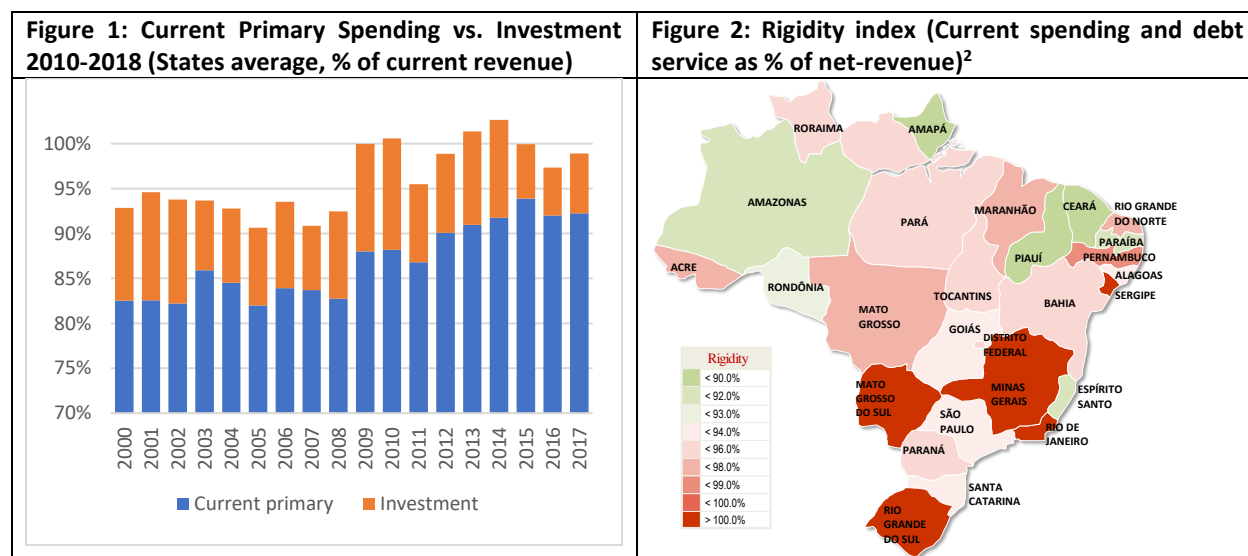


1) Brazil's ongoing subnational fiscal crisis

Subnational finances have deteriorated in recent years and several States are in different stages of illiquidity or insolvency. Three large States (Rio de Janeiro, Rio Grande do Sul and Minas Gerais) have declared a “fiscal calamity”. Other States are in widespread default with suppliers (e.g. Piauí) or have tapped funds set aside for future pension obligation (e.g. Sergipe, Rio Grande do Norte). In addition, many States are very much liquidity constrained, struggling to pay their staff and other obligations on time. The main driver of this has been a combination of rapid growth in mandatory expenditures (especially personnel) combined with a stagnation or fall in revenues in recent years.

Spending mandates and budget rigidities can be expected to lead to an increase in the number of States experiencing liquidity shortfalls and ultimately becoming insolvent. Even if the ongoing economic recovery continues, States will continue to struggle keeping up with their obligations. Using a simplified projection model of States’ fiscal accounts, we estimate 10 states to be insolvent by 2021 under a baseline scenario of economic recovery, and 17 in case of a renewed recession in 2020-2021.¹

Many of the existing fiscal rules for subnational governments re-enforce procyclical spending surges, while rigidities inhibit adjustments needed to maintain solvency. Expenditures on important functions (e.g. health, education) are governed by spending mandates linked to tax revenues