaption and mitigation, infrastructure, and its people.

50. **Substance of Prior Action 1:** To improve the medium-term fiscal sustainability, the government of Rio de Janeiro has decided to join the PEF, a federal program that supports Subnational Governments in re-establishing fiscal sustainability based on the ex-ante implementation of fiscal adjustment measures and the achievement fiscal targets agreed with the treasury. After four years in the program, and as a result of the adjustment measures to join the PEF and actions supported in this pillar, the city is expected to regain its creditworthiness (at least CAPAG B), hence its capacity to obtain federal guarantees for new loans. Since the federal program is aligned with the political cycle in the city of Rio de Janeiro (2021-24), risks of policy reversal are mitigated by design. To complement the PEF, the municipality has adopted a new fiscal regime strengthening the fiscal framework in the medium-term and providing an anchor for forward guidance. The new fiscal regime provides an automatic mechanism triggering fiscal adjustment measures at both revenues and expenditure sides when the municipality's CAPAG is downgraded to C or D. In addition, there is a set of prohibitions aimed to limit wage bill and future pensions growth (with 63.4 percent of current expenditures in 2020, these are the main expenditures of the municipality). The set of prohibitions includes: (i) limitations to new hires on the expenditure side; (ii) creation or increase of earmarking of public revenues; and (iii) tax revenues decrease due to lower tax rates or changes in tax base. Overall, the adhesion to the PEF program provides the commitment to perform a hard fiscal adjustment to improve the fiscal sustainability at the municipality in the short run, while the new fiscal regime is the structural reform to seek fiscal sustainability in the medium term.

51. **Indicative Trigger 1:** To strengthen the city's fiscal management, trigger 1 supports improvements in the accountability of the government, therefore enhancing the budget process. A more effective budget allocation and execution, which reduces off-budget payments and non-compliance with the fiscal law, will increase the redistribution capacity of the municipality through the generation of more resources. Improvements in budget management aim to effectively allocate and execute more resources in the strategic priorities identified by a participatory process. Finally, improved regulations to ensure the implementation of MRJ's integrated financial management information system (Siafic), timely adoption of the international public sector accounting standards (IPSAS)[41] and strengthening of the internal audit capacities of the Municipal Comptroller General are essential to proper account, report and monitor execution of public expenditures, increase transparency and generate consolidated financial statements.

52. **Expected Results:** The PEF program, together with the new fiscal regime, are expected to curb recurrent expenditure growth and to strengthen tax revenues. As a result, the ratio of current expenditures to current revenues (current savings indicator) is expected to decrease from 100 percent in

[41] IPSAS implementation intends to modernize government accounting practices to improve the quality of public governance practices, fiscal information, accountability, and transparency to reduce abuse of power, and safeguard government assets.

2020 to 90.5 percent in 2022, falling below the threshold set by the federal's governments creditworthiness benchmark for subnational entities.[42] Since the implementation of the new CAPAG methodology in 2017, the municipality has never been able to achieve a current saving indicator below the 95 percent limit, and as result the city has been assessed as CAPAG C since then. The fact that the actions supported by this operation bring down the ratio of current expenditures to current revenues below 95 percent is thus a milestone for the city. The resulting increase of the municipality's operating balance will allow the city to reduce its debt payments, reduce arrears, and provide space to create fiscal incentives to encourage investments in climate adaptation and mitigation supported in the second operation. In a counterfactual scenario where no fiscal reforms would be adopted, the current savings ratio would remain above the 95 percent threshold and would continue to increase in the next years. This reform will also allow the municipality to regain access to borrowing with support from federal government guarantees to promote investments in favor of environmental, social, and economic goals. Prior action one together with trigger one are expected to improve the CAPAG liquidity indicator from -188 percent in 2020 to less than 100 percent in 2024.[43] With this, the city would be recovering the CAPAG A rating for this indicator.

Prior Action #2: The Borrower has enacted legislation and decrees to mobilize tax revenues and improve its business environment by: (i) allowing taxpayers to regularize ISS (Tax on Services) debts wrongfully paid to other municipalities via debt write-offs (program popularly known as *De Volta para Casa*); (ii) improving its settlement mechanism for tax administrative disputes between the tax authority and the tax debtors (*transação tributária*); (iii) simplifying ISS withholding rules; and (iv) revoking certain ISS exemptions, as evidenced by (a) Chapters I and V of Title I, Chapter I of Title II, and Title III of Law No. 7,000, dated June 23, 2021, published in the Borrower's official Gazette on July 26, 2021, and (b) regulated by (i) Decree No. 50032, dated December 16, 2021, published in the Borrower's official Gazette on December 17, 2021, and (ii) Decree No. 50039, dated December 20, 2021, published in the Borrower's official Gazette on December 21st, 2021.

Indicative Trigger #2: The borrower has enabled the development of a low-carbon sustainable economy by providing fiscal incentives for promoting investments in mitigation outcomes.

53. **Rationale:** Brazilian companies operate in an environment of high costs, the so called *Custo Brasil*.[44] In part, this is due to the complexity of the Brazilian tax system, featuring over 80 different taxes at the federal, state and municipal level. A tax reform that simplifies the current system is therefore one of the key structural reforms needed to boost potential GDP growth and create more jobs. In this complex system, one of the main challenges facing the Municipality of Rio de Janeiro in strengthening its revenue effort is taxpayer evasion of the Municipal Service Tax (ISS), whereby taxpayers register activities and declare tax returns in a municipality with lower ISS rates than the one where the services/ goods are provided. In these cases, it is common that the tax authorities of the municipality where the services are provided issue an infraction notice to the taxpayer. However, this process of tax litigation is too slow and generates high operational costs for the municipality. Only regarding the ISS, there are more than 62 thousand processes, which adds up to R$38 billion (equivalent to 1.24 times of Rio's 2021 NCR) subject to tax litigation. To deal with this situation, Rio municipality is offering incentives for taxpayers to comply

[42] A SNG with current savings between 90 and 95 percent is assigned a CAPAG B rating; below 90 percent receives a CAPAG A. In order to be allowed to obtain federal guarantees, a SNG needs a CAPAG B rating in the current savings indicator.
[43] A liquidity indicator above 0 and below 100 is assigned a CAPAG A. Otherwise, the SNG receives a CAPAG C.
[44] Dutz, Mark A. 2018. Jobs and Growth : Brazil's Productivity Agenda. International Development in Focus. Washington, DC: World Bank.

with their obligations and help clear the backlog of pending tax evasion cases. A further challenge arises from the complexity of the ISS tax system, which is based on complicated regulations that are difficult for the private sector to navigate, a challenge that is aligned with the Brazilian country level problematic. Thus, the government expects to improve the business environment by simplifying tax regulations to enhance compliance.

54. **Substance of Prior Action 2:** To mobilize tax revenues and improve the business environment, the municipality has (i) launched the program "*de volta a casa*" (back to home) which concedes debt discounts to those ISS contributors operating in Rio that were using a fictitious address in another municipality to pay lower taxes; (ii) updated the mechanism (*transação tributária* or tax transaction) of agreement between the tax authorities and tax debtors to reduce the number of lawsuits and administrative procedures, allowing the anticipation of financial resources to the municipality and the reduction of expenses in litigation[45]; and (iii) simplified ISS legislation.[46]

55. **Indicative Trigger 2:** Trigger 2 reflects the municipality's ambition to become a financial green hub and will support the development of a voluntary carbon market through the Rio Green Stock Exchange. This initiative would be supported through a fiscal incentive that is possible given the expected creation of fiscal space resulting from the package of measures supported in Pillar 1. Specifically, the municipality proposes to offer a discount on ISS taxes (to be defined in coming months) to companies that generate carbon credits and list them on the Rio Green Stock Exchange. The trigger is expected to create a new business model that results in additional jobs to the municipality as a new carbon-market infrastructure and network is expected to be mobilized – from project developers to service providers, intermediaries, and consultancy providers to buyers. A large broker from Singapore already announced its establishment in the municipality due to this initiative.[47] At the same time, with the low-carbon brand established, Rio de Janeiro expects to mobilize additional investments towards infrastructure resilience. A new climate-smart infrastructure can result in significant savings to Rio de Janeiro due to the existing infrastructure losses, particularly in public roads and edifications in high areas of the city, prone to landslides.

56. **Expected Results*:*** The tax reform is expected to increase tax revenues, to simplify the tax system, and to improve the business environment. As a result, each pillar should contribute to increase tax revenues over the next years. In particular, it is estimated a cumulative impact of close to R$1 billion between 2021 and 2024. More specifically, real ISS tax revenues are expected to increase from R$6.3 billion in 2020 to R$6.6 billion in 2024 (5 percent real increase). In an alternative scenario with no tax reform, the ISS tax revenues were estimated to decrease to R$6.1 billion in 2024 (3 percent real decrease). Thus, it translates into an increase of more than R$500 million when compared to the alternative scenario with no reform (8 percent of 2020 ISS tax revenues). This tax reform will contribute to the short-term fiscal adjustment, helping the MRJ to attain a CAPAG B rating, which will allow the city to regain access to

[45] The new rules established two types of tax transaction: the individual transaction (*transação individualizada*) and the adhesion transaction (*transação por adesão*). The first one is directly performed in relation to a specific taxpayer, by demand of the taxpayer or by the initiative of the tax authorities. The transaction could grant the taxpayer a reduction of interest and fines related to the tax debts, new deadlines and payment conditions, change of guarantees presented by the taxpayer, possibility of tax compensation and payment with real estate properties (*dação em pagamento*). The second type of transaction (*transação por adesão*) is focused on the solution of litigation proceedings related to tax infractions, as well as on the rationalization and efficiency in the collection of taxes by the municipality.
[46] The ISS simplification supported by this operation includes: (i) consolidation of ISS withholding rules into a unique article to simplify the tax reporting; and (ii) revoking some ISS exemptions. These include ISS exemptions that were not in force and some exemptions that conflict with tax rules for self-employed professionals and companies subject to SIMPLES Nacional.
[47]*https://www.prnewswire.com/news-releases/rio-de-janeiro-working-with-aircarbon-exchange-to-establish-voluntary-carbon-credit-marketplace-in-brazil-301419638.html*

borrowing with support from federal government guarantees to promote key investments. This reform will improve the business environment and support the city's post COVID-19 recovery. Finally, the fiscal space generated with measures in this pillar could contribute to finance fiscal incentives for low-carbon urban development supported by trigger 2. This trigger is expected to generate 1,000,000 tons of carbon credits in the city of Rio de Janeiro.

Prior Action #3: The Borrower has enacted legislation to reduce the public pension deficit by: (i) increasing the contribution rate to civil servants (active and inactive ones, pensioners, and beneficiaries of the special pension) from 11 percent to 14 percent; and (ii) establishing a contribution-based complementary pension scheme for civil servants from the executive and legislative branches of the government, as well as from the Audit Office (*Tribunal de Contas*), which would reduce medium-term public pension liabilities, as evidenced by (a) Article 6, Paragraph 1 of Law No. 6,852, dated April 14,2021, published in the Borrower's official Gazette on April 15, 2021; and (b) Law No. 6,982 dated June 29, 2021, published in the Borrower's official Gazette on June 30, 2021, and regulated by Decree No. 49370, dated September 1, 2021, published in the Borrower's official Gazette on September 2, 2021.

Indicative Trigger #3: The Borrower has enacted a set of decrees and issued regulations to improve unified pension record management and enable more efficient audits.

57. **Rationale:** Rio de Janeiro operates a pay-as-you-go pension system, financed through civil servant contributions at a fixed percentage of their salaries and employer contributions made by the municipality at double the rate of employee contributions. As the number of retired civil servants with generous pre-2003 pension rights grew, the deficit of the unsustainable pension scheme continuously increased, putting an additional burden on the government's accounts. The financial deficit in the Rio de Janeiro municipal civil service pension system (for all branches of government) reached BRL 1.02 billion in 2021, equivalent to 20 percent of the municipality's current revenues. A further challenge persists in the area of pension scheme management. Different branches of government in Brazil have strong autonomy and they seldom share pension information with the executive branch, undermining integrated management of the pension system, impeding audits, and complicating forecasts of future pension expenditures. These challenges made the pension reform one of the top priorities for the municipality in pursuit of a more sustainable fiscal outlook.

58. **Substance of Prior Action 3:** To shift the public sector pension scheme on to a more sustainable trajectory, the municipality of Rio de Janeiro has increased the pension contribution rate from 11 percent to 14 percent to active and inactive civil servants, pensioners, and beneficiaries of special pensions. The contribution is assessed on wages of active civil servants as well as pension amounts that exceed the RGPS (*Regime Geral de Previdência Social* – the general pension scheme in Brazil) benefit ceiling (the federal public pension system for the private sector workers), which corresponded to R$6,433.57 in 2021. The municipality has also introduced a contribution-based complementary pension scheme for new civil servants (in Brazil it is known as *previdência complementar*), which is compliant with the federal pension reform introduced in 2019. Newly hired workers of the executive and legislative branches of government, as well as the Audit Office (*Tribunal de Contas*), will have an opportunity to contribute to an individual pension savings account, matched by employer contributions at that same rate. Consequently, future pension benefits paid by RPPS (*Regime Próprio de Previdência Social* – the federal pension scheme for civil servants) will be capped at the RPGS benefit ceiling, limiting future pension liabilities of the government.

59. **Indicative Trigger 3:** The indicative trigger refers to the need to effectively manage consolidated pension records and perform regular audits of all three government branches (legislative, executive and judiciary). This would improve the fairness and transparency of the pension scheme by eliminating any disparities across branches while granting pension benefits. Trigger 3 is also a fundamental step towards a more ambitious integration of some human resource and pension scheme management functions, which would allow (i) human resource policy decisions to be informed by pension cost implications in the short, medium, and long term; and (ii) more precise pension liability monitoring by early forecasting of new retiree inflows and their expected benefits. Recent experiences from other subnational governments in Brazil suggest that pension record audit was greatly simplified by record system unification and improved IT solutions and could yield savings of 10 to 20 percent of pension expenditures.

60. **Expected Results:** Overall, it is expected an increase in real pension revenues from R$4.4 billion in 2020 to R$5,7 billion in 2024 (30 percent real increase), which translates into an increasing of pension revenues as a share of net current revenues from 17.5 in 2020 to 20.6 by 2024. The introduction of the complimentary regime for civil servants is not expected to have an immediate fiscal impact, but reduces long term actuarial deficit, as it allows to cap RPPS pensions of future civil servants at the RGPS benefit ceiling.

Pillar II: Accelerating the transition towards a low-carbon, climate-resilient and inclusive urban development

61. **The Municipality of Rio de Janeiro acknowledges its vulnerability to climate change and the need to advance in greening the transport system, the highest emitting sector of greenhouse gases in the city**. Rio's sea level location and geography makes its population increasingly more susceptible to landsides and floods during the rainy season and, in the medium term, to sea level rises and heat waves. Thus, Rio has long understood that cities play a key role in combating climate change and has been global leader in this agenda, from hosting Rio 92 to a recent C40 presidency. However, the city has seen prolonged inefficiencies in the city's public transport system, in particular the BRT, that have contributed to a steady loss of ridership since 2015. Passengers have been migrating to less efficient lower capacity buses, and to cars and two-wheelers. In addition, the shift towards more sustainable mobility patterns in Rio has also been inhibited by the limited availability of adequate and safe non-motorized transport infrastructure and its integration with the public transport system, which explains why cycling, for example, accounts for only 1 percent of all trips in the city. An increased reliance on sustainable mobility modes, along with a broad strategy to improve building energy efficiency, waste management, green infrastructure, and disaster risk management solutions, is central to Rio being able to achieve its overall climate goals, thereby contributing to the fulfillment of Brazil's carbon emissions mitigations targets as outlined in its 2022 Update on the First Submission of the Nationally Determined Contributions (NDC) under the UNFCCC.

62. **This pillar will support the Municipality of Rio in shifting to a low-carbon, resilient and inclusive urban development through more sustainable mobility and strategies to mitigate and adapt to climate change**. This pillar is expected to steer Rio in improving public and non-motorized transport to avoid the migration of riders to higher-emitting transport modes. It also expects to strengthen the municipality's cross-sectoral strategy to reduce GHG emissions and foster mitigation and adaptation to climate change. To do so, the package of reforms includes measures to improve the operational efficiency, multimodal integration, and safety for women in the BRT system to attract passengers to public transport (PA#4),

measures to promote low-carbon non-motorized transport through regulations that expand the cycling network and make the urban environment more conducive to walking and cycling (PA#5), actions that promote integrated practices in, among others, urban mobility, low-carbon and climate-resilient infrastructure, energy, and waste management in a Low Emission District (PA#6), and the adoption of a municipal sustainable development and climate action plan, aligned with the Sustainable Development Goals and the Paris Agreement (PA#7).

Prior Action #4: The Borrower has enacted legislation to improve service efficiency and safety of the BRT system, thereby reducing modal shift to high-emission private vehicles by: (i) separating the system's fare collection management from the bus operation, thereby facilitating the digitalization of the electronic ticketing system and intermodal integration, and increasing data transparency; (ii) instituting a gender program to prevent and address sexual harassment in its public transport system, as evidenced by (a) Law No. 6,848, dated March 25, 2021, published in the Borrower's official Gazette on March 26, 2021; (b) Decree No. 48580, dated March 5, 2021, published in the Borrower's official Gazette on March 8 2021; and (c) Law No. 6,938, dated June 14 2021, published in the Borrower's official Gazette on June 16 2021, whereas the two latter are regulated by the joint Resolutions No. 52, 53, and 54, dated December 29, 2021, published in the Borrower's official Gazette on December 30, 2021 **Indicative Trigger #4:** The Borrower has enacted a legal framework to foster a more competitive and low-carbon bus sector market by separating bus operation from fleet provision in the BRT system.

63. **Rationale:** The transport sector, driven by road transport[48], ranks first in GHG emissions in the city of Rio de Janeiro, representing 35.4 percent of total emissions in 2019, which calls for increased efforts from the municipality to attract passengers to public transport and active mobility. The city's public transport system, the second largest in Brazil, is facing an unprecedented crisis with a steady drop in passenger numbers, reflecting the decline in service quality. First established in 2012, Rio's BRT system has, since the 2014 economic crisis, struggled to retain passengers, consequently failing to earn sufficient tariff revenues to cover capital and operating costs.[49] The reduced demand, in turn, contributed to a decreasing ability of the concessionaires to maintain adequate service levels and meet contractual service obligations. With 34 percent of BRT stations ending up closed, the fleet size reduced to 50 percent and services were cut from the less profitable lines in the city's low-income areas. Between 2015 and 2019, the BRT system experienced a 32 percent reduction in demand, with a further 49 percent drop in 2020 because of COVID-19 isolation measures. Alarmingly, between 2015 and 2020, the city saw an increase of 11 percent in the car fleet and of 30 percent on the motorized two-wheeler fleet[50]. The inefficient provision of services on the BRT system[51] has been subject to daily reports, underlying the urgency of adopting concrete measures to restore the provision of services in line with the needs of the population of Rio de Janeiro.[52] Besides enabling access to opportunities, studies based on the city of Belo Horizonte show that BRTs can lower emissions by 4 to 20 percent when they substitute regular lines of slower and

[48] 64.5 percent of the transport sector, a 1.7 percentage point increase from 2017.

[49] User tariffs represent the only revenue source for the operator, according to the current remuneration formula, with no additional reward for the quality of the services provided.

[50] Ministério da Infraestrutura, Secretaria Nacional de Trânsito (SENATRAN), Registro Nacional de Veículos Automotores (RENAVAM). *https://www.gov.br/infraestrutura/pt-br/assuntos/transito/conteudo-denatran/estatisticas-frota-de-veiculos-denatran*

[51] On the three existing corridors *Transoeste, Transcarioca* and *Transolímpica*.

[52] Law 48465.

lower-capacity buses[53]. The municipality's challenge is to avoid further modal shifts toward high-emission cars and motorcycles, and to inefficient semi-formal buses, and attract passengers back to the BRT system[54]. The lack of detailed demand data, given the outdated and bus operators controlled ticketing system, prevents the municipality from rationalizing and enforcing service provision. The ticketing process currently does not provide data that would allow for an understanding of the actual and potential demand for each mode, measuring financial impacts for each participating agency/transport mode, and, thus, setting tariff policies, rules, and compensations for multimodal integration.

64. **Additional challenges arise from concerns for women's safety when using public transport.** Across countries of all income ranges, lack of personal safety on public transport disproportionately impacts women and constrains their access to economic and social activities.[55] In developing countries, concerns about sexual harassment are estimated to reduce female labor force participation by 16.5 percent.[56] In Santiago, Buenos Aires, and Quito nearly nine in ten women have experienced or witnessed sexual harassment, with harassment on buses being five times more common than on subways.[57] Women riding public transport in Rio experience harassment once a week, and a third of riders are willing to forego the equivalent of 10 percent of the fare to ride in a women-reserved space.[58] Safe transportation is a crucial element in enabling women and girls in Rio to access to opportunities, as nearly 54 percent of women rely on municipal buses compared to 46 percent among men.[59] Women's safety in public transport has a direct impact on the ability of this sustainable mode to retain passengers and prevent them from shifting to private motorized modes. In Santiago, Buenos Aires, and Quito, the already mentioned study identified a high level of intent of current public transport riders to switch to another mode, cars being the first choice, should economic circumstances permit. Studies in different contexts find that the more unsafe people feel on public transport, the less likely they are to use it. [60]Additionally, research conducted in contexts as diverse as Colombia, Bolivia, the Dominican Republic, India, and Vietnam all found that women switch from public transport to other modes – specifically, taxi and ride-hailing services – as a reaction to feeling vulnerable to sexual harassment or other types of gender-based violence;[61] in Cairo (Egypt), 11 percent of the women who had experienced sexual harassment in public transport were found to never used public transport again.[62] Numerous studies in the United States have also concluded that

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[53] CCDR Brazil (mimeo).

[54] The Municipality has set the stage for a series of reforms, by temporarily intervening in the BRT concessions in March 2021, to reestablish compliance with contractual rules. This intervention ended in February 2022 and the municipality terminated the contracts of current BRT concessions on contractual noncompliance grounds. While the municipality prepares the new concession for the bus operation in the BRT system and the acquisition of the bus fleet, the current operation is being temporarily run by Mobi.Rio, a recently created municipal company responsible for planning, managing, and overseeing public transport operations.

[55] Kondylis, F. et al. 2019. Demand for Safe Spaces: Avoiding Harassment and Stigma. Washington, DC: World Bank.

[56] Sustainable Mobility for All. 2019. Global Roadmap of Action Towards Sustainable Mobility: Gender. Washington DC, License: Creative Commons Attribution CC BY 3.0

[57] Also, in these cities between 61 percent and 73 percent of women are concerned about security in public transport. CAF and FIA Foundation. 2017. Ella se Mueve Segura – She Moves Safely: A study on women's personal security and public transport in three Latin American cities.

[58] Kondylis, F. et al. (2019). Demand for Safe Spaces: Avoiding Harassment and Stigma. Washington, DC: World Bank.

[59] SETRANS. (2016). Origin-Destination Survey in RJMR, 2012.

[60] Lynch, G., Atkins, S. 1988. The influence of personal security fears on women's travel patterns. Transportation 15, 257–277.

[61] Quinones, L.M. 2020. Sexual harassment in public transport in Bogota. Transportation Research Part A 139, 54–69; Kash, G. 2019. Always on the defensive: The effects of transit sexual assault on travel behavior and experience in Colombia and Bolivia. Journal of Transport & Health 13, 234-246; Alonso, F., Useche, S.A., Faus, M., Esteban, C. 2020. Does urban security modulate transportation choices and travel behavior of citizens? A national study in the Dominican Republic. Frontiers in Sustainable Cities 2, 42; Nguyen, M.H., and D. Pojani. (2021). Why are Hanoi students giving up on bus ridership? Transportation; Saigal, T., and N.V.M. Rao. 2021. Role of safety in declining public transport use: Empirical evidence from India. Journal of Economic and Administrative Sciences. December.

[62] Alonso, F., Useche, S.A., Faus, M., Esteban, C. 2020. Does urban security modulate transportation choices and travel behavior of citizens? A national study in the Dominican Republic. Frontiers in Sustainable Cities 2, 42.

personal safety is an important factor in determining mode choice.[63] The effects of lack of safety on public transport on mode choice is also becoming evident in Rio. Due to lack of safe public transport, women have been resorting to high-emission two-wheelers at a faster pace than men: between 2014 and 2020, the number of women who obtained a motorcycle driver's license increased by 56 percent in the State of Rio de Janeiro, while for men this increase was 17 percent.[64]

65. **Substance of Prior Action 4:** The prior action supports critical legislation that enables the Municipality to begin the upgrading of the BRT's governance and operational framework to expand and attract more passengers. Law 3167 of December 27, 2000, was altered to transfer fare collection and ticketing management from the bus operators' control to the Municipality – in line with best practices to unbundle fare collection from bus operation[65]. It also allows the Municipality to concession a Digital Ticketing System to a third party, which must provide full demand data access and oversight to the municipal government. The new fare collection and ticketing system's governance will allow the rationalization of routes and facilitate intermodal integration by (i) expanding digital payments; and (ii) allowing the municipality to implement a data-based tariff policy integration, that would eventually include all municipal transport modes. The second set of regulations to revamp the BRT system shows Rio's strong commitment to improving safety to women and girls in the public transport by enacting a Law, a decree, and resolutions that enable a comprehensive gender-focused program to combat sexual harassment, including: (i) a complaint tracking and response system, with methodology, procedures, and a unified channel for reporting abuse through the city's online and face-to-face 311 system; (ii) a training program for bus drivers and public agents; and (iii)guidelines and commitments for in-station and in-vehicle communication to prevent harassment, stimulate notifications, and encourage women to use the BRT system. Measures under this Prior Action will thus contribute to improve the medium-term financial sustainability and competitiveness of the BRT system against high-emission transport modes, helping support a higher and more stable level of ridership by attracting users to the system, in particular women and girls.

66. **Indicative Trigger 4:** The indicative trigger furthers the Municipality's commitment to improve and expand the BRT system by transforming its operational model. Many cities around the world, including Rio, have been managing their bus services through a two-tier model, where the public sector is usually responsible for infrastructure development, service planning, and regulating and managing operations, while the private sector procures bus fleet, operates bus services, and manage fare collection according to specifications and standards set in contracts. Some cities at the forefront of urban mobility have been successfully testing different operational models that unbundle bus operation services from fare collection and fleet provision to leverage the specialization of each providing agent. Rio has already taken the first step by returning the control of the fare collection and ticketing system to the Municipality (PA#4). The follow-up regulations will separate bus operations from fleet provision through a state-intermediated model – following the steps of Santiago, the London New Routemaster, and Singapore. Unbundling provision and operation has proved to be an attractive model for international investors and also enables the introduction of electric buses in the fleet. Although e-buses offer much lower operational costs, they have considerably higher upfront capital costs than diesel buses[66]. Most bus operators do not have access

[63] For example, Koppelman, F., and E. Pas. (1980). Travel-Choice Behavior: Models of Perception, Feelings, Preference, and Choice. In Transportation Research Record 765, TRB, National Research Council, 26–32.
[64] Ministério da Infraestrutura, Secretaria Nacional de Trânsito (SENATRAN), Registro Nacional de Veículos Automotores (RENAVAM).
[65] In LAC, Sao Paulo, Bogota and Santiago are benchmarks for the separation of the fare collection system from bus operation.
[66] In Brazil, e-buses are four times more expensive than diesel buses.

to credit to purchase high-cost e-buses; therefore, the current operational model ends up delaying the deployment of greener public transport. By adopting these policy reforms, Rio expects to improve the efficiency of the system, advance the electrification of the fleet, and ultimately attract more users to public transport.

67. **Expected Results:** The Borrower expects that the implementation of the measures under the two operations will contribute to the modernization and greening of the fleet, by improving the frequency and reliability of bus services and reducing the average headway, from 11.4 minutes to 6.5, and by increasing safety for women. These actions are ultimately expected to result in increased operational efficiency and in at least a 40 percent increase in ridership of the BRT system[67], an efficient and lower-carbon transport mode, by shifting passengers away from private motorized vehicles (cars and motorcycles) and more polluting informal transport. In addition, the measures aimed at modernizing the ticketing system are expected to increase the share of passengers using digital payment methods from 79 to 84 percent, reduce payment evasion, and improve the system's operational efficiency, by enhancing the quality of the demand data available to the operator. In turn, the improved data can allow for more optimal decision-making regarding route rationalization and other operational decisions, with potentially significant downward impacts on the overall vehicle miles traveled and emissions. For example, in Dalian (China), improved operational strategies in the public transport system were associated with CO_2 emissions reductions of approximately 13 percent.[68] Rio's BRT ticketing reform is also expected to facilitate the overall use of the BRT system and improve its functional multi-modal integration with other public transport modes, with potentially significant emissions reductions impacts. In Bogota (Colombia), three times the amount of CO_2 a year was estimated to be saved through the creation of a multimodal transport system integrating walking and cycling with the BRT system, compared to what could be saved through a mitigation strategy focusing on only one of these modes.[69]

68. The measures are also expected to improve women's safety and ridership in the public transport system, under a conducive environment with trained bus drivers and expanded channels for reporting harassment, such as the implementation of a tracking and response system for documenting and addressing complaints. The Borrower expects that at least 75 percent of sexual harassment complaints submitted to the new tracking and response system are responded. Given the overwhelming global evidence on the association between feeling safe on public transport and mode choice, especially among women, improving women's safety in the BRT system in Rio can be expected to result in increased BRT ridership and, thus, a reduced share of more polluting, private motorized modes. Indeed, studies on the topic have documented the potential of safety to enable a shift towards public transport. In the United Kingdom, 10 percent of the population were found to consider using public transport if their fears about personal safety were addressed.[70] In Australia, increased safety in public transport was found to positively impact its use, the effect being greater than that of trip distance.[71]

[67] Excluding the *Transbrasil* line, to be inaugurated in 2022.
[68] Tang, C., Ceder, A., and Y-E. Ge. 2018. Optimal public-transport operational strategies to reduce cost and vehicle's emission. PLoS ONE 13(8): e0201138.
[69] Wright, L. and L. Fulton. 2005. "Climate Change Mitigation & Transport in Developing Countries", Transport Reviews, 25(6), pp. 691–717, November.
[70] Crime Concern. 2004. People Perceptions of Personal Security and Their Concerns about Crime on Public Transport: Research Findings. London, UK: Department for Transport
[71] Delbosc, A. and G. Currie. 2012. "Modelling the causes and impacts of personal safety perceptions on public transport ridership." *Transport Policy*: 24, 302–309.

Prior Action #5: The Borrower has enacted regulations that incentivize the use of active mobility rather than high-emission vehicles, thereby reducing transport related greenhouse gas emissions by: (i) expanding its Mobility System by Bicycles, which includes earmarking public land to increase the number of cycleways connecting to neighborhood centers, key public facilities, and structural transport stations; and (ii) establishing the program On the Way to School 2.0 (*A Caminho da Escola 2.0*), to improve the walking and cycling safety conditions in the surroundings of schools, as evidenced by (a) Decree No. 49461, September 21, 2021, published in the Borrower's official Gazette on September 22, 2021; and (b) joint Ordinance SMTR/CET-RIO No. 1, dated January 26, 2022, published in Borrower's official Gazette on January 27, 2022.

Indicative Trigger #5: The Borrower has enacted a legal framework to further expand low-carbon mobility in the city and connect low-income areas, by adopting the Municipal Cycleway Plan, with commitments, responsibilities, and an accountability framework to expand and consolidate a comprehensive cycling network.

69. **Rationale:** Rio has one of the most extensive cycleway networks in Latin America[72] and saw an increase of 50 percent between 2012 and 2016 (from 303 km to 450 km, respectively). However, the cycling network is concentrated in the wealthier Southern and Central neighborhoods and has not expanded between 2017 and 2020. More importantly, the lack of policies that constrain the use of cars, and faulty connections between mass transit stations and cycleways are not conducive for promoting non-motorized transport to reduce congestion and GHG emissions. Cycling represents only 1 percent of the total trips in Rio[73], a shy number when compared to cities like Bogota, where the cycling modal share is 6.6 percent[74]. The 2018 National Survey on the Profile of the Brazilian Cyclist reveals that the lack of adequate infrastructure (50.4 percent) and road safety (29.9 percent) in Rio de Janeiro are the main barriers for *cariocas* to cycling more often[75]. Corroborating this survey, data show that a significant share of travel to and from schools in Brazil's major cities is currently undertaken by private motorized modes – trips that to some extent could be shifted to walking or cycling. Data from the 2011 household survey show that, in Rio, approximately 15 percent of trips by people aged 5-17 are made by private modes, while nearly 45 percent of students aged 0-4 are driven to school by cars or motorcycles. The more recent household travel survey data from two other large cities in Brazil confirm those trends. In Sao Pãulo, nearly all trips by people aged 5-17 are to and from school, and only about half of the trips use non-motorized transport, while about 15 percent of the trips use a private motorized vehicle[76]. In Recife, only one-fifth of trips for educational purposes use NMT as the primary mode, while about 30 percent rely on a car or a motorcycle[77]. The use of zero-emissions (non-motorized) transport for daily commuting to schools is greatly impeded by the Rio's dire road safety situation – as manifested by the 11-percent increase in fatal road crashes between 2006 and 2020. Astoundingly, road crashes are the main cause of external death in children aged 5 to 14 years old[78]. Besides improvements in infrastructure, studies show that traffic calming

[72]São Paulo has the largest network in Brazil, with approximately 680 km of cycleways, while Bogota, which has been long investing in active mobility, has approximately 630 km of exclusive routes to cyclists.
[73] Plano de Mobilidade Urbana Sustantável da Cidade do Rio de Janeiro, 2016.
[74] Encuesta de Movilidad 2019, Alcadia de Bogota.
[75] Other reasons: public safety (11.3 percent), better signage (5 percent), other (2.1 percent). Pesquisa Perfil do Ciclista 2018. [global evidence on how traffic calming, road safety, and modal integration helps shift trips to NMT].
[76] DE/GPA/PAP/CPA. 2020. Mobilidade da População por Faixas Etárias na Região Metropolitana de São Paulo em 2017.
[77] ICPS Recife. 2016. Pesquisa Origem-Destino do Recife. Edição 2016.
[78] DATASUS.

measures in schools' perimeters contribute to students walking or biking to school[79]. Rio's 2016 Sustainable Urban Mobility Plan underscores the importance of addressing those infrastructure and policy gaps to increase the share of non-motorized active mobility in the city.

70. **Substance of Prior Action 5:** The prior action supports regulations that promote zero-emissions passenger transport modes and their multi-modal integration with efficient public transport. Decree No. 49641 of September 22, 2021, enables the expansion of the cycling network, based on the guidelines defined in the 2016 Sustainable Urban Mobility Plan (PMUS) and its stated objective of ensuring that the movement of people and goods in the city occurs in a sustainable way. The Decree contributes to this objective by earmarking public land to create 123 new cycling segments that will connect the existing cycling network to mass transit stations and traffic generator nodes, such as schools, hospitals, and business centers, prioritizing the lower-income and less served by public transport North (50 segments) and West regions (33 segments) of the city. Based on global experience, improved cycling infrastructure and bicycle parking facilities at public transport stations can significantly increase the size and predictability of demand for public transport services.[80] The decree is thus a key step for the consolidation and expansion of an integrated cycling network, by dedicating these valuable areas of the city to the cycling connections and setting the timeline for the creation and implementation of the City's Cycleway Plan (360 days). Complementing this measure, the joint Ordinance SMTR/CET-RIO No. 1 of January 27th, 2022, expands to the entire city the On the Way to School 2.0 program. The regulation aims to improve pedestrian and cycling mobility conditions to promote zero-emission transport by setting the guidelines, commitments, and responsibilities to implement traffic calming measures. These include signaling that favor active mobility, low-speed zones, tactical urbanism in the short-term and comprehensive planning in the medium-term[81], and educational campaigns. Furthermore, the criteria for those interventions are going to be based on a risk map prepared by the school network community. This crucial program builds upon the results of the pilot program from December 2021 around a school in *Realengo*, in the poorer Western region of the city, supported by the Institute for Transportation and Development Policy (ITDP Brazil) and the FIA Foundation, targeting those that more urgently require actions to facilitate walking and cycling.

71. **Indicative Trigger 5:** This indicative action reflects the municipality's commitment to consolidate an integrated plan to further expand low-carbon mobility, quadruple the share of bicycle trips by 2030, and contribute to ending the supremacy of high-emission cars in the city. The Borrower will enact a decree that establishes the adoption of the Municipal Cycleway Plan, regulating the Complementary Law 199 dated January 17, 2019, with a framework to expand and consolidate a comprehensive cycleway network connecting low-income areas. The Plan will build on the 2019 Sustainable Urban Mobility Plan, on the guidelines and targets of the Sustainable Development and Climate Action plan, and on the decree that expands the connections between cycleways and public transport systems and key services. The Plan will establish the commitments, responsibilities, criteria, and an accountability framework for the expansion of the cycling network, including actions to leverage private capital financing to upgrade and maintain

[79] Nicholson, L. M. et al. 2014. "Developing a measure of traffic calming associated with elementary school students' active transport". *Transportation Research Part D: Transport and Environment*. Volume 33, 17-25. Pucher, J. et al. 2010. "Infrastructure, programs, and policies to increase bicycling: An international review.: *Preventive Medicine*: 50(Supplement 1), S106-S125.

[80] Geurs, K. T. et al. 2016. "A multi-modal network approach to model public transport accessibility impacts of bicycle-train integration policies." *European Transport Research Review*: 8(4): 25.

[81] Tactical urbanism refers to small, specific, local, and low-cost interventions that can evolve incremental improvements into a more comprehensive planning of an entire area to catalyze long-term change. Examples of tactical urbanism that improve road safety are temporary bike lanes and the redesigning of streets' geography and intersections with paint.

infrastructure, the allocation of bicycle parking facilities, rules, and guidelines for the integration of the shared-bike system integrated with the public transport network, and road safety actions and targets.

72. **Expected Results:** The Borrower expects that the measures will enable at least 100 cycling connections between main cycleways and mass transit stations and traffic generator nodes by 2024, with at least 40 percent of the medium- and high-capacity transport stations having bicycle connections, and the implementation of low-speed zones around at least 50 schools' perimeters by 2024. These measures are expected to improve the competitiveness and attractiveness of non-motorized and zero-emission transport modes, by making their use more convenient and safer. By 2030, the Borrower expects that the investment in cycling infrastructure expansion and multi-modal integration will lead to a fourfold increase in the number of bicycle trips.

Prior Action #6: The Borrower has enacted legislation to establish a low emission district in the city center that promotes, inter alia, low- and zero-emissions mobility, urban afforestation, climate-resilient infrastructure, building energy efficiency, and sustainable solid waste management, as evidenced by Section I of Chapter VI and Annex I of the Complementary Law (*Lei Complementar*) No. 229, dated July 14, 2021, published in the Borrower's official Gazette on July 15, 2021.

Indicative Trigger #6: The Borrower has enacted a regulation to further strengthen the green transformation of the Low Emission District, by establishing a governance structure across Secretaries and a monitoring and evaluation methodology of local GHG emissions.

73. **Rationale:** Brazil has relatively ambitious Nationally Determined Contributions (NDCs): in addition to the significant values established for its mitigation targets, Brazil is one of the very few countries in the region that have taken on commitments not only for 2030, but also a target for 2025, allowing for better monitoring of the evolution of its mitigation actions.[82] Rio has been at the forefront of climate related initiatives since the Rio 1992 and Rio+20 conferences, and as evidenced by the recent approval of the city's Sustainable Development and Climate Action Plan (PDS, see PA#7), which directly supports several cross-sectoral climate objectives and defines the guidelines and actions to be implemented until 2030, in alignment with the Sustainable Development Goals established by the United Nations. Establishing a Low Emission District in central Rio de Janeiro, akin to the "Low Emission Zones" (LEZ) in developed countries[83], has strategic national importance by showcasing how policies can be defined and implemented at the city level to help implement the country's overall NDCs, with a focus on the highest-emission sectors, transport and energy. Evidence from other cities confirms the expected climate benefits of these types of policy initiatives: in London, CO_2 emissions originating in the Ultra LEZ (central zone) declined by 13 percent within the first six months, while in the overall LEZ the emissions of black carbon, a major climate forcing agent, declined by over 40 percent. The definition of a Low Emissions District can serve as a starting point for eventually expanding the scope of regulations towards 'ultra-low emissions zones', or 'zero emissions zones' in the city. Along with the other 34 signatory cities of the C40 Green and Healthy Streets Declaration, Rio has pledged to ensure that a major area of the city is zero emission by 2030.

[82] Brazil's Update of the First NDC submission (December 2020) commits to reducing GHG emissions by 37 percent below 2005 levels in 2025, and by 43 percent below 2005 levels in 2030. Source: Paris Agreement, Brazil's Nationally Determined Contribution (NDC): https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Brazil%20First/Brazil%20First%20NDC%20(Updated%20submission).pdf
[83] In the European Union there are approximately 250 LEZs currently in place (McGrath, M. 2019. "London's ULEZ: How does it compare?" BBC, April 8.).

74. **Substance of Prior Action 6:** The prior action supports a law that creates the Low Emission District in Rio's city center.[84] The objective of the measure is to create, in the City of Rio de Janeiro, a 35,000 m^2 district, which will see a set of multi-phased cross-sectoral actions and urban interventions to transition from car-focused streets to a carbon-free environment. The establishment of the Low Emission District is aligned with the target of carbon neutrality by 2050 established in the Paris Agreement and will trigger putting in place measures across several sectors, defined in the supported Law, in the 2021-24 Strategic Plan and in the Sustainable Development and Climate Action Plan (PDS). These measures include, among others, low-carbon and climate-resilient infrastructure and micro-drainage solutions, urban afforestation, incentives to promote the use of non-motorized transport and urban logistics and deter high-emission vehicles within the perimeter, the implementation of infrastructure for electric vehicles, incentives to improve the energy efficiency of buildings, actions to support sustainable management of waste[85] – such as increased recycling of dry waste[86] - , environmental and climate education, and instruments to measure GHG emissions and pollution. Finally, the municipality envisions implementing an area of zero GHG emissions from mobile sources within the District by 2030. The governance and monitoring mechanisms of the Low Emission District and the conditions for its implementation will be further regulated by an act of the Municipal Executive Power.

75. **Indicative Trigger 6*:*** Given the Low Emission District's groundbreaking nature, the Borrower has been showing its strong commitment to advancing the green transformation of this area in the city center and is preparing a legal framework that will establish the governance structure across Secretaries, the required follow-up policy actions, and the monitoring methodology for measuring local GHG emissions. The governance structure will lay out the roles and responsibilities of eight Secretaries – which will be complemented by a stakeholder communication and engagement plan to build support with Rio's population and achieve wide consensus of the importance of the district, in particular with stakeholders that might have vested interests in keeping the status quo. In addition, the legal framework is expected to further detail the implementation process, by defining the execution phases, and laying out the development of policy actions and Secretaries' commitments and responsibilities – comprehending of, among others, incentives to zero and low carbon mobility and urban logistics, low-carbon and climate resilient infrastructure, a parking policy, charging infrastructure requirements and incentives for e-vehicles, energy efficiency incentives and standards for buildings. The regulation will also set the standards and indicators for local measurement of GHG emissions in partnership with the Pereira Passos Institute (IPP). This regulation is expected to directly contribute to a successful implementation of the Low Emission District, to change the population's behavior, and to curb GHG emissions and environmental pollutants.

76. **Expected Results:** The Borrower expects that the measures supported by the prior action will increase the competitiveness and use of low-carbon and sustainable transport modes – non-motorized and

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[84] The Low Emission District is delimited by the polygon formed by Avenida Marechal Floriano, included since Praça Duque de Caxias until Rua Visconde de Inhaúma, included until Orla Prefeito Luiz Paulo Conde, included until Avenida Alfred Agache, included until Avenida General Justo, included until Praça Senador Salgado Filho, included until Trevo Edson Luís de Lima Souto, included until Avenida Beira Mar, included until Rua Teixeira de Freitas, included until Largo da Lapa, included until Rua Visconde de Maranguape, included until Avenida Mem de Sá, included until Rua dos Inválidos, included until Praça da República, included until Praça Duque de Caxias, excluded until Avenida Marechal Floriano, starting point.

[85] These measures are aligned with the overall Zero Waste policy outlined in Rio's Strategic Plan 2021-24

[86] Waste – including treatment and disposal of solid waste and wastewater – represents approximately 16.5 percent of Rio's GHG emissions, according to the emissions inventory of 2019. An estimated 35 percent of the generated waste can be recycled, according to Companhia Municipal de Limpeza Urbana (COMLURB).

public transport, and electric vehicles – thereby reducing GHG emissions, as well as increase in afforestation, and energy efficiency in buildings in the medium-term. Specifically, by end-2024 the Borrower expects that in the first phase, 35,000 m^2 of public space in the Low Emission District will be renewed with a focus on active and e-mobility, low-carbon and climate-resilient infrastructure, urban afforestation, and policies that reduce vehicle emissions. In addition, the Borrower expects an increase of 30 percent of bicycle trips through the city's bike-sharing scheme originating in the District perimeter; the Borrower also expects that these measures will improve local air quality and produce public health benefits (e.g., reduced prevalence of respiratory illness), due to reduction in nitrogen dioxide and particulate matter emissions whose largest contributor in cities is road traffic.

Prior Action #7: The Borrower has issued a decree to, *inter alia*, promote the transition toward electric mobility, incentivize the use of renewable energy and promote energy efficiency, and enhance the disaster risk prevention and preparedness by establishing its Sustainable Development and Climate Action Plan in line with the United Nation's Sustainable Development Goals and the Paris Agreement, as evidenced by Decree No. 48940, dated June 4, 2021, published in the Borrower's official Gazette on June 7, 2021.

Indicative Trigger #7: The Borrower has enacted regulations to decrease GHG emissions and energy use by: (i) establishing instruments to accelerate the electrification of the municipal vehicle fleet; and (ii) introducing the mechanisms to green the Government's energy consumption matrix and promote the clean energy free market.

77. **Rationale:** The City of Rio de Janeiro has been a leader in the climate agenda in Brazil in the last four decades, inspired by the principle of acting locally and thinking globally. From hosting the Rio 92 UN conference – when heads of State adopted Agenda 21 as the first letter of intent to promote sustainable development in the 21st century – and twenty-years later the Rio+20, to chairing the C40 Cities Climate Leadership Group from 2013 until 2016, Rio has a track-record of committing to sustainable development and GHG emissions targets. Despite the severe recent economic crisis, some advances have been observed. The transport sector, until 2015, saw a moderate expansion of the cycling network and high-capacity modes of transportation, such as BRT corridors, the Light Rail Transit (LRT), and the metro system, which are more carbon-friendly and less vulnerable to climate hazards. Launched in December 2010 to monitor and rapidly respond to natural disasters, Rio's Operational Center now integrates and oversees all urban operations. However, Rio's low altitude and geography, with hillsides of forest massifs, makes the city highly susceptible to sea level rise, landslides, heat waves, and floods: landslide risks affect 45 percent of the city, in particular poorer areas with irregular housing; heat waves have greater impact in the lower-income northern region, affect more heavily the elderly and children, and can also disrupt water, energy, and transport services; the municipality estimates that rises in sea level could affect about 10 percent of the city by 2080[87]. As climate mitigation and adaption measures become more pressing, the municipality is faced with the challenge of integrating the 17 UN Sustainable Development Goals (SDGs) and the Paris Agreement to short-, medium-, and long-term planning instruments at a local scale. As the city recovers from the pandemic, it will face a scenario of increased demand for mobility and energy use, particularly in the transport, buildings, and waste sectors. Given these challenges, the municipality has a

[87] Rio de Janeiro's Sustainable Development and Climate Action Plan, p.96. *https://www.rio.rj.gov.br/web/planejamento/pds*

crucial role in promoting policies that steer a transition to a more sustainable and resilient developing trajectory.

78. **Substance of Prior Action 7:** This prior action supports a Decree that establishes the adoption of the Sustainable Development and Climate Action Plan (PDS), Rio's main instrument for short-, medium-, and long-term strategic planning aligned with the SDGs and the Paris Agreement to reduce GHG emissions and better cope with the effects of climate change on the most vulnerable. The PDS is organized along thematic long-term aspirations for 2050, strategic goals for 2030, and their associated actions and projects in the short-term, adopting a sophisticated methodology to devise mitigation and adaptation strategies[88], while promoting inclusive sustainable development along 45 Sustainability Corridors[89]. The PDS establishes 134 targets and more than 900 actions at the local level in 5 transversal pillars: Cooperation and Peace, Equality and Equity, Longevity and Well-being, Climate Change and Resilience, and Governance[90]. In addition to the elements described above, the PDS includes measures in four specific areas which contribute to the achievement of the objectives of the DPL program, with a focus on the highest emitter sectors – Transport and Energy:

- *Electric mobility transition.* The PDS supports the creation of a regulatory, technical, and financial framework – including business models, alternative financing sources, charging infrastructure, and technical standards – to accelerate the electrification of the bus fleet and municipal vehicle fleet, including those of its contractors. Additionally, the PDS supports the implementation of policies that generate demand in the electric mobility market, including incentives to individuals, businesses, and buildings – such as tax exemptions and charging infrastructure standardization and regulation – as well as restrictions to high-emission vehicles – such as parking limitations.

- *Energy efficiency and NCRE.* The PDS supports measures to improve demand and supply side energy efficiency. The implementation of electricity demand-side management programs will be enabled by the creation of a Code of Sustainability in Buildings to guarantee high energy and water efficiency, by a regulatory framework that will promote municipal buildings to consume renewable energy from the free market, and by renewing all street lighting to LED technology by 2030 through a PPP, reducing energy consumption. On the supply side, the PDS envisions the implementation of three mini-generation solar farms in municipal landfills to generate energy for consumption in municipal buildings.

- *Climate data monitoring.* The PDS supports the full implementation of Rio's Climate Monitoring System (SISCLIMA), with the goal of promoting transparency of progress in reaching the city's climate policy goals. In addition to being included as a core pillar in the PDS, the expanded scope for SISCLIMA was foreseen in Decree 48941, dated June 4, 2021, which establishes the basis for climate governance and monitoring. The purpose of SISCLIMA will be to conduct an annual emissions inventory and to evaluate specific parameters for the reduction of emissions in strategic high-emissions sectors (stationary energy, transport, waste). The Low Emission District

[88] On the mitigation side, the PDS sets sector-specific emissions reduction targets and actions, based on a city-wide GHG inventory taken in 2017. On the adaptation side, the PDS undertakes a full assessment of the city's exposure to hazards in different climate scenarios, proposing priority risk management and adaptation interventions accordingly.
[89] Sustainability Corridors are the 45 axes that cross the city for focused mitigation and adaptation interventions.
[90] Pillars constitute transversal actions in areas such as health, education, diversity, public security and safety, transport, housing, urban development, tourism, urban reforestation and environment conservation, waste management, and governance.

(supported by PA#7) is envisioned as one of the projects that will be subject to targeted emissions monitoring.

- *Disaster risk prevention and preparedness*. The PDS supports a range of measures to address the main natural hazards to which Rio is exposed, all of which are expected to increase in frequency due to climate change. Structural goals include reaching zero people living in areas identified with high risk of flooding or landslides, undertaking regular emergency drills for extreme climate events, enhancing communication channels and educational programs aimed at population preparedness, reducing the incidence of public transit disruption stemming from climate events, and developing contingency plans for coastal management and extreme heat events.

79. **Indicative Trigger 7:** This indicative trigger reflects the municipality's strong commitment to curb transport GHG emissions and consume energy from renewable sources. The municipality will lead by example and adopt policy actions laid out in the Sustainable Development and Climate Action Plan to enable the gradual replacement of its high emitter vehicle fleet with a more efficient electric fleet, and the mechanisms to green the Government's energy consumption matrix and promote the clean energy free market. Following best practices in urban mobility, Rio's municipal government wishes to transform the vehicles to provide services to the population – for instance, from cars used by engineers to inspect civil works to garbage trucks from third-party contractors. The municipality intends to adopt policies that will modernize and unify this system, and progressively include electric vehicles in the pool. It is expected that this action will contribute to having a fleet with 30 percent of non-emitting vehicles by 2030, including third-party contracted vehicles. While the municipal fleet is minor compared to the entire city's fleet, it sets a precedent and creates the need for government job destinations to be equipped with charging stations, which in turn can serve more customers. Complementing this action, the municipality will enact a regulatory framework to promote municipal Secretaries and government units to purchase electricity from clean and renewable sources directly from solar, wind, and/or small hydroelectric plants, showing leadership and commitment toward a greener and more efficient energy consumption model and support for a clean energy free market.

80. **Expected Results:** The Borrower estimates that, as Rio de Janeiro meets its mitigation goals through the actions in the PDS, the city will reach a 5 percent reduction in overall GHG emissions by 2024, compared to 2017. In addition, the measures supported by the prior action and indicative trigger are expected to result in the reduction of electricity consumption for public lighting by 50 percent. By 2024, the Borrower also expects to have 10 percent of its own car fleet comprised of e-vehicles. By 2030, it is expected that the actions outlined in the PDS will allow the city to, among others, achieve the electrification of 20 percent of its bus fleet and of 30 percent of its municipal vehicle fleet; increase the share of low or zero-emitting vehicles in the city's fleet to at least 3 percent; adopt high energy and water efficiency standards in all new large and medium-sized buildings and major renovations; and transition to at least 25 percent of the energy consumed by municipal buildings being sourced from mini-generator solar farms in municipal landfills and other renewable energy plants from the free market.

81. **The DPL program builds on a range of analytical, data collection, and strategic activities implemented by the client as well as by the World Bank and other development partners in support of low-carbon, sustainable, and inclusive urban mobility and land use planning**. Analytical underpinnings for the program are drawn both from engagements specific to Rio de Janeiro as well as those from

comparable cities elsewhere in Brazil or the Latin America region more broadly. Table 6 below presents analytical underpinnings that informed the reforms and programs supported by the DPL.

Table 6: DPL Prior Actions and Analytical Underpinnings

Prior Actions	Analytical Underpinnings
Operation Pillar 1: Strengthening fiscal management to improve medium-term fiscal sustainability	
Prior action #1 (New fiscal framework)	• Brazil SCD (report no. 101431) and Brazil Public Expenditure Review (P154992). *This PA has benefited greatly from the Brazil Public Expenditure Review, in particular the sections on fiscal sustainability, public sector wage bill, and pensions.* • Technical assistance by Bank team on in-depth fiscal modeling as part of Brazil Subnational Fiscal Modeling ASA (P172861). *Fiscal modeling that simulated the impact of the proposed reform in the State.*
Prior action #2 (Tax reform)	• Brazil SCD (report no. 101431) and Brazil Public Expenditure Review (P154992). *This PA has benefited greatly from the Brazil Public Expenditure Review, in particular the sections on fiscal sustainability, public sector wage bill, and pensions.*
Prior Action #3 (Pension reform)	• Brazil Public Expenditure Review (P154992). *This PA has benefited greatly from the Brazil Public Expenditure Review, in particular the sections on pensions.* • Wage Bill & Public Workforce Reform in Brazil (P166281). *The PA has benefited greatly from the detailed analysis of the wage bill at the federal and subnational level in Brazil, and the impact of different administrative reforms since administrative reforms that impact the wage bill policy have a great impact on pensions spending as well.* • Technical assistance by Bank team on in-depth fiscal modeling as part of Brazil Subnational Fiscal Modeling ASA (P172861). *Fiscal modeling that simulated the impact of the proposed reform in the State.* • Subnational civil servant pension schemes in Brazil: context, history, and lessons of reform.
Operation Pillar 2: Accelerating the transition towards a low-carbon, climate-resilient and inclusive development	
Prior action #4 (BRT):	• Rio Prefeitura et al. 2017. *Monitoramento das Emiss*ões de Gases de Efeito Estufa da Cidade do Rio de Janeiro: 2012-2017. • Ministério da Infraestrutura, Secretaria Nacional de Trânsito (SENATRAN), Registro Nacional de Veículos Automotores (RENAVAM). • Daily data reports on efficiency of service provision on the BRT system • SETRANS. 2016. *Origin-Destination Survey in RJMR, 2012*. • Analytical work on gender gaps and harassment in public transport: Kondylis, F. et al. 2019. *Demand for Safe Spaces: Avoiding Harassment and Stigma*; Sustainable Mobility for All. 2019. *Global Roadmap of Action Towards Sustainable Mobility: Gender;* and World Bank Group and UNGE. 2020. *Why Does She Move? A Study of Women's Mobility in Latin American Cities*. • World Bank. (in progress). Country Climate and Development Report (CCDR) for Brazil. In the pillar on *Enabling resilient, low-carbon and productive cities*, the CCDR addresses the need to transition to greener and more efficient urban public transport systems.

Prior action #5 (cycleways):	• Plano de Mobilidade Urbana Sustantável da Cidade do Rio de Janeiro, 2016. • 2018 National Survey on the Profile of the Brazilian Cyclist (Pesquisa Perfil do Ciclista). • SETRANS. 2016. *Origin-Destination Survey in RJMR, 2012.* • Nicholson, L.M. et al. 2014. "Developing a measure of traffic calming associated with elementary school students' active transport." *Transportation Research Part D: Transport and Environment*, 33, 17-25. • Pucher, J. et al. 2010. Infrastructure, programs, and policies to increase bicycling: An international review. *Preventive Medicine*, 50 (Supplement 1), S106-S125.
Prior action #6 (Low emission district):	• World Bank engagement with Instituto Brasileiro de Desenvolvimento e Sustentabilidade on *Transition to Electromobility in Brazilian Cities* (approved on March 2020). • World Bank Group et al. 2021. *Decarbonizing Cities by Improving Public Transport and Managing Land Use and Traffic.* Discussion Paper. October. • World Bank. (in progress). Country Climate and Development Report (CCDR) for Brazil. In the pillar on *Enabling resilient, low-carbon and productive cities*, the CCDR assesses the carbon emissions mitigation potential of urban low-emissions zones.
Prior action #7 (Climate action plan)	• Rio Prefeitura et al. 2017. *Monitoramento das Emissões de Gases de Efeito Estufa da Cidade do Rio de Janeiro: 2012-2017.* • Technical partnerships with several organizations, including, among others, C40 Cities, UN Habitat, Programa de Pós Graduação em Arquitetura da Universidade Federal do Rio de Janeiro(UFRJ-FAU-PROARQ), and UNICEF. • Technical analysis undertaken in recent years, such as the Rio 500 Vision, the Climate Change Adaptation Strategy, the PMUS (Sustainable Urban Mobility Plan) Sustainable Urban Mobility Plan, Resilient Rio, and Panorama • World Bank. (in progress). Country Climate and Development Report (CCDR) for Brazil. In the pillar on *Enabling resilient, low-carbon and productive cities*, the CCDR emphasizes the potential for improved energy efficiency in buildings, improved solid waste management, and greening of urban transport by transitioning to e-mobility.

4.3. LINK TO CPF, OTHER BANK OPERATIONS AND THE WBG STRATEGY

82. **The proposed DPL is fully aligned with the World Bank Group's Country Partnership Framework (CPF) for the period FY2018–23.** The World Bank Group FY18-23 CPF for Brazil (Report no. 113259-BR, discussed by the Executive Directors on July 13, 2017) was prepared against the backdrop of the deep 2014–16 economic recession that led to a fiscal crisis and increased unemployment and poverty levels. The main premise of the CPF was the need to revisit the country's growth model to improve its sustainability and inclusiveness. The CPF is built on three pillars: (i) fiscal consolidation and government effectiveness; (ii) private sector investment and productivity; and (iii) equitable and sustainable development. In line with the CPF, this proposed operation is part of a series of subnational DPLs to support fiscal adjustment and sustainable low-carbon and climate-resilient development in subnational entities. The proposed operation is the fourth under this framework, following the Mato Grosso Fiscal Adjustment DPL (P164588), the First Amazonas Fiscal and Environmental Sustainability Programmatic DPL (P172455) and the ongoing State of Goias Sustainable Recovery DPL (P177632). The proposed activities are fully aligned with the Brazil CPF. The first pillar is aligned with Focus Area 1, *Fiscal consolidation and government effectiveness*, and Objectives 1.1 (Strengthening Fiscal Management) and 1.2 (Increase fiscal sustainability and fairness of pension system) of the CPF by: (i) supporting the adherence to the PEF, and an incentive mechanism for subnational borrowers to address their structural fiscal challenges early on, thus reducing the risk of their finances becoming unsustainable; and (ii) supporting reforms to make the

pension system more sustainable, including increasing contribution rates for to active civil servants and pensioners with pensions above the INSS ceiling. The second pillar is aligned with Focus Area 2, and Objective 2.3 (Mobilize greater investment in infrastructure to improve services) by: (i) focusing on the digitalization of the mobility sector; and (ii) supporting the mobilization of greater investment in infrastructure to improve services. Pillar 2 is also aligned with Focus Area 3, *Inclusive and sustainable development*, and Objective 3.1 (Support the achievement of Brazil's NDC with a particular focus on land use), and Objective 3.2 (Provide more inclusive and sustainable urban services) by: (i) revamping the BRT system; (ii) supporting the implementation of a Low Emission District in the city center to decrease GHG emissions; and (ii) supporting the achievement of the municipality's and the country's NDCs on reducing CO_2 emissions.

4.4. CONSULTATIONS AND COLLABORATION WITH DEVELOPMENT PARTNERS

83. **Public consultations on the proposed reforms in the municipality of Rio de Janeiro took place both during the development of the policies, and while they were being reviewed by the Municipal Council (*Câmara de Vereadores*).** In the case of Municipal laws, consultations follow the procedures in the Organic Law of the municipality (*Lei Orgânica do Município do Rio de Janeiro*). The consultation process increases the legitimacy of policies, while allowing authorities to benefit from advice and technical knowledge. The municipality of Rio de Janeiro confirmed that the program supported by this DPL operation is based on a broad consultation process with a variety of stakeholders, including civil society and business chambers.

84. **The World Bank collaborated with the Federal Treasury in the design of pillar 1.** On the fiscal adjustment component of the operation, the World Bank team worked in close partnership with the Federal Treasury (*Secretaria do Tesouro Nacional*, STN), which is the federal government's agency responsible for supervising the fiscal affairs of subnational governments. Representatives of the STN and the World Bank team discussed the development of the program under pillar 1, the modeling of its fiscal impact and the relevance of the Municipality' adherence to Fiscal equilibrium plan (*Plano de Promoção do Equilíbrio Fiscal*) to support the city's fiscal consolidation.

85. **The policies under the second pillar of the operation were thoroughly discussed with interested stakeholders and civil society.** The reforms to recuperate and modernize the BRT (PA#4) underwent a process of public consultation (face-to-face and virtual) with relevant stakeholders before being sanctioned by the Government. Similarly, the connection of cycleways (PA#5) and the Low Emission District (PA#6) were also developed based on extensive discussions with stakeholders. PA#5 is one of the follow-up actions that resulted from the 2016 Sustainable Urban Mobility Plan which underwent several consultations with stakeholders – face-to-face workshops in different regions, online interactions, etc. – and suggestions were incorporated in the guidelines for the cycleway network expansion. There was no evidence of negative reactions to the proposed policy, and stakeholders noted that cycleways will benefit poor households by reducing their expenditures on transport. In the context of the Low Emission District discussions, the Downtown Upgrading Plan for Rio de Janeiro (Reviver Centro[91]) was developed based on extensive discussions held by the Downtown Upgrading Working Group, established by Decree no. 48.348 of January 1, 2021and agencies such as Rio Luz, the Secretariat for Conservation and Environment (SECONSERVA), Rio-Aguas, and Defesa Civil were part of it. Although the *Reviver Centro* Program, of which

[91] https://reviver-centro-pcrj.hub.arcgis.com/

the Low Emission District is part, has been criticized by some political leaders and civil society organizations – mainly on the potential risks of gentrification – these concerns have been addressed by the inclusion of investments in social housing in the Program. Results from public surveys with more than 8,000 respondents indicated that participants consider improvements in security, lighting, public transport, and accessibility as priorities for the central area of the city. The use of low-carbon transportation was also discussed through this platform. In addition, the Program was discussed in a public hearing in the House of Representatives and in the Municipal Council of Urban Policy – COMPUR.

86. **In addition, through the Integrated Committee for Planning and Sustainable Development of the City Rio de Janeiro, composed of more than a hundred representatives of the City's agencies, the proposal of public policies was consolidated forming the basis of the Sustainable Development and Climate Action Plan (PA#7).** The detailed preparation of the PDS followed a long consultation and engagement process over several years, involving professional research institutions, specialists from the most diverse areas of the private and public sectors, NGOs, international and supranational and supranational institutions, and the city's residents. Face-to-face and online participative processes guided different technical discussions from which it was possible to define a vision for the city for the next decade and the steps to be taken between now and 2030.

87. **Finally, the World Bank collaborated with IFC on developing new business models that promote the implementation of e-buses in Brazilian cities.** The World Bank transport team and the IFC Upstream team have jointly provided technical assistance to São Paulo, Salvador, Fortaleza, and Belo Horizonte to develop business models and guarantee structures that leverage private sector participation to facilitate the deployment of e-buses under the Brazilian regulatory framework. The respective assessments have informed the discussions with the MRJ about the new ticketing system (PA#4) and the proposed separation of bus operations and vehicle provision services (Indicative Trigger #4).

5. OTHER DESIGN AND APPRAISAL ISSUES

5.1. POVERTY AND SOCIAL IMPACT

88. **Most prior actions have the potential of generating positive social impacts**. Policy changes included in the first pillar – under the umbrella of the Fiscal Equilibrium Plan –support the municipality to improve medium-term fiscal sustainability, while creating fiscal space and regaining access to new loans (with support from federal government guarantees) to finance critical investments in favor of its environmental, social, and economic goals. Relative to a no-reform scenario, fiscal measures supported in this operation are expected to reduce the pension system deficit by 4.5 percent points and the wage bill by 7.1 percent points relative to Net Current Revenues (NCR) by 2025. These policy changes open fiscal space for critical public spending on social and economic priorities, including the provision of basic public social services benefiting especially the bottom of the distribution. Policy changes in the second pillar may have indirect positive poverty and social impacts as they could contribute to improved BRT services on which low-income households depend on, increased access for women and dwellers of poor neighborhoods to safer transport modals and reduced city's exposure and vulnerability to disaster risks exacerbated by climate change.

89. **Prior Actions in the first pillar are expected to curb the city's fiscal deficit increasing fiscal space to improve the provision and the quality of public services**. The direct effects on poverty are expected

to be minimal, with potential indirect impacts on inequality. The fiscal recovery supported by PA#1 may contribute to ensure – in the medium-term – more fiscal space to provide basic public services on which most disadvantaged and vulnerable social groups rely, thus promoting equity. In the City of Rio de Janeiro, about 93 percent of the children aged 4 to 14 in poor households attend public schools, compared to 42 percent among the non-poor (PNAD 2019). Meanwhile, 8 out of 10 households in the bottom 40 percent of the distribution use the public health system when get sick, in comparison to only 3 out of 10 in the top 60 (PNS 2019). Notably, the Municipality allocated about 29 percent of the city's revenues in 2020 on education and 19 percent on health, both above the constitutional requirements of 25 percent and 15 respectively. The opened fiscal space could boost the investments on human capital. The changes to the ISS tax law supported by PA#2 are expected to have small to null effects on prices, and hence on the purchasing power and poverty of RJM residents. The program *Volta para Casa* will involve writing off ISS debts for firms, and the agreement to apply local ISS rates. The difference in rates currently applied suggest a theoretical maximum of 3 percentage points could be the difference between RJM ISS rates and the current rate charged by firms "residing" in other cities. In practice, however, the difference is likely to be smaller and is the potential indirect change in prices caused by firms' relocation to RJM. Finally, while the ISS exemption was repealed for a series of services (such as sporting events, advertising, etc.), the impacts on poverty are expected to be minimal. According to 2017/18 POF data, these items are purchased by about 40 percent of families in RJM, and within this group, they represent only 1.7 percent of the households' expenditures. These items will now have ISS rates between 2.6 percent and 5.

90. **PA#3 is expected to have limited negative distributional and poverty impacts.** The municipal public servants are relatively well paid in comparison to other formal workers in the Municipality of Rio de Janeiro. More than half of the municipal administration employees are in the top 20 percentile of the wage distribution and 87 percent are in the top 30 percentile (according to RAIS 2020 data). Less than 1 percent of the municipality's civil servants are in the bottom 20 percent of the labor income distribution (RAIS 2020). To put the expected change in contribution in perspective, a 14 percent contribution rate would imply that the employee standing in the fifth percentile of the municipal public servant's wage distribution would still receive a net wage greater than the gross minimum wage.

91. **The measures supported by the first pillar were widely debated in the city and were approved by the local assembly.** Public servants mobilized against some of the fiscal reforms and lobbied for changes in the draft bill (requesting modifications related to the freezing of the period of service for the triennium and the end of the career plan, the prohibition of new salary readjustments, and the prohibition of the creation of positions). Public servants also perceived the shift of the public sector pension scheme towards a more sustainable trajectory by increasing their contribution rate as a potential loss. The local assembly approved the civil service and pension reforms making a case for improved fairness and fiscal transparency (the pension reform addressed disparities in pension benefits across government branches and the wage premium gaps between public servants and private sector peers).

92. **The four prior actions considered under the second pillar are expected to have positive distributional impacts.** They will benefit the low-income population of the city and some disadvantaged and vulnerable social groups (e.g., people living in at-risk areas and shanty towns, Afro-Brazilian youth, and women exposed to violence) and are expected to have also positive effects on women's agency and empowerment. Prior Actions # 4, # 5 and # 6 and prior action # 7 aim to promote greener, more efficient, and inclusive urban transport. These measures are expected to reduce congestion, daily commuting time and the weight of transport in family budgets.

93. **Prior action #4 is expected to have positive effects among households across the income distribution with greater benefits for those at the bottom.** PA#4 will improve the quality of access of low-income population to mass transportation and consequently their connectivity to city areas where formal jobs and basic public services are concentrated, as well as to non-motorized transport for daily commuting to schools, which is greatly impeded by the Rio's dire road safety situation. The poor in Rio are more dependent on public transportation, since only 17 percent of them have a car at their households and only 5 percent have a motorcycle (POF 2017/18), compared to 40 percent and 5 percent of the non-poor respectively. Besides the benefits to low-income groups, positive impacts from PA#4 could come from behavioral changes across the distribution. Among RJM residents, a significant share of those owning a private automobile use other means of transport. Among individuals in the top 60 percent of the income distribution, about 53 percent reported expenditures on public transport and 46 percent specifically on buses. This means that a multimodality of transportation occurs often even among relatively richer households. Thus, as the quality of BRT is improved through reduced headway (I.e. intervals between departures), positive impacts on transit could come not only from individuals who stop using their cars, but from those who adjust the use of transportation along the intensive margin. Choosing public transportation more often would reduce the externalities caused by the private transport modes, such as increased traffic and more pollution.

94. **PA#4 will also contribute to address one of the key factors leading to gender gaps in urban mobility that prevail in Rio de Janeiro.** PA#4 will support the inclusion agenda of the MRJ by combating and preventing sexual harassment and gender-based violence in public transportation. This will be achieved by developing a conducive environment with trained bus drivers and expanded channels for reporting harassment, such as the implementation of a monitoring and evaluation system for documenting and addressing complaints. These prior actions have been object of broad processes of consultation and social participation relying on online tools (the Participa.rio digital platform, the Reviver.Rio and "The City We Want" initiatives), technical training events, and face-to-face meetings using the school network.

5.2. ENVIRONMENTAL, FORESTS, AND OTHER NATURAL RESOURCE ASPECTS

95. **The prior actions included in the DPL are likely to result in positive effects on the environment with significant emission reduction measures.** The actions are mainly aimed reducing emissions by strengthening the BRT public transport system, improving multi-modal integration, implementing Low Emission District in the city center, adopting the Sustainable Development and Climate Action Plan.

96. **Pillar one contains three prior actions that are not likely to cause direct negative impacts on the environment.** On the contrary, the approval of the new fiscal regime PA#1 encompasses prior actions which are likely to have significant positive effects on the environment, all linked to the goal of promoting green growth and reducing CO_2 emissions in the second operation. PA#2 and PA#3 have no impacts on the environment.

97. **Under the second pillar, significant positive environmental impacts are expected**. The revamp of the transport system of the BRT (PA#4) has potentially positive environmental impacts with reduction of air pollution and CO_2 emission rates as they expect to attract users back to the public transport system. PA#5 aiming to promote a shift from motorized to non-motorized transport modals (NMT) also has a potential positive environmental impact by shifting from CO_2 emitting to zero emissions modes of urban

mobility (NMT). This shift will require the expansion and segregation of bike lanes, integration with other modalities, adequate monitoring and proper signaling to ensure the safety of cyclists. In addition, the implementation of a Low Emission District in the city center – aimed at promoting low- and zero-emissions mobility, improving building energy efficiency and solid waste management (PA#6) – is likely to have significant positive effects on the environment, on urban air quality and significant climate benefits. One context-related risk to the success of this Prior Action relates to governance arrangements. Introducing low emission zones (LEZ) is often politically challenging, and cities seeking to implement them are likely to encounter opposition. Consequently, the governance and monitoring mechanisms of the Low Emission District should rely on a broad consensus between stakeholders with distinct vested interests and build support that is strong enough to pass through successive governments. As many challenges of a LEZ involve reduced mobility and logistical challenges due to the restrictions imposed, it is recommended that the establishment of the Low Carbon District takes this into consideration. For this reason, it is crucial to ensure the continuity of the participation of stakeholders as well as the implementation of alternatives as already foreseen in the law - cargo bicycles and credit lines for the change of the diesel-based fleet to electric motors.

98. **Finally, PA#7 supports the Sustainable Development and Climate Action Plan (PDS) that comprises an ample portfolio of climate adaptation and mitigation measures and is also likely to have significant positive effects.** Some of the environmental effects are the reduction of GHG emissions, improvement of air quality, noise reduction, efficient use of water, use of clean and renewable energy, and improvement of the health and safety conditions of the population. These results will occur to the extent that instruments and regulations are in place to make these benefits effective. For example, it is planned to implement the electrification of 20 percent of the bus fleet and 30 percent of the municipal vehicles. Some of the challenges faced in the transition to electromobility are already foreseen in these regulations as: (i) the need of new regulatory frameworks; (ii) the long-term concession contracts that do not establish solid clauses for the incorporation of new technologies, pollutant emission reduction targets and parameters oriented towards zero emission; and (iii) funding and financing constraints to renew the fleets.

5.3. PFM, DISBURSEMENT AND AUDITING ASPECTS

99. **The overall integrated fiduciary risk of this operation arising from the Municipality of Rio de Janeiro's (MRJ) public financial management (PFM) and public procurement system[92] is Substantial.** A well-developed legal framework—including the Federal Constitution, the Fiscal Responsibility Law (LRF) and other laws and regulations—underpins the MRJ PFM and established Institutional PFM arrangements are being strengthened within the Municipal Secretariat of Finance's departments. There are continued improvements in the external oversight mechanisms, including participation by key stakeholders and sector agencies, that follow federal rules that are consistent with the best international standards and there is timely availability of budget execution information for public access, primarily through the Internet. In terms of fighting corruption, the MRJ's ranking in the Transparency International Covid-19 Brazil Portal is 25 out of 27 Brazilian states' capitals, with an overall score of 79/100[93].

[92] PFM aspects are supported by the following analytical work: Brazil Public Expenditure Review (PER); Country Policy and Institutional Assessments (CPIA); Brazil Public Expenditure and Financial Accountability (PEFA) Report; Last two published annual audit reports and financial statements of the Municipality of Rio de Janeiro; Observatory of Public State Finance; 2019 MMD-QATC (Supreme Audit Institution Performance Measurement Framework); and IMF Fiscal Transparency Evaluations/Reviews and Code of Good Practices on Fiscal Transparency.
[93] https://transparenciainternacional.org.br/ranking/

100. **The MRJ is undertaking some important PFM reforms to improve the quality and relevance of financial information available for decision making and to enhance the credibility, transparency, accountability and efficiency in PFM,** as well as promoting appropriate behavior of public sector officials, while reducing the risk of public corruption, irregularities and fraud**.** These include: (i) implementing the Integrated Budget, Financial and Administrative System (*Siafic*)[94]; (ii) implementing the International Public Sector Accounting Standards (IPSAS)[95]; (iii) enhancing internal controls and commitment controls to mitigate challenges such as lack of budget realism, cash flow unpredictability, high amount of off-budget expenditures, inobservance of budget rules and legal fiscal limits[96]; (iv) implementing recommendations made by oversight institutions; (v) strengthening the Municipal Government's accounting and budget execution system (FINCON) together with the Contract Management System (FCTR) to improve the quality and transparency of accounting information[97]; (vi) observance of the use of the single treasury account (STA) model of cash management and the clear allocation of responsibility for managing it; and (vii) reforming the CGM implement the internal audit standards in the public sector and strengthening the internal audit function and the strengthen the inspection function.

101. **However, the MRJ's PFM system still needs further improvements to address residual weaknesses**. In particular, some of the limitations of the system noted in the public sector investment management and related provisions for investments and recurrent costs to ensure quality and efficiency of public expenditures include: (i) training programs for managers at all levels on the PFM framework including their roles and responsibilities; (ii) an action plan to address significant deficiencies in the procurement function and management of government supplies and inventories; and (iii) enhancing audit standards[98] and institutional reform of the Municipal Comptroller General (CGM).

102. **Internal Oversight**. The Municipal government has internal rules and commitment controls with the Municipal Comptroller General (CGM-RJ) being the entity that supports the Municipal's direct and indirect agencies on legal and procedural compliance in public contracts, access to information, anticorruption, and transparency in public administration. The CGM-RJ has sufficient independence to perform its role. The CGM's internal structure establishes some of the main internal control functions (internal control, ombudsmanship, and inspection) following a risk-based approach and the "three lines of defense", in compliance with international best practices and recommendations made by the Federal Court of Accounts (TCU) through Normative Instruction (*Instrução Normativa*) IN 63/2010. However, greater emphasis needs to be made to strengthen the internal audit and inspection functions to meet international standards and prevent misuse of funds.

103. **External Oversight.** The Municipal Audit Court, *the Tribunal de Contas do Município do Rio de Janeiro*, TCMRJ reports to the legislative branch and is responsible for performing financial, compliance and operational audits and special reviews of budget execution and the quality of government expenditures at the Municipal level. The TCM-RJ audits have a reasonable scope and are generally issued with only minor delays. As part of its strategy to strengthen its institutional framework, the TCM-RJ will

[94] A software that must be used by the executive, legislative, and judiciary powers, with a shared database and integrated with the Municipal FMIS (FINCON). The Government should launch the bidding process by the end of CY2022.
[95] Portaria STN nº 548/2015 - *Plano de Implantação dos Procedimentos Contábeis Patrimoniais – PIPCP*, to be fully implemented by December, 2024.
[96] Lei Complementar 235 enhances PFM controls to avoid off-budget expenditures.
[97] The ranking shows the quality of accounting and fiscal information and is monitored by the National Treasury Secretariat.
[98] Implementing the Internal Audit Capability Model (IA-CM) as to strengthen the internal audit functions in all entities that execute the Municipal budget.

implement the *Sistema Aprimore* aiming to monitor and track the performance of the MMD-QATC indicators.[99]

104. **Accounting and Financial Reporting.** The MRJ has been able to prepare timely financial statements, with reasonable observance of the deadlines established to implement IPSAS. The MRJ publishes the annual estimates of Revenue and Expenditure on its website; the Year-end financial statements and audit reports are also accessible, but only after they have been submitted to the legislature for approval. The latest approved audit of the Municipality's accounts covers the 2020 fiscal year and this report (together with that of 2019) identified material exceptions, that compromised the overall consistency and usefulness of the financial statements. To improve the quality of its financial reporting, thereby enhancing transparency and accountability of the use of public funds, the MRJ has committed to implement the recommendations made in the last audit reports.

105. **The federal framework of laws and regulations for procurement is solid and transparent and is familiar to both public officials and to the private sector**. These laws and regulations take precedence over those for the subnational levels. States and municipalities may complement federal legislation but not contradict it, nor may they create new procurement methods. Open competitive bidding is the default procurement method, as defined by Article 37 of the Constitution, and provides fair opportunities for bidders to contest decisions including through appeal to an independent entity. All procurement opportunities, regardless of estimated cost, are published via the internet and official gazettes. Companies are required to have local representation to bid on government contracts. This involves establishing a local office or designating a local agent to serve as local representative and obtaining a taxpayer identification number or CNPJ (*Cadastro Nacional de Pessoas Jurídicas*). Once incorporated in Brazil, foreign companies are treated as locals and subject to the same rules and conditions as domestic companies. In terms of national e-procurement system, the *Pregão Eletrônico* is the main procurement method used in the Municipality. E-Reverse auctions remain as the method of choice for off the shelf goods and readily available services. Specifically in the Rio de Janeiro, for the past three years 73 percent of all the procurement processes made in the Municipality were *Pregão Eletrônico*. This represents around 61 percent of the amount procured (BRL 800 million). Based on this numbers and the fact that legal framework (for e-procurement) is consolidated in Brazil, there is no doubt about the relevance of e-procurement and the reliability of the method.

106. **The provisions in the federal Brazilian legal framework governing fraud and corruption are also binding on state and municipal public administrations.** The World Bank's assessment is that they are adequate. The Federal Constitution and Laws to combat Fraud and Corruption define various categories of misconduct and provide for such sanctions as the suspension of political rights, removal from public office, freezing of assets and financial compensation for damages caused to public treasury for personal and firms. The Constitution also stipulates that there is no statute of limitations when seeking reparations for damages caused to the public treasury by government officials. Legal action can be filed in court by the public entity that suffered the losses or by the Ministério Público; in practice, it is almost always the Ministério Público that initiates. Any person can file a complaint requesting an investigation of suspected wrongdoing. The Constitution and Anti-Corruption Laws have been complemented by other federal and

[99] *Programa Qualidade e Agilidade dos Tribunais de Contas* (MMD-QATC), is a diagnostic tool developed by Brazilian Supreme Audit Institutions Association - ATRICON, to assess the quality and performance of the Brazilian Supreme Audit Institutions. MMD QATC is based on the International Organization of Supreme Audit Institutions (INTOSAIs) Performance Measurement Framework (SAI-PMF).

state legislation inter alia regulating citizens' access to information and establishing a code of ethics for state officials.

107. **Additional fiduciary arrangements will be put in place for the operation to safeguard the development objectives.** Given the MRJ's PFM environment, and specifically the instances of off-budget expenditures, expenditures approved/paid not following established procedures as well possible delays in the implementation of the various action plans to respond to the other identified PFM system weaknesses, there are risks to the achievement of the development objectives, and as such additional fiduciary arrangements will be put in place for the operation.

108. **The loan proceeds will be disbursed based on satisfactory implementation of the DPL supported program.** Once the loan is effective and against satisfactory implementation of the program (specified prior actions achieved) and maintenance of an adequate macroeconomic policy framework, the borrower will request the World Bank to disburse[100] in local currency, the equivalent amount of the loan proceeds into a new[101] local currency denominated bank account opened by the Municipal Government at the *Banco do Brasil* branch in Rio de Janeiro. The *Banco do Brasil* is deemed acceptable to the World Bank, as it is: (i) financially sound, in good standing, audited regularly, receiving satisfactory audit reports, and is able to execute many transactions promptly; (ii) performs a wide range of banking services satisfactorily; (iii) provides detailed bank statements; and (iv) is part of a satisfactory banking network and charges reasonable fees for its services

109. Written **Confirmation.** Within 30 days after receipt of the loan proceeds into the Brazilian Reais denominated account mentioned above, the Municipal Government will confirm to the World Bank that (i) the loan proceeds were received into the local currency denominated account, and (ii) the amount has been recorded in the Municipality's accounting and budgeting management system/records. If loan proceeds are used to finance excluded expenditures as defined in the Loan Agreement, the World Bank will require the Municipal Government to refund the amount.

110. **An external auditor will be required as a second mitigation measure.** Since the TCM's audit report for 2021, reflecting that the effectiveness of the action plan in mitigating the identified risks is not expected to be available prior to July 2022, as a mitigation measure to reduce fiduciary risk, the Bank will require an audit of the dedicated account to mitigate the fiduciary risk of any possible loss or diversion of the proceeds.

111. **The independent auditors, acceptable to the Bank, should observe the agreed terms of reference acceptable to the World Bank and will conduct the audit in accordance with International Standards on Auditing (issued by the International Auditing and Assurance Standards Board of the International Federation of Accountants) or national auditing standards if, as determined by the World Bank, these do not significantly depart from international standards**. The MRJ should furnish the Bank a certified copy of the report of such single audit report, not later than four months after the use of the

[100] With the loan denominated in USD, at the time of submitting the withdrawal application to the Bank, the Borrower will ask the World Bank/WFA to pay the equivalent currency in BRL of the USD requested (to be paid using the exchange rate in effect at the time that the Work Bank processes and approves the withdrawal request.

[101] This account is being created by the Municipality as a mitigation measure i.e., establishing a dedicated local currency bank account (an account used exclusively for DPO proceeds).

total loan proceeds disbursed, but not later than four months prior from the project closing date. The audit report should be publicly available in the MRJ transparency portal.[102]

5.4. MONITORING, EVALUATION AND ACCOUNTABILITY

112. **The Secretaria Municipal de Fazenda e Planejamento (SMFP) is responsible for collecting and monitoring information related to program implementation and progress toward the achievement of the results.** SMFP is responsible for coordinating all necessary actions among the agencies involved in the reform program supported by this DPL. SMFP will be directly responsible for the first pillar of the operation in coordination with other municipal agencies. The Municipal Secretary of Transport (SMTR) and the Secretary of Environment (SMAC) oversee policies and coordinates different institutions under the second pillar of the program. The World Bank team has worked closely with the above agencies as well as the Federal Treasury to define results indicators that are clearly spelled out and measurable, giving preference to those that are already collected by the municipal Government on a regular basis so as to avoid duplication.

113. **Grievance Redress**. Communities and individuals who believe that they are adversely affected by specific country policies supported as prior actions or tranche release conditions under a World Bank Development Policy Operation may submit complaints to the responsible country authorities, appropriate local/national grievance redress mechanisms, or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

114. **Brazil and MRJ have a robust legislation on access to information and grievance redressing.**[103] The 1988 Federal Constitution (Art. 103 and Art. 130) and Constitutional Amendment 45/2004 also provide for the creation of Ombudsmen at all levels of government and major advances have been made in this area. The City of Rio de Janeiro restructured its Municipal Ombudsman System through Decree Rio Nº 44,746/2018. The Municipal Ombudsman System comprises the Institutional Ombudsman (its central managing body), 46 ombudsman offices and 167 ombudsman agents. The Ombudsman is the second instance of relationship between the City Hall and the citizen. It is intended to receive complaints of requests addressed to the City Hall through Central 1746, but which were not carried out on time or with the desired quality. Through the ombudsman it is also possible to make compliments, suggestions, and criticisms. The operation of the Municipal Ombudsman System is annually publicly reported. The last report available (2020) shows that 55,023 complaints were registered throughout the year (from a total

[102] https://www.rio.rj.gov.br/web/transparencia
[103] Including: Constitutional Amendment 19/1988, Federal Law 12,527/2011, Federal Law 13,460/2017, Federal Decree 9,492/2018, and Normative Instruction Ministry of Transparency and Federal Comptroller General (CGE)/Union General Ombudsman Office (OGU) 5/2018.

of 163.417 records). The 1746 Call Center was the mostly used channel to register these complaints (76.8 percent), followed by the web APP (21.5 percent). The 2020 Report also shows that only 53.4 percent of the complaints was solved within the legal period of time (30 days, extendable for an equal period, upon express justification) and the average time to provide a conclusive response to the complaints was 67.1 days. The Ombudsman ensures the protection of the identity of the author of the complaints in compliance with Law 12,527/2011.

6. SUMMARY OF RISKS AND MITIGATION

115. **The overall risk of this operation is rated as substantial**. The principal risks to the objectives of this operation include political and governance risks, macroeconomic risks, fiduciary and stakeholder risks. While the program's design incorporates risk-mitigation measures, some risks cannot be fully extenuated. The DPL reform program has the flexibility to be adjusted going forward in case some of these risks materialize. Specific risks, along with mitigation measures, are discussed below.[104]

116. **Political and governance risks in the run-up to the 2022 electoral cycle are substantial**. The current mayor and his government has shown strong commitment to the reform agenda supported by the DPL in the past months, but the uncertain political climate given that State and federal elections in October 2022 could undermine efforts to pursue politically sensitive reforms supported by the proposed series. However, in the first pillar the risk of policy reversal is mitigated by two factors: (i) the fact that this is a new government that front-loaded key fiscal measures to improve fiscal sustainability, and that it will be in office until 2024, the closing of this DPL; (ii) the adhesion of the municipality of Rio de Janeiro in the PEF has clear incentives to comply with the agreed targets, as the municipality is currently CAPAG C under the subnational credit worthiness scoring system (CAPAG), and failure to comply with the PEF targets would prevent them from obtaining the guarantees under the program, and from participating into the COFIEX for new federally guaranteed credit operations (only CAPAG ratings A or B can participate). The operation's design fully incorporates lessons from IEG past evaluations, to include a sound results framework and to support a steady but gradual and politically informed implementation of reforms. It is expected that the gradual and systematic approach to be adopted by the Government will reduce the likelihood of these key agendas being politicized.

117. **Macroeconomic risks are also substantial, arising mainly from uncertainty in the fiscal, inflation, and growth outlook**. Fiscal risks are significant, especially during this period of heightened political uncertainty. Risks of growing demand for social transfers in a weak growth and slow labor market context could further delay the post-COVID-19 fiscal adjustment. Credible commitment to comply with constitutional expenditure ceiling will be critical to avoid a loss in market confidence. Mitigating factors include commitment by the authorities to complying with the federal expenditure ceiling, the implementation of the reforms submitted to the Congress (Annex 6), and a large treasury cash position, reducing rollover risks. The risks to growth are also significant as inflationary pressures have motivated the central bank to start a cycle of interest rates hikes, which could dampen

[104] The institutional Capacity for Implementation and Sustainability risk is deemed as moderate after mitigation measures (residual risk). These include: (i) the focus on critical reforms that are closely aligned with the city' Strategic Plan and benefit from high-level political support; (ii) the fact that reforms and programs build on strong analytical foundations and international best practices; and (iii) strong policy dialogue with the World Bank, the IADB, and international organizations (WRI, C40 Cities, GIZ, and ITDP) around the topics supported by this operation will continue during the implementation of the program. The team is also proposing additional TAs to support the municipality in the implementation of the On the Way to School Program (PA#5) and the Low Emission District (PA#6) reforms in the second pillar as a mitigation measure. Finally, the current operation is benefitting with strong ownership and commitment to reforms from the government's side, which is reflected in the frontloading of key reforms both on the fiscal and on the transport side.

growth prospects. The war in Ukraine is causing higher commodities prices, supply shortages and increased risk aversion that can trigger additional exchange rate depreciations and inflation pressures in Brazil, inducing a more aggressive monetary policy stance that is likely to reduce further the economic growth. A deterioration in the external context, such as a slowdown in trading partners or an increase of the interest rates in advanced countries, could limit external demand and weaken the current account. However, the flexible exchange rate regime and the large foreign reserves constitute sound buffers against external shocks. Low foreign currency exposure of public debt would limit the impact of currency depreciation on gross public debt. Progress in productivity-enhancing reforms could boost Brazil's long-term output potential and deliver faster fiscal consolidation in the medium term.

118. **Economic and fiscal risks at the municipality level are substantial**. The main source of risk for the city is coming from the Brazil-level macro risks previously discussed. Rio de Janeiro's economic growth is highly dependent on services, which is heavily linked to the Brazilian business cycle. Therefore, a potential slowdown in Brazil will impact the municipality's revenues (mainly ISS and IPTU) and constrain Rio's ability to continue the fiscal adjustment path. Fiscal reforms supported by the operation, and the incentives created by the PEF, would help to contain the fiscal deficit and proceeds of the operation will allow the municipality to ramp-up social, climate and infrastructure investments. Similarly, pro-growth reforms supported in this operation will facilitate Rio's post Covid-19 economic recovery and complement through a higher revenue base the tax effort of the city and support the fiscal sustainability.

119. **The fiduciary risk is rated as Substantial.** Given the current MRJ's PFM environment, the main fiduciary risks include: (i) the low effectiveness of the internal control system; (ii) the lack of compliance over the established procedures, specifically the instances of financial obligations that should have been executed in the budget but did not pass through its execution; and (iii) possible delays in the implementation of the various action plans to respond to the other identified PFM system weaknesses. As to mitigate the risk, some additional fiduciary arrangements will be put in place for the operation, including: (I) establishing a dedicated local currency bank account (an account used exclusively for DPL proceeds); (ii) requirement of an external audit of the dedicated account; and (iii) action plan related to the trigger, which includes the timely adoption of the International Public Sector Accounting Standards (IPSAS) and the strengthening of the audit capacities of the municipality.

120. **Stakeholder risks are assessed as Substantial**. A wide range of stakeholders could be affected by the supported reforms, including government's own agencies, public sector unions, private sector, and households. For example, in the case of the new fiscal regime approved by the local assembly, public servants pressured the legislative to influence the final writing of the proposals avoiding some measures they saw as detrimental to their interests and rights (such as the freezing of the period of service for the triennium and the end of the career plan). Business associations support the implementation of the fiscal reforms to improve the municipal government's fiscal sustainability. The prioritization of low-carbon transport technologies over fossil fuels and the implementation of a low emission zone in the city center, could also be questioned by interest groups. The BRT governance and operational models are undergoing a profound transformation that will open the sector to new private investors and make it more competitive; these reforms could face opposition from incumbent local bus operators. The municipality recently terminated the contracts of current BRT concessions on contractual noncompliance grounds. Operations are currently run by the municipal transport authority ("Mobi.Rio") until new concessions are awarded in the tendering process for bus operations under a new governance and management model. Meanwhile, concessionaires whose contracts were terminated filed a lawsuit and requested an injunction against the termination of concessions. The most recent court decision related to the injunction is

favorable to the Municipality of Rio de Janeiro, although said court decision could be appealed in the future. In parallel, the municipality claims to be negotiating termination terms, compensations, and fines with the plaintiffs. There is a risk that this situation affects the implementation pace of indicative trigger #4. The separation of the bus operation from bus fleet provision under new contracts could be delayed if the case is still being reviewed in court. The authorities are aware of these risks and are engaging actively (face-to-face meetings and online consultation processes) with all relevant stakeholders, mainly with transport operators and fleet providers, civil society organizations, the private sector, and with the legislative and judiciary branches.

Table 7: Summary Risk Ratings

Risk Categories	Rating
1. Political and Governance	Substantial
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Low
4. Technical Design of Project or Program	Low
5. Institutional Capacity for Implementation and Sustainability	Moderate
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Substantial
9. Other	Low
Overall	Substantial

ANNEX 1: POLICY AND RESULTS MATRIX

Prior Actions under DPL 1	Indicative Triggers DPL 2	Indicator Name	Baseline	Target
Pillar One: Strengthening fiscal management to improve medium-term fiscal sustainability				
Prior Action 1: The Borrower has enacted legislation to improve fiscal sustainability by: (i) joining the federal government's plan for the fiscal recovery of subnational entities (*Plano de Promoção do Equilíbrio Fiscal*), and committing to reduce current savings and improve liquidity; and (ii) adopting a new fiscal framework with revenue and expenditure adjustment measures that are triggered in case of fiscal distress, as evidenced by (i) Complementary Law (*Lei Complementar*) No. 235, dated November 3,2021, published in the Borrower's official Gazette on November 4 2021, and (ii) an official letter from the Mayor (*Ofício GBP*) No. 406, dated December 14, 2021 with the attached Borrower's *Plano de Promoção do Equilíbrio Fiscal*.	**Trigger 1:** The borrower has enacted a set of decrees and resolutions to improve accountability of the Government through: (i) the adoption of the international public sector accounting standards (IPSAS); and (ii) the strengthening of the internal audit capacities of the Municipal Comptroller General (CGM).	Current savings (current spending as percentage of current revenues - CAPAG indicator) Liquidity (Financial Obligations from Non-Earmarked Resources as percentage of gross cash balance, CAPAG indicator)	100 (2020) -188 (2020)	Less than 95 (2024) Less than 100 (2024)
Prior Action 2: The Borrower has enacted legislation and decrees to mobilize tax revenues and improve its business environment by: (i) allowing taxpayers to regularize ISS (Tax on Services) debts wrongfully paid to other municipalities via debt write-offs (program popularly known as De Volta para Casa); (ii) improving its settlement mechanism for tax administrative disputes between the tax authority and the tax debtors (transação tributária); (iii) simplifying ISS withholding rules; and (iv) revoking certain ISS exemptions, as evidenced by (a) Chapters I and V of Title I, Chapter I of Title II, and Title III of Law No. 7,000, dated June 23, 2021, published in the Borrower's official Gazette on July 26, 2021, and (b) regulated by (i) Decree No. 50032,	**Trigger 2**: The borrower has enabled the development of a low-carbon sustainable economy by providing fiscal incentives for promoting investments in mitigation outcomes	ISS revenue in 2024, compared to projection with no reform (Millions of 2021 Real) Number of carbon credits generated in Rio de Janeiro	6,172 (2024 with no reform) 0 (2020)	6,689 (2024) 1,000,000 (2024)

dated December 16, 2021, published in the Borrower's official Gazette on December 17, 2021, and (ii) Decree No. 50039, dated December 20, 2021, published in the Borrower's official Gazette on December 21, 2021.		(Tons)[105]		
Prior Action 3: The Borrower has enacted legislation to reduce the public pension deficit by: (i) increasing the contribution rate to civil servants (active and inactive ones, pensioners, and beneficiaries of the special pension) from 11 percent to 14 percent; and (ii) establishing a contribution-based complementary pension scheme for civil servants from the executive and legislative branches of the government, as well as from the Audit Office (*Tribunal de Contas*), which would reduce medium-term public pension liabilities, as evidenced by (a) Article 6, Paragraph 1 of Law No. 6,852, dated April 14,2021, published in the Borrower's official Gazette on April 15, 2021; and (b) Law No. 6,982 dated June 29, 2021, published in the Borrower's official Gazette on June 30, 2021, and regulated by Decree No. 49370, dated September 1, 2021, published in the Borrower's official Gazette on September 2nd, 2021.	**Trigger 3**: The Borrower has enacted a set of decrees and issued regulations to improve unified pension record management and enable more efficient audits.	Pension Contributions in real terms (Millions of 2021 Real)	4,442 (2020)	5,700 (2024)
Pillar Two: Accelerating the transition towards a low-carbon, climate-resilient and inclusive urban development				
Prior Action 4: The Borrower has enacted legislation to improve service efficiency and safety of the BRT system, thereby reducing modal shift to high-emission private vehicles by: (i) separating the system's fare collection management from the bus operation, thereby facilitating the digitalization of the electronic ticketing system and intermodal integration, and increasing data transparency; (ii) instituting a gender program to prevent and address sexual harassment in its public transport system, as evidenced by (a) Law No. 6,848, dated March 25, 2021, published in the Borrower's official Gazette on March 26, 2021; (b) Decree No.	**Trigger 4:** The Borrower has enacted a legal framework to foster a more competitive and low-carbon bus sector market by separating bus operation from fleet provision in the BRT system.	Ridership in the BRT system (Number of passengers) Percentage of sexual harassment complaints submitted to the new tracking and	60.4 million (2021) NA (2020)	85.2 million[106] (2024) At least 75 (2024)

[105] This result indicator is related to indicative trigger 2.
[106] Excluding the *Transbrasil* line, to be inaugurated in 2022.

48580, dated March 5, 2021, published in the Borrower's official Gazette on March 8 2021; and (c) Law No. 6,938, dated June 14 2021, published in the Borrower's official Gazette on June 16 2021, whereas the two latter are regulated by the joint Resolutions No. 52, 53, and 54, dated December 29, 2021, published in the Borrower's official Gazette on December 30, 2021.		response system that are responded (%)		
Prior Action 5: The Borrower has enacted regulations that incentivize the use of active mobility rather than high-emission vehicles, thereby reducing transport related greenhouse gas emissions by: (i) expanding its Mobility System by Bicycles, which includes earmarking public land to increase the number of cycleways connecting to neighborhood centers, key public facilities, and structural transport stations; and (ii) establishing the program On the Way to School 2.0 (*A Caminho da Escola 2.0*), to improve the walking and cycling safety conditions in the surroundings of schools, as evidenced by (a) Decree No. 49461, September 21, 2021, published in the Borrower's official Gazette on September 22, 2021; and (b) joint Ordinance SMTR/CET-RIO No. 1, dated January 26, 2022, published in Borrower's official Gazette on January 27, 2022.	**Trigger 5:** The Borrower has enacted a legal framework to further expand low-carbon mobility in the city and connect low-income areas, by adopting the Municipal Cycleway Plan, with commitments, responsibilities, and an accountability framework to expand and consolidate a comprehensive cycling network.	High and medium capacity mass transit stations connected with cycleways (%)	20 (2020)	At least 40 (2024)
Prior Action 6: The Borrower has enacted legislation to establish a low emission district in the city center that promotes, *inter alia*, low- and zero-emissions mobility, urban afforestation, climate-resilient infrastructure, building energy efficiency, and sustainable solid waste management, as evidenced by Section I of Chapter VI and Annex I of the Complementary Law (*Lei Complementar*) No. 229, dated July 14, 2021, published in the Borrower's official Gazette on July 15, 2021.	**Trigger 6:** The Borrower has enacted a regulation to further strengthen the green transformation of the Low Emission District, by establishing a governance structure across Secretaries and a monitoring and evaluation methodology of local GHG emissions.	Monthly bicycle trips in the Low Emission District (Rio's Bikesharing Scheme)	65,000 (Sep 2021)	85,000 (Sep 2024)
Prior Action 7: The Borrower has issued a decree to, inter alia, promote the transition toward electric mobility, incentivize the use of renewable energy and	**Trigger 7:** The Borrower has enacted regulations to decrease GHG emissions	Reduction in GHG emissions		

promote energy efficiency, and enhance the disaster risk prevention and preparedness by establishing its Sustainable Development and Climate Action Plan in line with the United Nation's Sustainable Development Goals and the Paris Agreement, as evidenced by Decree No. 48940, dated June 4, 2021, published in the Borrower's official Gazette on June 7, 2021	and energy use by: (i) establishing instruments to accelerate the electrification of the municipal vehicle fleet; and (ii) introducing the mechanisms to green the Government's energy consumption matrix and promote the clean energy free market.	(%)	- (2017)	5 (2024)

ANNEX 2: FUND RELATIONS ANNEX

Brazil—Assessment Letter for the World Bank
April 12, 2022

Rio de Janeiro Adjustment and Sustainable Development Policy Loan

Economic Developments

1. **The authorities' decisive policy response to the Covid-19 shock reduced the severity of the recession in 2020, cushioned its impact on the poor and vulnerable, and set the stage for the subsequent recovery.** Real GDP declined by 3.9 percent in 2020, less than in many major advanced and emerging economies, and recovered to its pre-pandemic level in 2021Q1, ahead of most peers. Growth reached 4.6 percent in 2021, also supported by positive terms of trade and credit growth to the private sector.

2. **The labor market is continuing to recover, but slack persists.** Unemployment has declined to its pre-pandemic rate, although remains elevated at about 11 percent. Underemployment is above, and the labor force participation rate is below, pre-pandemic levels.

3. **Inflation has risen well above the target, reaching 11.3 percent in March 2022.** Price pressures have become broad based and have intensified further with the war in Ukraine. The central bank has hiked the policy rate to 11.75 percent, an increase of 975 basis points since mid March 2021, and has kept long-term inflation expectations anchored.

4. **In 2021, the authorities largely withdrew the extraordinary fiscal support of 2020.** Revenues also over-performed owing to higher inflation and commodity-related windfalls. As a result, the primary fiscal balance of the nonfinancial public sector improved by about 10 percentage points of GDP. Public debt (by the IMF's definition) fell from 99 to 93 percent of GDP. The authorities implemented a new social assistance program (*Auxilio Brasil*) in late 2021, with larger benefits until end-2022, that was accommodated through a constitutional amendment of the expenditure ceiling.

5. **The banking system has been resilient.** Capital and liquidity ratios remain adequate, and nonperforming loans remain low. The household debt-to-income ratio rose from about 42 percent at end-2019 to about 51 percent in October 2021.

6. **The external current account deficit in 2021 was broadly unchanged at 1.7 percent of GDP, with exports and imports rebounding strongly.** Net foreign direct investment inflows have continued to fully finance the deficit. Net portfolio inflows turned positive for the first time since 2015, partly on account of the wider interest rate differentials.

Outlook and Risks

7. **Growth is projected to decelerate to 0.8 percent in 2022 on account of tighter domestic financial conditions.** It is projected to rise in subsequent years to about 2 percent as financial conditions normalize. Inflation is projected to decline to 6.7 percent by end-2022 and converge toward the target by end-2023.

8. **A modest fiscal expansion in 2022, including recent tax cuts to alleviate the impact of inflation on the population, could result in a primary fiscal deficit of the nonfinancial public**

sector of about 0.5 percent of GDP. Assuming the expenditure ceiling is adhered to over the medium term, which would be facilitated by reforms such as of the public administration, the consolidated primary balance could improve to around 1 percent of GDP. Under the above assumptions for the primary balance, interest rates and growth, public debt is projected to stabilize around 95 percent of GDP over the medium term, from 93 percent of GDP at end-2021.

9. **Risks to growth are tilted somewhat to the downside, while risks to inflation are tilted to the upside.** Higher commodity prices would boost exports and could improve fiscal balances but would add to inflationary pressures. A swift resolution of the war in Ukraine and a waning of the Covid-19 pandemic would also boost growth, including through higher global growth and reduced supply chain pressures. Downside risks include negative developments of the war in Ukraine, a resurgence of the pandemic, and an abrupt tightening of global financial conditions. Fiscal uncertainties could also weigh, such as possible deviations from the expenditure ceiling and realizations of contingent liabilities. Direct trade links with Russia are limited with imports concentrated on fertilizers, where shortages could impact agricultural production. Risks are mitigated by a sound banking system, a large stock of international reserves, a low share of foreign currency public debt, and a large government cash buffer.

Policies

10. **Monetary policy will need to remain appropriately tight, being calibrated as needed with incoming data to keep medium-term inflation expectations well anchored and guide inflation back to the target over the next two years.** The flexible exchange rate is a key shock absorber, with intervention limited to counter disorderly market conditions.

11. **Fiscal consolidation is needed over the medium term to lower public debt, alongside reforms to reduce budget rigidities and create space for public investment and other high priority programs to foster inclusive growth.** Comprehensive tax reform should aim to increase progressivity, simplify the system, and improve resource allocation. Scaling back tax expenditures would frontload the benefits to equity and efficiency. Enhancing the fiscal framework, of which the expenditure ceiling has been a key anchor, and strengthening subnational finances would bolster credibility, reduce risks, and improve the capacity of the government to manage adverse shocks.

12. **Potential growth remains relatively low, with per capita income over the past three decades having grown on average around 1 percent per year and diverged from advanced economy levels. Boosting productivity, therefore, is a critical priority.** In addition to the above-mentioned fiscal reforms, it will require concerted action to liberalize trade and product markets, increase the flexibility of formal labor markets, and improve governance. Strengthening the effectiveness and predictability of the anti-corruption and AML/CFT frameworks remains critical. Steps are also needed to further improve the environment for private sector investment.

IMF Relations

13. **The 2021 Article IV consultation was concluded on September 10, 2021.** The 2022 Article IV consultation mission is yet to be scheduled. In agreement with the Brazilian authorities, the IMF resident representative office in Brasilia will be closed by June 30, 2022, when the term of the current representative ends.

3

Table 1. Brazil: Selected Economic Indicators, 2019-2027

I. Social and Demographic Indicators

Area (thousands of sq. km)	8,510	Health	
Agricultural land (percent of land area)	30.2	Physician per 1000 people (2018)	2.2
		Hospital beds per 1000 people (2018)	2.2
Population		Access to safe water (2018)	83.6
Total (million) (est., 2019)	210.1		
Annual rate of growth (percent, 2018)	0.8	Education	
Density (per sq. km.) (2019)	25.3	Adult illiteracy rate (2019)	6.6
Unemployment rate (2019)	11.9	Net enrollment rates, percent in:	
		Primary education (2019)	98
Population characteristics (2018)		Secondary education (2019)	85
Life expectancy at birth (years)	76		
Infant mortality (per thousand live births)	12	Poverty rate (in percent, 2018) 1/	25.3
Income distribution (2017)			
Ratio between average income of top 10 percent of earners over bottom 40 percent	12.4	GDP, local currency (2020)	R$7,468 billion
		GDP, dollars (2020)	US$1,449 billion
Gini coefficient (2018)	53.9	GDP per capita (2020)	US$6,893

Main export products: airplanes, metallurgical products, soybeans, automobiles, electronic products, iron ore, coffee, and oil.

II. Economic Indicators

	2019	2020	2021	2022 Proj.	2023 Proj.	2024 Proj.	2025 Proj.	2026 Proj.	2027 Proj.
	(Percentage change)								
National accounts and prices									
GDP at current prices	5.5	1.1	16.2	9.1	6.8	6.1	4.9	4.8	5.0
GDP at constant prices	1.2	-3.9	4.6	0.8	1.4	2.2	2.0	2.0	2.0
Consumption	1.9	-5.2	5.1	-0.1	0.3	1.2	1.2	1.2	1.3
Investment (GFCF)	4.0	-0.5	9.5	3.0	2.8	4.7	4.8	4.8	4.7
Consumer prices (IPCA, end of period)	4.3	4.5	10.1	6.7	3.5	3.0	3.0	3.0	3.0
	(Percent of GDP)								
Gross domestic investment									
Private sector	13.5	13.2	15.6	15.0	15.1	15.5	15.9	16.4	16.9
Public sector	2.1	2.7	1.1	2.1	2.2	2.3	2.4	2.5	2.5
Gross national savings									
Private sector	16.8	26.0	18.7	22.0	21.8	20.4	19.9	19.9	20.3
Public sector	-4.7	-11.8	-3.8	-6.4	-6.1	-4.3	-3.5	-3.0	-3.0
Public sector finances									
Central government primary balance 2/	-1.3	-10.0	-0.4	-0.3	-0.4	0.0	0.4	0.7	1.0
NFPS primary balance	-0.9	-9.1	0.8	-0.4	-0.5	-0.1	0.3	0.6	1.0
NFPS cyclically adjusted primary balance (in percent of potential GDP)	-0.5	-7.7	1.1	-0.1	-0.3	0.1	0.3	0.6	1.0
NFPS overall balance	-5.9	-13.3	-4.4	-7.6	-7.4	-5.6	-4.9	-4.4	-4.5
Net public sector debt	54.7	62.5	57.2	59.0	61.5	63.4	64.9	66.2	66.4
General Government gross debt, Authorities' definition	74.4	88.6	80.3	78.4	79.0	79.2	79.9	80.4	79.7
NFPS gross debt	87.9	98.7	93.0	91.9	92.8	93.4	94.2	94.9	94.3
Of which: Foreign currency linked	4.2	5.8	5.2	5.0	4.9	4.8	4.9	4.9	4.9
	(Annual percentage change)								
Money and credit									
Base money 3/	3.3	8.0	16.2	9.1	6.8	6.1	4.9	4.8	5.0
Broad money 4/	8.6	18.6	15.1	11.9	8.9	7.6	6.4	6.1	6.5
Bank loans to the private sector	5.9	16.4	10.0	9.0	9.0	8.0	8.0	8.0	8.0
	(Billions of U.S. dollars, unless otherwise specified)								
Balance of payments									
Trade balance	26.5	32.4	36.4	50.4	53.7	52.2	51.1	49.4	47.3
Exports	225.8	210.7	284.0	321.0	330.2	337.2	343.8	349.8	355.8
Imports	199.3	178.3	247.6	270.5	276.5	285.0	292.7	300.4	308.5
Current account	-65.0	-24.5	-27.9	-27.6	-32.5	-37.4	-42.3	-46.9	-52.4
Capital account and financial account	64.7	16.6	36.1	27.6	32.5	37.4	42.3	46.9	52.4
Foreign direct investment (net inflows)	46.4	41.3	27.3	38.4	40.7	42.7	44.6	46.5	48.5
Terms of trade (percentage change)	0.1	0.6	13.1	-3.6	-3.3	-2.1	-0.7	-0.5	-0.6
Merchandise exports (in US$, annual percentage change)	-5.7	-6.7	34.8	13.0	2.9	2.1	2.0	3.7	3.5
Merchandise imports (in US$, annual percentage change)	1.6	-10.5	38.9	9.2	2.2	3.1	2.7	5.4	5.4
Total external debt (in percent of GDP)	36.1	44.1	41.4	37.8	36.7	36.0	36.2	36.5	36.7
Memorandum items:									
Output Gap	-1.5	-4.0	-1.2	-1.0	-0.6	-0.4	-0.2	0.0	0.0
Current account (in percent of GDP)	-3.5	-1.7	-1.7	-1.5	-1.6	-1.8	-1.9	-2.0	-2.1
Unemployment rate	12.0	13.8	14.2	13.7	12.9	12.4	11.8	11.1	10.4
Gross official reserves	357	356	362	362	362	362	362	362	362
REER (annual average in percent; appreciation +)	-1.8	-20.6	–	–	–	–	–	–	–

Sources: Central Bank of Brazil; Ministry of Finance; IBGE; IPEA; and Fund staff estimates.
1/ Computed by IBGE using the World Bank threshold for upper-middle income countries of US$5.5/day. This number is not comparable to the estimates provided by IPEA in previous years due to methodological differences.
2/ Includes the federal government, the central bank, and the social security system (INSS).
3/ Currency issued, required deposits held at the Central Bank plus other Central Bank liabilities to other depository corporations
4/ Currency outside depository corporations, transferable deposits, other deposits and securities other than shares

121. **Safeguards Assessments.** A safeguards assessment of the *Banco Central do Brasil* (BCB) was completed in June 2002 and updated in March 2005.

122. **Exchange Rate Arrangement.** Since January 18, 1999, Brazil's de facto and de jure foreign exchange regime has been classified as floating. Brazil accepted the obligations under article VIII, sections 2(a), 3, and 4, effective as of November 30, 1999. The IOF (*Imposto sobre Operações Financeiras*) is a 6.38 percent tax on financial transactions, among which exchange transactions carried out by credit card, debit card, and traveler's check companies (including cash withdrawals) to fulfill their payment obligations for the purchase of goods and services abroad by their customers. The IOF gives rise to multiple currency practices (MCP) subject to Fund jurisdiction under article VIII, sections 2(a) and 3. In January 2008, the IOF for these exchange transactions was raised to 2.38 percent, and further increased to 6.38 percent in March 2011. The scope of operations was expanded to other foreign exchange transactions in addition to credit cards in December 2013.

123. **Technical Assistance**. The Statistics Department (STA) provided technical assistance (remotely) in August 2020 to support the Brazilian Institute of Geography and Statistics (IBGE) in dealing with COVID-19 related challenges in compiling GDP data in the Quarterly National Accounts. The Fiscal Affairs Department (FAD) is supporting the Ministry of Economy in its efforts to strengthen the tax administration system, enhance medium-term fiscal planning and improve transparency. Three missions were conducted during 2020: (i) “Strengthening Fiscal Responsibility at the Subnational Level” in February to provide technical advice on designing subnational fiscal rules. That mission built on the findings of an earlier (April 2019) mission titled “Strengthening the Framework for Subnational Borrowing”, which provided recommendations to strengthen the institutional framework for subnational public finances with a focus on programs to support States and municipalities under financial distress. (ii) a TADAT Performance Assessment in January; and (iii) supporting the State of São Paulo (remotely) in implementing a cost accounting system for the public sector in April 2020.The FAD also carried out a Public Investment Management Assessment (PIMA), published in November 2018, and a mission on Cost Accounting, in March 2018.

ANNEX 3: LETTER OF DEVELOPMENT POLICY

PREFEITURA DA CIDADE DO RIO DE JANEIRO
Gabinete do Prefeito

Ofício GBP Nº 47 **Rio de Janeiro,** 7 **de** abril **de 2022**

À Senhora

PALOMA ANÓS CASERO
Diretora-Brasil
Região da América Latina e do Caribe
The World Bank
Sces - Trecho 3 - Lote 5 - Polo 8 – sn
Brasília – DF
Cep: 70.200-003

Assunto: Carta de Políticas - *Development Policy Loan (DPL)*

Senhora Diretora,

Este documento compreende um conjunto de medidas de políticas de ajuste fiscal e sustentabilidade econômica e socioambiental. Tem como objetivo integrar políticas públicas de desenvolvimento socioeconômico e sustentabilidade ambiental e melhorar a qualidade de vida dos cidadãos do Município do Rio de Janeiro.

O Governo da Prefeitura da Cidade do Rio de Janeiro entende que o apoio técnico-financeiro do Banco Internacional para Reconstrução e Desenvolvimento – BIRD, por meio do Development Policy Loan (DPL) será essencial ao sucesso do programa de ajuste e sustentabilidade fiscal do Município.

Relevante salientar que o supracitado programa tem o intuito de elevar a capacidade de poupança e de investimentos do Município com recursos próprios, no médio prazo. Desta forma, acreditamos em uma Prefeitura da Cidade do Rio de Janeiro próspera na gestão ambiental, no desenvolvimento sustentável e no equilíbrio das contas públicas.

Contexto

A atual gestão municipal assumiu o mandato em meio a um cenário de grave crise econômica no país e no Rio de Janeiro, que resultou em impactos determinantes sobre a arrecadação municipal em 2021, ao mesmo tempo em que as despesas apresentaram um crescimento oriundo de gastos imprescindíveis, com ênfase na Função Saúde, dado o cenário de pandemia causado pelo Coronavírus SARS-CoV-2 (Covid-19).

O Município do Rio de Janeiro (MRJ) apresentou dificuldades fiscais antes mesmo da pandemia, devido ao crescimento dos gastos com pessoal e demais despesas correntes que não foram acompanhadas pelo crescimento das receitas. A pandemia da COVID-19 reduziu ainda mais a capacidade do município de promover investimentos em favor de seus objetivos ambientais, sociais e econômicos, incluindo o desenvolvimento urbano de baixo carbono, resiliente e inclusivo.

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A taxa de emprego e de atividade econômica impactam diretamente a arrecadação de impostos, com ênfase no Imposto Sobre Serviços (ISS), principal tributo próprio municipal. As medidas sanitárias de distanciamento impostas pela pandemia afetaram negativamente a arrecadação desse imposto a partir de março 2020. Em 2021, apesar do pequeno crescimento no início do ano, as receitas do ISS ainda se encontravam nos mesmos níveis de agosto de 2017.

Dentro do contexto apresentado, o efeito direto causado ao Tesouro Municipal foi a impossibilidade de arrecadação suficiente para fazer frente às demandas enfrentadas pelo Município. Diante desse quadro de dificuldades, a disponibilidade dos recursos do Poder Executivo não foi suficiente para honrar os pagamentos de obrigações de anos anteriores, o que gerou déficit de R$ 5,5 bilhões no caixa da Prefeitura no fechamento do exercício de 2020. Além disso, as despesas vêm crescendo de forma recorrente. Em particular, os Gastos com Pessoal do Poder Executivo como percentual da Receita Corrente Líquida ficaram acima do teto da Lei de Responsabilidade Fiscal nos anos de 2019 e 2020.

Esta situação, para além de evidenciar a fraca situação fiscal em que se encontrava o Município, conduziu a situações de insuficiência de tesouraria, acumulação de restos por pagar, quebra do investimento público em áreas chave para o desenvolvimento e sucessivos déficits orçamentários. A cidade do Rio de Janeiro tem vocação inquestionável para atração de investimentos e tem sido um líder na agenda de mudanças climáticas nas últimas quatro décadas. No entanto, é necessário recuperar a sustentabilidade fiscal para permitir que o município invista em áreas prioritárias para contribuir para a recuperação pós Pandemia da Covid-19.

Com o intuito de fazer frente às obrigações imediatas, principalmente considerando as despesas adicionais na área de saúde e assistência social, será necessário aporte de recursos extraordinários necessários ao bom funcionamento da administração municipal e estruturação do fluxo de caixa. A opção para o Município é o reforço da liquidez por meio de uma operação de crédito. Concomitantemente, serão tomadas medidas de caráter estrutural, que, apesar de necessitarem de maior tempo de maturação para atingirem os efeitos financeiros desejados, irão proporcionar a sustentabilidade fiscal a médio e longo prazos.

A adesão do Município do Rio de Janeiro (RJ) ao Plano de Promoção do Equilíbrio Fiscal foi autorizada pela Lei Complementar Municipal nº 235, de 3 de novembro de 2021. Após tratativas junto ao Tesouro Nacional para o desenho do Plano de Promoção do Equilíbrio Fiscal, o mesmo foi homologado pela Secretaria do Tesouro Nacional em dezembro 2021, com sua vigência expirando no exercício de 2024. Para ter seu Plano homologado, a Prefeitura da Cidade do Rio de Janeiro teve que realizar diversas medidas de ajuste, de caráter estrutural, previstas no § 1º do art. 2º da Lei Complementar nº 159, de 19 de maio de 2017, incluindo: (i) a alienação total ou parcial de participação societária, com ou sem perda do controle, de empresas públicas ou sociedades de economia mista, ou a concessão de serviços e ativos, ou a liquidação ou extinção dessas empresas, para quitação de passivos com os recursos arrecadados; (ii) a realização de leilões de pagamento de despesas atrasadas; (iii) a adoção de gestão financeira municipal centralizada ; e (iv) a implementação do regime de previdência complementar.

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Por outro lado, o Município do Rio de Janeiro tem uma importante contribuição para a redução da emissão de carbono do Brasil por meio de seu setor de transporte, que é central em sua agenda de mitigação climática. Como a segunda cidade mais populosa do Brasil, o setor de transporte do Rio é a principal fonte de emissões da cidade, com 42% de suas emissões totais, tornando-o central para a agenda climática do Rio. No entanto, a sustentabilidade do sistema de transporte do Rio foi desafiada por uma rede de transporte público deficiente, impedindo o investimento em veículos verdes de transporte público e contribuindo para uma perda constante de passageiros desde 2015, especialmente entre mulheres e famílias de baixa renda. Por fim, o Rio de Janeiro também enfrenta desafios de adequação ao adensamento urbano ligados à sua geografia, o que o torna suscetível a desastres relacionados ao clima, como chuvas severas e inundações.

O apoio do Banco via *Development Policy Loan (DPL)*:

Por meio do DPL, o Banco Mundial apoiará o Município na implementação de políticas que contribuem para fortalecer a gestão fiscal com o objetivo de melhorar a sustentabilidade fiscal de médio prazo, e políticas para acelerar a transição para um desenvolvimento urbano de baixo carbono, resiliente ao clima e inclusivo.

Área Fiscal: Com apoio do DPL, o governo da Prefeitura da Cidade do Rio de janeiro propõe a adesão do Município ao Plano de Promoção do Equilíbrio Fiscal (PEF), instituído pela Lei Complementar nº 178, de 13 de janeiro de 2021. Esse Plano Federal visa melhorar a sustentabilidade fiscal dos entes subnacionais. A adesão do Município do Rio de Janeiro ao PEF exige o cumprimento das metas fiscais pactuadas. Para cumprir as metas fiscais acordadas no programa, este DPL também apoia reformas fiscais que incluem a adoção de um novo regime fiscal, uma reforma previdenciária, e uma reforma tributária:

1. **Novo Regime Fiscal:** A Lei Complementar Municipal nº 235/2021 cria o Novo Regime Fiscal no MRJ que estabelece normas de finanças públicas voltadas para a responsabilidade na gestão fiscal e define mecanismos de controle, estabilização e preservação para corrigir os desvios que afetaram as contas públicas municipais. O objetivo é incluir na legislação municipal mecanismos de controle, estabilização e preservação do equilíbrio das contas públicas, implantando um Novo Regime Fiscal, ancorado na metodologia de análise de saúde fiscal proposta pelo Tesouro Nacional. Os indicadores de avaliação da CAPAG nortearão toda a política fiscal do Município, disparando "gatilhos" com medidas corretivas e vedações, visando garantir a solvência e a estabilidade das finanças públicas no médio e longo prazo. Trata-se de um projeto para evitar a situação financeira em que o Município se encontra.

2. **Reforma Tributária**: A reforma aprovada pela Lei Municipal nº 7000, de 23 de julho de 2021, e regulamentada pelos Decretos RIO nº 50.032, de 16 de dezembro de 2021 e nº 50.039, de20 de dezembro de 2021, trata de um amplo leque de medidas que, em seu conjunto, configuram uma reforma tributária municipal, destinada a simplificar a administração, a fiscalização e a arrecadação de tributos, sempre tendo em vista atrair empresas (e, portanto,

mais empregos) para o Município do Rio de Janeiro. Adicionalmente, tem por objetivo garantir a justiça fiscal e assegurar o atendimento às necessidades da população em áreas vitais como a saúde pública, especialmente nesse momento de crise, por meio do potencial de aumento de arrecadação.

3. **Reforma Previdenciária**: O Executivo Municipal encaminhou duas leis, que se complementam, abrangendo um conjunto de normativas que têm por objetivo reduzir a necessidade de aportes financeiros do Tesouro ao sistema previdenciário, acometido por déficit financeiro e de déficit atuarial estimado em R$ 38 bilhões, ambos com perspectiva de crescimento. Para mudar o regime previdenciário do setor público para uma trajetória mais sustentável, o município do Rio de Janeiro aprovou a Lei nº 6.852, de 14 de abril de 2021 que majorou a taxa de contribuição previdenciária de 11% para 14% para os servidores públicos ativos e para os inativos e pensionistas com proventos acima do limite máximo do Instituto Nacional do Seguro Social (INSS). Outro marco para a previdência municipal é a instituição da Previdência Complementar, com a publicação da Lei nº 6.982, de 29 de junho de 2021 e o Decreto RIO nº 49.370, de 1º de setembro de 2021. O novo regime será aplicado para os servidores que vierem a ingressar no serviço público após sua publicação, considerando que, em consonância com as novas regras previstas após a promulgação da Emenda Constitucional nº 103, de 12 de novembro de 2019, o provento de inatividade para os novos servidores estará limitado ao teto do Regime Geral de Previdência Social.

Área Ambiental: A Prefeitura da Cidade do Rio de Janeiro reconhece a necessidade de avançar na redução de emissões de gases do efeito estufa do sistema de transporte, setor econômico mais poluente da cidade, e na sua vulnerabilidade aos choques das mudanças climáticas. Com a perspectiva de aumentar a capacidade institucional para a promoção do transporte público sustentável, para a atração de passageiros para modais menos poluentes e para um desenvolvimento urbano de baixo carbono, resiliente ao clima e inclusivo, as ações prévias adotas pelo Município foram:

1. **Reformas no sistema de BRT (Bus Rapid Transit)**: A definição do novo modelo de bilhetagem do BRT, separando seu gerenciamento da concessão de operação de ônibus foi instituído pela Lei Municipal nº 6.848, de 25 de março de 2021. O Município passa a ser responsável pela implantação e pelo gerenciamento do Sistema de Bilhetagem, podendo o Poder Executivo executar tais atividades pela contratação de terceiros, mediante o devido processo licitatório.

   A adoção do novo modelo tem como objetivo permitir maior transparência aos dados de utilização do sistema de transporte, maior eficiência operacional do sistema BRT, controle efetivo sobre a arrecadação tarifária, assim como expandir os meios de pagamento digitais, melhorando a experiência do usuário e facilitando a integração com outros meios de transporte público e mobilidade ativa. Ainda com o intuito de aumentar a segurança do transporte público e atrair mais passageiras para o sistema, o Munícipio instituiu o Programa Permanente de Prevenção e Enfrentamento ao Assédio no Transporte Público, através da Lei

Municipal nº 6.938, de 16 de junho de 2021, do Decreto RIO nº 48.580, de 08 de março de 2021, e das resoluções conjuntas SMTR/SPM-RIO/SEGOVI nº 52, 53 e 54, de 30 de dezembro de 2021, que instituem uma plataforma de denúncia de casos de assédio no transporte público, protocolos de encaminhamento e monitoramento das denúncias, um programa permanente de treinamento para motoristas e cobradores, e uma estratégia de comunicação para prevenir e combater o assédio no transporte.

2. **Ciclovias**: A ampliação da oferta de infraestrutura cicloviária (ciclovias, ciclofaixas, faixas compartilhadas e estacionamento de bicicletas) com o objetivo de promover a mobilidade ativa de forma segura, por meio do Decreto Rio nº 49.461, de 21 de setembro de 2021, que determina e reserva as áreas prioritárias destinadas às ligações da Rede de Mobilidade por Bicicleta aos centros de bairros, aos grandes equipamentos urbanos e estações da Rede Estrutural de Transportes. Adicionalmente, o Município expandiu o programa "A Caminho da Escola 2.0" para melhorar as condições de segurança a pé e de bicicleta relacionadas ao trânsito no entorno das unidades escolares e ao acesso seguro de crianças a estes equipamentos, evidenciado pela portaria conjunta SMT/CET nº 001, de 26 de janeiro de 2022.

3. **Distrito de baixa emissão**: A instituição de um distrito de baixa emissão na região central da cidade, pioneiro no Brasil, por meio da Lei Complementar nº 229, de 14 de julho de 2021, com o objetivo de implementar ações para redução de emissões de Gases de Efeito Estufa - GEE na Cidade do Rio de Janeiro, alinhando-a às metas assumidas na 21ª Conferência do Clima - COP e no Acordo de Paris. O Distrito de Baixa Emissão do Centro será implantado por meio de ações que incentivam: (i) o transporte limpo e zero emissão; (ii) a promoção da mobilidade ativa; (iii) a requalificação urbana sustentável dos espaços públicos; e (iv) a melhoria da qualidade do ar.
   Adicionalmente, o Distrito de Baixa Emissão do Centro contemplará ações compensatórias, inclusive às relativas a edificações e resíduos e privilegiará ainda projetos educativos para sensibilização e engajamento da população sobre a relevância dos benefícios diretos e indiretos na saúde e qualidade de vida.

4. **Plano climático**: A adoção do Plano de Desenvolvimento Sustentável e Ação Climática da Cidade do Rio de Janeiro (PDS), por meio dos Decretos Rio nº 46.078, de 11 de junho de 2019 e nº 47.086, de 08 de janeiro de 2020, é fruto de intensa participação social e integra políticas econômicas, sociais e urbano-ambientais que devem ser implementadas até 2030 para a promoção do desenvolvimento da cidade de forma sustentável. Uma das principais metas do PDS é a redução das emissões de gases do efeito estufa em 20% até 2030 e, até 2050, a proposta é que essas emissões sejam neutralizadas. Destacam-se ações que promovem a mobilidade elétrica, incentivam o uso de energias renováveis e mais eficientes, e melhoram os mecanismos da cidade para a prevenção e mitigação de eventos climáticos.

Neste contexto, o apoio financeiro do Banco Mundial para implantação do "Projeto de Ajuste e Desenvolvimento Sustentável do Rio de Janeiro", no valor de até

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US$ 150,0 milhões, tem particular relevância na estratégia de financiamento da Prefeitura, razão pela qual agradecemos antecipadamente por sua colaboração no sentido da dar prosseguimento às gestões internas no Banco Mundial, visando à aprovação da operação de crédito, que, associada ao Plano de Promoção do Equilíbrio Fiscal, contribuirá para a construção de uma trajetória de reequilíbrio das contas públicas municipais e para acelerar a transição para um desenvolvimento urbano de baixo carbono, resiliente ao clima e inclusivo.

Decerto, esta Gestão entende a necessidade da adesão a novas ações estruturantes para o crescimento socioeconômico e ambiental do Município. É nosso compromisso, portanto, implementar medidas de políticas complementares à sustentabilidade fiscal e à transformação da cidade, direcionadas ao desenvolvimento urbano de baixo carbono e mais inclusivo, por meio de uma mobilidade mais sustentável e de estratégias para mitigação de impactos e adaptação às mudanças climáticas. Sem prejuízo de outras, algumas destas medidas contemplam temas de responsabilidade fiscal e auditoria.

São áreas de interesse do Município do Rio o programa "bolsa verde", o aprofundamento das reformas previdenciárias, o fortalecimento dos serviços de transporte público por meio da promulgação de regulamentos que separam as operações de ônibus da provisão de frota, a estruturação legal e regulatória necessária para a implementação do "Plano Municipal de Ciclovias" e "Distrito de Baixa Emissão" para expansão da mobilidade de baixo carbono e conexão de áreas de baixa renda, além de medidas para a redução das emissões de GEE, por meio do esverdeamento da matriz de transporte e consumo de energia do governo municipal.

Ao agradecer ao Banco Mundial por seu contínuo apoio, aproveito esta oportunidade para expressar minha consideração e estima.

EDUARDO PAES
Prefeito da Cidade do Rio de Janeiro

[Unofficial translation]

LETTER OF DEVELOPMENT POLICY

To Ms.

PALOMA ANÓS CASERO

Director-Brazil

Latin America and the Caribbean Region

The World Bank

Subject: Policy Letter - Development Policy Loan (DPL)

Madam Director,

This document comprises a set of policy measures for fiscal adjustment and economic and socio-environmental sustainability. Its objective is to integrate public policies for socioeconomic development and environmental sustainability and to improve the quality of life of citizens in the Municipality of Rio de Janeiro.

The Municipal Government of the City of Rio de Janeiro understands that the technical and financial support of the International Bank for Reconstruction and Development - IBRD, through the Development Policy Loan (DPL) will be essential to the success of the Municipality's fiscal adjustment and sustainability program.

It is important to point out that the aforementioned program is intended to increase the Municipality's capacity to save and invest with its own resources, in the medium term. In this way, we believe in a prosperous City Hall of Rio de Janeiro in terms of environmental management, sustainable development and the balance of public accounts.

Context

The current municipal management took office in the midst of a scenario of serious economic crisis in the country and in Rio de Janeiro, which resulted in decisive impacts on municipal revenue in 2021, at the same time that expenses grew due to essential expenditures, with an emphasis on the Health Function, given the pandemic scenario caused by the Coronavirus SARS-CoV-2 (Covid-19).

The Rio de Janeiro Municipality (RJM) had fiscal difficulties even before the pandemic, due to the growth in personnel expenses and other current expenses that were not accompanied by the growth in revenues. The COVID-19 pandemic has further reduced the municipality's ability to promote investments in favor of its environmental, social and economic objectives, including low-carbon, resilient and inclusive urban development.

The rate of employment and economic activity directly impact tax collection, with emphasis on the Tax on Services (ISS), the main municipal tax. The health distancing measures imposed by the pandemic negatively affected the collection of this tax as of March 2020. In 2021, despite the small growth at the beginning of the year, ISS revenues were still at the same levels as in August 2017.

Within the presented context, the direct effect caused to the Municipal Treasury was the impossibility of collecting sufficient funds to meet the demands faced by the Municipality. In view of this situation of difficulties, the availability of resources from the Executive Branch was not enough to honor the payments of obligations from previous years, which generated a deficit of R$ 5.5 billion in the Municipality's cash at the end of the 2020 fiscal year. Besides, expenses have been growing on a recurring basis. In particular, the Executive Branch Personnel Expenses as a percentage of Net Current Revenue were above the ceiling of the Fiscal Responsibility Law in 2019 and 2020.

This situation, in addition to highlighting the poor fiscal situation of the Municipality, led to insufficient cash flow, accumulation of unpaid balances, fall in public investment in key areas for development and successive budget deficits. The city of Rio de Janeiro has an unquestionable vocation for attracting investment and has been a leader in the climate change agenda for the last four decades. However, it is necessary to recover fiscal sustainability to allow the municipality to invest in priority areas to contribute to the post-Covid-19 pandemic recovery.

In order to meet the immediate obligations, especially considering the additional expenses in the area of health and social assistance, it will be necessary to allocate extraordinary resources necessary for the proper functioning of the municipal administration and the structuring of the cash flow. The option for the Municipality is to reinforce liquidity through a credit operation. At the same time, measures of structural nature will be taken, which, despite taking longer to mature to achieve the desired financial effects, will provide fiscal sustainability in the medium and long term.

The adhesion of the Rio de Janeiro Municipality (RJM) to the Fiscal Balance Promotion Plan was authorized by Municipal Complementary Law No. 235, of November 3, 2021. After negotiations with the National Treasury for the design of the Fiscal Balance Promotion Plan , it was approved by the National Treasury Department in December 2021, with its validity expiring in 2024. In order to have its Plan approved, the Rio de Janeiro's City Hall had to carry out several adjustment measures, of structural nature, foreseen in § 1 of art. 2 of Complementary Law No. 159, of May 19, 2017, including: (i) the total or partial sale of equity interest, with or without loss of control, of public companies or mixed capital companies, or the concession of services and assets, or the liquidation or extinction of these companies, to settle liabilities with the funds collected; (ii) holding auctions for payment of late expenses; (iii) the adoption of centralized municipal financial management; and (iv) the implementation of the supplementary pension scheme.

On the other hand, Rio de Janeiro Municipality (RJM) has an important contribution to reducing Brazil's carbon footprint through its transport sector, which is central to its climate mitigation agenda. As the second most populous city in Brazil, Rio's transport sector is the city's main source of emissions, with 42% of its total emissions, making it essential to Rio's climate agenda. However, the sustainability of Rio's transport system has been challenged by a poor public transport network, preventing investment in green public transport vehicles and contributing to a steady loss of passengers since 2015, especially among women and low-income families. Finally, Rio de Janeiro also faces challenges in adapting to urban densification linked to its geography, which makes it susceptible to weather-related disasters, such as severe rains and floods.

Bank support via the Development Policy Loan (DPL):

Through the DPL, the World Bank will support the Municipality in the implementation of policies that contribute to strengthening fiscal management with the aim of improving medium-term fiscal sustainability, and policies to accelerate the transition to low-carbon, climate resilient and inclusive urban development.

Fiscal Area: With support from the DPL, the City Hall of Rio de Janeiro proposes that the Municipality join the Fiscal Balance Promotion Plan (PEF), established by Complementary Law No. 178, of January 13, 2021. This Federal Plan aims to improve the fiscal sustainability of subnational entities. The adhesion of Rio de Janeiro Municipality to the PEF requires compliance with the agreed fiscal targets. To meet the fiscal targets agreed in the program, this DPL also supports fiscal reforms that include the adoption of a new tax regime, a pension reform, and a tax reform:

1. **New Fiscal Regime:** The Municipal Complementary Law No. 235/2021 creates the New Fiscal Regime in the RJM, which establishes public finance rules focused on responsibility in fiscal management and defines control, stabilization and preservation mechanisms to correct the deviations that affected the municipal public accounts. The objective is to include in municipal legislation mechanisms for control, stabilization and preservation of the balance of public accounts, implementing a New Fiscal Regime, anchored in the methodology of fiscal health analysis proposed by the National Treasury. CAPAG's evaluation indicators will guide the entire fiscal policy of the Municipality, triggering corrective measures and seals, aiming to guarantee the solvency and stability of public finances in the medium and long term. It is a project to avoid the financial situation in which the Municipality finds itself.

2. **Tax Reform:** The reform approved by Municipal Law No. 7000, of July 23, 2021, and regulated by RIO Decrees No. 50,032, of December 16, 2021 and No. 50,039, of December 20, 2021, deals with a wide range of measures that, as a whole, constitute a municipal tax reform, aimed at simplifying the administration, inspection and collection of taxes, always considering to attract companies (and, therefore, more jobs) to the Rio de Janeiro Municipality. Additionally, it aims to guarantee fiscal justice and ensure that the needs of the population in vital areas such as public health are met, especially in this moment of crisis, through the potential for increased revenue.

3. **Social Security Reform:** The Municipal Executive sent two laws, which complement each other, covering a set of regulations that aim to reduce the need for financial contributions from the Treasury to the social security system, affected by a financial deficit and an actuarial deficit estimated at R$ 38 billion, both with growth prospects. To change the public sector pension system to a more sustainable path, the municipality of Rio de Janeiro passed Law No. 6,852, of April 14, 2021, which increased the social security contribution rate from 11% to 14% for active civil servants and for the inactive and pensioners with earnings above

the maximum limit of the National Institute of Social Security (INSS). Another milestone for municipal social security is the establishment of the Complementary Pension, with the publication of Law No. 6,982, of June 29, 2021 and RIO Decree No. 49,370, of September 10, 2021. The new regime will be applied to civil servants who join the public service after its publication, considering that, in line with the new rules provided for after the enactment of Constitutional Amendment No. 103, of November 12, 2019, the inactivity income for the new civil servants will be limited to the ceiling of the General Social Security System.

Environmental Area: The City Hall of Rio de Janeiro recognizes the need to make progress in reducing greenhouse gas emissions from the transport system, the most polluting economic sector in the city, and in its vulnerability to climate change shocks. With the perspective of increasing institutional capacity to promote sustainable public transport, to attract passengers to less polluting modes and for low-carbon, climate-resilient and inclusive urban development, the previous actions adopted by the Municipality were:

1. **Reforms in the BRT (Bus Rapid Transit) system**: The definition of the new BRT ticketing model, separating its management from the concession of bus operation, was established by Municipal Law No. 6,848, of March 25, 2021. The Municipality becomes responsible for the implementation and management of the Ticketing System, and the Executive Power may carry out such activities by contracting third parties, through the respective bidding process. The adoption of the new model aims to allow greater transparency to the transport system usage data, greater operational efficiency of the BRT system, effective control over tariff collection, as well as expanding digital payment methods, improving the user experience and facilitating integration with other means of public transport and active mobility. Also, with the aim of increasing public transport safety and attracting more passengers to the system, the Municipality instituted the Permanent Program to Prevent and Combat Harassment in Public Transport, through Municipal Law No. 6,938, of March 16, 2021, RIO Decree No. 48,580, of March 8, 2021, and joint resolutions SMTR/SPM-RIO/SEGOVI No. 52, 53 and 54, of December 30, 2021, which establish a platform for reporting harassment in public transport , protocols for routing and monitoring complaints, a permanent training program for drivers and collectors, and a communication strategy to prevent and combat harassment in transport.
2. **Bike lanes:** The expansion of the offer of cycling infrastructure (cycle lanes, shared lanes and bicycle parking) with the objective of promoting active mobility in a safe way, through RIO Decree No. 49,461, of September 21, 2021, which determines and reserves the priority areas destined to the connections of the Mobility Network by Bicycle to the centers of neighborhoods, to the great urban equipments and stations of the Structural Transport Network. Additionally, the Municipality expanded the “On the Way to School 2.0” program to improve safety conditions on foot and by bicycle related to traffic around school units and

the safe access of children to these equipment, evidenced by the joint SMT/CET ordinance No. 001, of January 26, 2022.

3. **Low-emission district:** The establishment of a low-emission district in the central region of the city, a pioneer in Brazil, through Complementary Law No. 229, of July 14, 2021, with the objective of implementing actions to reduce emissions of Greenhouse Gases - GHG in the City of Rio de Janeiro, aligning it with the goals assumed at the 21st Climate Conference - COP and the Paris Agreement. The Low Emission District of the Center will be implemented through actions that encourage: (i) clean transport and zero emissions; (ii) the promotion of active mobility; (iii) sustainable urban upgrading of public spaces; and (iv) improving air quality. Additionally, the Low Emission District of the Center will contemplate compensatory actions, including those related to buildings and waste and will also privilege educational projects to raise awareness and engage the population on the relevance of direct and indirect benefits in health and quality of life.

4. **Climate Plan:** The adoption of the Sustainable Development and Climate Action Plan of the City of Rio de Janeiro (PDS), through Rio Decrees No. 46,078, of June 11, 2019 and No. 47,086, of January 8, 2020, results from intense social participation and integrates economic, social and urban-environmental policies that must be implemented by 2030 to promote the city's development in a sustainable way. One of the main goals of the PDS is to reduce greenhouse gas emissions by 20% by 2030 and, by 2050, the proposal is for these emissions to be neutralized. Actions that promote electric mobility, encourage the use of renewable and more efficient energies, and improve the city's mechanisms for the prevention and mitigation of climatic events stand out.

In this context, the financial support of the World Bank for the implementation of the “Project for Adjustment and Sustainable Development of Rio de Janeiro”, in the amount of up to US$ 150.0 million, has particular relevance in the financing strategy of the City Hall, for which we are grateful in advance for its collaboration in order to proceed with the internal management at the World Bank, aiming at the approval of the credit operation, which, associated with the Fiscal Balance Promotion Plan, will contribute to the construction of a trajectory of rebalancing the municipal public accounts and to accelerating the transition to low-carbon, climate-resilient and inclusive urban development.

Certainly, this Management understands the need to adhere to new structuring actions for the socioeconomic and environmental growth of the Municipality. It is our commitment, therefore, to implement policy measures that are complementary to fiscal sustainability and to the transformation of the city, aimed at low-carbon and more inclusive urban development, through more sustainable mobility and strategies for mitigating impacts and adapting to climate change. Without prejudice to others, some of these measures include topics of fiscal responsibility and auditing.

Areas of interest to the Municipality of Rio are the program “Bolsa Verde”, the deepening of social security reforms, the strengthening of public transport services through the enactment of regulations that separate bus operations from fleet provision, the legal and regulatory structuring necessary for the implementation of the “Municipal Cycle Paths Plan” and “Low Emissions District” to expand low-carbon mobility and connect low-income areas, in addition to measures to reduce GHG emissions, through the greening of the transport matrix and energy consumption of the municipal government.

In thanking the World Bank for its continued support, I take this opportunity to express my consideration and esteem,

Eduardo Paes

Mayor

ANNEX 4: ENVIRONMENT AND POVERTY/SOCIAL ANALYSIS TABLE

Prior Actions	Significant positive or negative environment effects	Significant poverty, social or distributional effects positive or negative
Operation Pillar 1: Strengthening fiscal management to improve medium-term fiscal sustainability		
Prior Action 1: The Borrower has enacted legislation to improve fiscal sustainability by: (i) joining the federal government’s plan for the fiscal recovery of subnational entities (*Plano de Promoção do Equilíbrio Fiscal*), and committing to reduce current savings and improve liquidity; and (ii) adopting a new fiscal framework with revenue and expenditure adjustment measures that are triggered in case of fiscal distress	This prior action is likely to have positive effects on the environment. The capacity of the State to manage natural resources could be enhanced in the medium and long term with a more stable fiscal system and guarantee a better basic public service. However, a strong coordination of actions must be guaranteed in order to strengthen the State's capacity to manage these actions.	The fiscal recovery will contribute to ensure more fiscal space to provide basic public services (primary health care and early childhood and elementary education) on which most disadvantaged and vulnerable social groups rely. Notably, the Municipality allocated about 29 percent of the city’s revenues in 2020 on education and 19 percent on health, both above the constitutional requirements of 25% and 15 respectively (12% for Health and 25% for Education). Fiscal space to continue this expenditure allocation will benefit the most vulnerable. For instance: 8 out of 10 households in the bottom 40 percent of the distribution use the public health system when get sick, in

		comparison to only 3 out of 10 in the top 60 (PNS 2019). Increased fiscal space is also critical for the implementation of the 63 sustainable programs included in the Sustainable Development and Climate Action Plan (Pillar 2 – Prior action #8), which have a strong focus on (a) areas of the city predominantly occupied by low income families and (b) on socially inclusive activities.
Prior Action 2: The Borrower has enacted legislation and decrees to mobilize tax revenues and improve its business environment by: (i) allowing taxpayers to regularize ISS (Tax on Services) debts wrongfully paid to other municipalities via debt write-offs (program popularly known as "De Volta para Casa"); (ii) improving its settlement mechanism for tax administrative disputes between the tax authority and the tax debtors (*transação tributária*); (iii) simplifying ISS withholding rules; and (iv) revoking certain ISS exemptions	PA#2 is expected to have no impact on the environment.	The changes to the ISS tax law supported by PA#2 are expected to have small to null effects on prices, and hence on the purchasing power and poverty of RJM residents. The programa Volta para Casa will involve writing off ISS debts for firms, and the agreement to apply local ISS rates. The difference in ISS rates (between RJM and neighboring cities) suggest a theoretical maximum of 3 percentage points as the potential increase in ISS rates as a result of the program. In practice, however, the rate increase is likely to be smaller as is the potential indirect change in prices caused by firms' relocation to RJM. Finally, while the ISS exemption was repealed for a series of services (such as sporting events, advertising, etc.), the impacts on poverty are expected to be minimal. According to 2017/18 POF data, these items are purchased by about 40% of families in RJM, and within this group, they represent only 1.7% of the households' expenditures.
Prior Action 3: The Borrower has enacted legislation to reduce the public pension deficit by: (i) increasing the contribution rate to civil servants (active and inactive	No environmental impact is expected from this prior action. It is expected that this action should in the medium and long term strengthen the governmental	PA#3 is also expected to have little impacts on poverty. The municipal public servants are relatively well in comparison to other formal workers in the Municipality of Rio de Janeiro.

ones, pensioners, and beneficiaries of the special pension) from 11 % to 14%; and (ii) establishing a contribution-based complementary pension scheme for civil servants from the executive and legislative branches of the government, as well as from the Audit Office (*Tribunal de Contas*), which would reduce medium term public pension liabilities	capacity to improve its environmental management.	More than a half of the municipal administration employees are in the top 20% of the wages distribution and 87% in the top 30% (according to RAIS 2020 data). Less than 1% of the municipality servants are in the bottom 20% of the labor income distribution (RAIS 2020). To put the expected change in contribution in perspective, a 14% contribution rate would imply that the employee standing in the percentile 5 of the municipal public servant's wage distribution would still receive a net wage greater than the gross minimum wage.
Operation Pillar 2: Accelerating the transition towards a low-carbon, climate-resilient and inclusive urban development		
Prior action 4: The Borrower has enacted legislation to improve service efficiency and safety of the BRT system, thereby reducing modal shift to high-emission private vehicles by: (i) separating the system's fare collection management from the bus operation, thereby facilitating the digitalization of the electronic ticketing system and intermodal integration, and increasing data transparency; (ii) instituting a gender program to prevent and address sexual harassment in its public transport system	PA#4 has potentially positive environmental impacts with reduction of air pollution and CO_2 emission rates. The BRT revamping should attract users, especially women. It is hoped that the improved service will promote a modal shift with environmental benefits, reducing emissions.	Positive social impacts are expected, as well as indirect positive effects on income due to better connectivity. The increased operational efficiency through, say, a reduction in headway times can particularly benefit the low-income population. The poor in Rio are more dependent on public transportation, since only 17% of them have a car at their households and only 5% have a motorcycle (POF 2017/18), compared to 40% and 5% of the non-poor respectively. This action could thus improve the mobility of low-income population and consequently allow them to reach more jobs and basic public services (schools, hospitals, other health facilities, etc.). Finally, the prior action includes measures to combat and prevent gender-based violence and harassment in public transportation, addressing one of the key factors generating gender gaps in mobility in the city.

Prior action 5: The Borrower has enacted regulations that incentivize the use of active mobility rather than high-emission vehicles, thereby reducing transport related greenhouse gas emissions by: (i) expanding its Mobility System by Bicycles, which includes earmarking public land to increase the number of cycleways connecting to neighborhood centers, key public facilities, and structural transport stations; and (ii) establishing the program On the Way to School 2.0 (*A Caminho da Escola 2.0*), to improve the walking and cycling safety conditions in the surroundings of schools	PA#5 also has a potential positive environmental impact by shifting from CO_2 emitting to zero emissions modes of urban mobility (NMT). Improved sustainable development sector governance and enforcement of zero emission provisions is expected to provide incentives for climate change mitigation, creating a more dynamic sector.	This prior action is also expected to have positive social impacts as, in the city of Rio de Janeiro, 85 percent of the population lives far from cycling infrastructures and this ratio is higher among the poorer than the better off: 88 and 70 percent, respectively and the city's plan to extend and improve the network of cycleways prioritize the city regions and neighborhoods inhabited mostly by low-income families: of the West zone of the city and the North zone where there will be investments in 83 (out of 123) cycling segments. While civil works, cycleways, and increases in green areas are expected to be done in streets, sidewalks, public squares, etc. there is no expectation that businesses will be significantly impacted. The "On the Way to School" Program is expected to increase the use of non-motorized transport for daily commuting to schools, which is greatly impeded by the Rio's dire road safety situation.
Prior action 6: The Borrower has enacted legislation to establish a low emission district in the city center that promotes, inter alia, low- and zero-emissions mobility, urban afforestation, climate-resilient infrastructure, building energy efficiency, and sustainable solid waste management	PA#6 is likely to have significant positive effects on the environment, on urban air quality and huge climate benefits, but to the success of this PA, the governance arrangements and monitoring mechanisms of the Low Emission District have to rely on a broad consensus between stakeholders with distinct vested interests and build support that is strong enough to pass through successive governments.	The direct effects on poverty are expected to be minimal, with potential indirect positive impacts on public health due to improvements on air quality. The Low Emission District is also expected to promote a more attractive environment for housing developers, leading to the construction of social housing complexes in the central city area that concentrates jobs.
Prior action 7: The Borrower has issued a decree to, *inter alia*, promote the transition toward electric mobility, incentivize the	PA#7 is also likely to have significant positive effects on the environment, against global warming, enhancing climate change mitigation,	The Sustainable Development and Climate Action Plan (PDS) comprises 63 short and medium-term sustainable projects that have the

use of renewable energy and promote energy efficiency, and enhance the disaster risk prevention and preparedness by establishing its Sustainable Development and Climate Action Plan, in line with the United Nation's Sustainable Development Goals and the Paris Agreement	environmental and health benefits and raising the quality of life, but the municipality must be prepared to face the challenges inherent to the process of transition to electric mobility.	potential to bring large benefits to the city population – and particularly its most vulnerable and disadvantaged social groups – by addressing the urban expansion processes to be faced by the city in the next 30 years and aims to reduce territorial inequalities and combat climate change. The targeted areas of intervention prioritize the neighborhoods where: (i) there are the lowest levels of food security and access to health, water and sanitation services; (ii) the most precarious housing and public security conditions as well as protection of individual rights; (iii) the worse levels of access to education, information and communication technologies; and (iv) the poorest conservation of ecosystems in the city. The selected triggers may indirectly benefit the poor and socially vulnerable people by enhancing safety and reducing the vulnerability and exposure to disasters that are expected to be exacerbated by climate change.

ANNEX 5: INTERGOVERNMENTAL FISCAL ARRANGEMENTS IN BRAZIL

124. **Brazil is a highly decentralized federation, with subnational governments being responsible for the delivery of most public services.** The Brazilian Constitution gives State and municipal governments substantive fiscal autonomy and large spending responsibilities. Municipalities provide primary education and health care, and States fund most secondary schools and hospitals. Public universities are mostly federal, but many States also maintain public universities of their own. States are the primary providers of policing and public security. State and municipal governments are also in charge of building and maintaining local and regional infrastructure and delivering social protection programs.

125. **States and municipalities also raise significant tax revenues of their own.** The Brazilian Constitution assigns taxation powers to different levels of government. Brazil's largest tax by revenue, the ICMS (*Imposto sobre Circulação de Mercadorias e Serviços*), is an indirect tax levied by States on goods and selected services (intermunicipal transport and communication). The States also tax motor vehicles (IPVA), and inheritances and donations (ITCMD). Municipalities levy a service tax (ISS) on services not

covered by the ICMS, and tax urban properties (IPTU) and real state transactions (ITBI). State and local governments have full autonomy to define their tax bases and rates. States also share 25 percent of the ICMS and 50 percent of the IPVA with municipalities.

126. **In order to provide public services, subnational governments receive intergovernmental transfers.** The federal government shares its tax revenues with States and municipalities through two general-purpose unconditional transfer funds, respectively the FPE (*Fundo de Participação dos Estados e do Distrito Federal*) and the FPM (*Fundo de Participação dos Municípios*). These are constitutionally mandated, and their allocation is based on demographic factors, with less developed States and municipalities receiving higher per capita allocations. As a result, these funds are the predominant source of revenue for poorer States, and poor rural municipalities. The federal government also provides specific transfers for education (FUNDEB) and health care (SUS), as well as capital transfers for specific programs.

127. **Fiscal rules for subnational governments are enshrined in the 2000 Fiscal Responsibility Law (LRF—*Lei de Responsabilidade Fiscal*).** With a view to reducing moral hazards in intergovernmental fiscal relations, the LRF explicitly prohibits debt refinancing operations between different levels of government. Complementary Senate resolutions also prohibit subnational borrowing if certain fiscal thresholds are not respected. The recent subnational fiscal crisis made it evident that the LRF and State-federal fiscal adjustment programs (PAFs) need strengthening. In response, the federal government approved: (i) a Fiscal Recuperation Regime for bankrupt States (LC 159/2017); and (ii) debt amortization extensions for States facing liquidity problems (LC 156/2016), conditional on fiscal adjustment measures. Following the tendency of improvement of the intergovernmental fiscal relations, Congress modified and approved fiscal rules to support fiscal adjustment at subnational governments (LC 178/2021). The main innovations of this law are: (i) the improvement of the FRR by changing LC 159/2017; (ii) creation of the Fiscal Equilibrium Plan (FEP), which was designed to support the adjustment of subnational governments with limited debt, but that were facing liquidity problems; (iii) clarified the definition of some limits of the Fiscal Responsibility Law, such as the one for personnel spending.

ANNEX 6: MAIN REFORMS IN BRAZIL

The current government of Brazil has passed several key reforms to contain fiscal expenditure, open markets to competition and trade, improve human capital, and accelerate productivity growth.

128. **Pension Reform.** At the end of 2019, a constitutional pension reform was adopted, establishing new retirement rules for urban private-sector employees and federal civil servants, offering transition rules to those nearing retirement. It set a minimum retirement age (65 for men and 62 for women, with some exceptions), phasing out pensions by length of service; raised the minimum contribution time for men working in the private sector in urban settings from 15 to 20 years; extended (to the whole working life) the period used to calculate average wages and determine pension benefits; and reduced survivor benefits to higher-income households with few survivors. Progressive contribution rates have also been established, and the contribution base for retired civil servants was expanded. The reform is expected to generate accumulated savings of R$84 billion during the first four years of implementation, and R$630 billion by 2030. The reform also opened the possibility for States and municipalities to apply similar parametric changes to their public servants, if they so decide.

129. **Water and Sanitation Reform.** The New Basic Sanitation Framework, enacted as Law 14,026 of July 15, 2020 (*Lei do Saneamento Básico*), calls for universal access to water supply and sanitation (WSS)

services by 2033. The goal is to provide safely managed water supply to 99 percent of the population and safe access to sanitation (collected and treated wastewater) to 90 percent. There is a long road ahead, since current sanitation services only reach half of the population, leaving over 100 million out. Around 15 million Brazilians live without access to safely managed water in urban areas. In rural areas, 25 million only have access to basic service levels, and 2.3 million use unimproved sources of water for drinking, personal hygiene, and cleaning their homes. The Ministry of Economy estimates that R$700 billion are required to revert this scenario and reach the targets set by the new law. The water and sanitation sector is expected to boost the economy and create jobs. The successful implementation of the new law will require addressing a series of challenges, including limited capacity at the three levels of government, the complex intergovernmental dynamics embedded in the Brazilian federal system, and the introduction of new policy and institutional functions.

130. **Air Transport Competition.** The National Congress has enacted new legislation opening the whole air transport sector to foreign capital, that is, allowing foreign airlines to operate flights in the domestic market, or to increase their existing stakes in major Brazilian carriers. This will provide additional flexibility in reorganizing the market structure, and foster competition among air transport service providers. Additional improvements in the air transport sector business environment may be achieved through *Programa Voo Simples*, a program launched in October 2020 to modernize and simplify rules, reduce bureaucracy, and attract investment to general aviation in Brazil. The program provides differentiated measures according to the size of each air taxi company, so that new small operators can enter the market and provide services to the population at a lower cost. In addition, it aims to simplify processes for manufacturing, importing, or registering aircraft. The new legislation facilitates the authorization process for entering and overflying the Brazilian territory, and therefore should be able to improve current practices; streamline processes, eliminate unnecessary or disproportionate formalities; and reduce the waiting time for issuing permits and adopting new technological solutions for the provision of services.

131. **Telecom Sector and Broadband Connectivity.** A new general telecommunications law (Law 13879/2019) was enacted in October 2019, amending a 1997 law with a view to improving broadband development and bridging Brazil's digital divide (by increasing broadband penetration). Currently, internet access is not available to 47 million Brazilians. In rural areas, 56 percent of all households and 43 percent of all schools lack internet connection.[107] In addition, an important telecommunications decree was approved in 2019 on rights of way and deployment facilitation.

132. **Data Protection Law**. Law 13709/2018 was sanctioned by the president and came into force on September 18, 2020. It is modeled on the European law and is considered a key building block for data protection. The Brazilian data protection law determines the creation of a data protection agency in the country.[108]

133. **Trade Liberalization.** With a view to fostering Brazil's integration into the global economy, the government has signed new trade agreements. In addition to the Mercosur-EU Agreement and the Mercosur-EFTA Agreement, Brazil is currently in negotiation with Canada, Korea, and Singapore. These new trade agreements are deemed to be deeper than previous ones. Furthermore, Brazil has adopted resolutions aimed to reduce the abuse of antidumping measures by streamlining its antidumping framework; reinforcing public interest procedures (a mechanism that assesses whether antidumping

[107] https://www.gsma.com/latinamerica/the-industry-welcomes-brazils-reform-of-general-telecommunications-law/
[108] http://lawsofbrazil.com/2020/09/18/brazils-data-protection-law/

duties cause more harm than benefits to the chain of production); and allowing the suspension of antidumping measures due to anticompetitive impacts.

134. **Positive Financial Score Reform.** A new law establishes a positive and negative credit rating system. The system works on an opt-out basis, and thus enables financial institutions to collect data on borrowers' credit history without their explicit consent, broadening the scope of credit bureaus and increasing competition in the credit market. This reform is expected to broaden access to funding for individuals and firms with a good credit history, and therefore contribute to productivity growth (as firms may be in a better position to obtain loans).

135. **Education Financing Reform.** In August 2020, the National Congress approved a constitutional amendment that will change the main pillar of education financing in Brazil: FUNDEB (National Basic Education Fund). FUNDEB has been made permanent, and federal government contribution levels have been raised, although part of the transfers will remain linked to improving education outcomes. States and municipalities that raise their education achievement levels may benefit in two ways: (i) 2.5 percentage points of federal FUNDEB funds (approximately R$4 billion) will be distributed according to education improvement indicators; and (ii) the distribution of State taxes on goods and services (ICMS) will follow a results-based model. The amendment has changed a constitutional article related to how ICMS revenues are shared with municipalities, making the successful results-based model adopted in the State of Ceará mandatory to all States, which will now be obliged to link from 10 percent to 35 percent of their ICMS transfers to education outcomes. Both changes are expected to spur the improvement of education outcomes if the incentive mechanisms are well designed. From a budget perspective, while the changes affecting ICMS transfers are budget neutral, federal spending with FUNDEB will more than double. By 2026, transfers to poorer States and municipalities will grow from 10 percent to 23 percent of the total FUNDEB funds received by States and municipalities (12 percent in 2021).

136. ***Bolsa Família* Expansion and *Auxilio Brasil*.** In March 2020, Brazil's conditional cash transfer program known as *Bolsa Família (BF)*, the larger of its kind in the world, incorporated an additional 1.2 million new families. Those families were already eligible for BF support even before the COVID-19 pandemic, but had not been enrolled due to budget constraints. Data from *Cadastro Único* (Brazil's single registry for social programs) indicate that families benefiting from the expansion were substantially poorer: about 82 percent fall under the lower income threshold of R$89 per person per month (US$1.13 per day). Moreover, administrative data confirm that new beneficiaries include nearly 1 million women that are now registered as primary BF beneficiaries, and approximately 990,000 children and youth that are now receiving financial support. More recently BF was reformed and renamed *Auxílio Brasil*. The new program provides a more generous benefit for families with young children (0-3); extends coverage of teens up to 21 who need more time to complete secondary education; creates additional rewards to high achiever students in sport and science competitions; creates a benefit to partially cover early childcare costs of women; and funds economic inclusion programs at the local level.

137. **Gas market reform.** In June 2019, Brazil launched *Novo Mercado de Gas* (New Gas Market), a package of reforms aimed at improving the flexibility and competitiveness of natural gas. Gas is seen as a critical element for Brazil's clean energy transition because of its ability to provide flexibility and security of supply—which will be required as Brazil's generation mix moves toward increasing shares of hydropower, wind and solar. In addition, gas has the potential to replace more polluting liquid fuels in the industrial and transport sectors. *Novo Mercado de Gas* supports these objectives by enhancing the competitiveness of gas markets and integrating the regulatory and planning regimes for electricity and

gas. Key reforms include enhancing third-party access to transportation infrastructure, and Petrobras's divestiture of its monopoly gas transportation and storage businesses.

138. **Fiscal Consolidation.** The fiscal consolidation process will rely heavily on the implementation of the reforms submitted to Congress. In 2021, the government approved a Constitutional Amendment (EC 109, of 2021) that creates emergency mechanisms to control public expenditure for federal, State and municipal governments. The amendment establishes that, whenever the ratio between mandatory federal expenses and federal revenues reaches the limit of 95 percent, a series of restrictions will come into play that basically aim to control expenses with civil servants, such as the prohibition to readjust wages and promote contests. The text authorizes States and municipalities to trigger the same triggers as the Union if they reach the limit of 95 percent in their accounts. If they choose not to activate them, they will be prevented from obtaining loans guaranteed by the Federal Government or from renegotiating their debts. With the aim of supporting fiscal consolidation and reducing the wage bill, the federal government has also submitted another constitutional amendment bill for Congress approval, introducing an administrative reform at federal and subnational levels. This proposed amendment is the first part of the administrative reform, which would include another two stages in which public service careers structures, salaries and rules of promotion would be reviewed. However, this reform would apply only to new public servants, and should have limited impacts in the short term.

139. **Independence of the Brazilian Central Bank**. The Complementary Law 179/2021 was approved by Congress in February 2021 and seeks to prevent political interference in the monetary authority, giving autonomy to the Central Bank autonomy. The Law reinforces the Central Bank's independence from a technical, operational, administrative and financial perspective. The Law establishes that the Central Bank's president and directors will have fixed terms of office of four years, not coinciding with that of the President of the Republic. It also sets out the reasons for the resignation of the president and directors. Price stability remains the central objective of the BC which, without prejudice to this objective, will also ensure the stability and efficiency of the financial system, smooth out fluctuations in the level of economic activity and promote full employment.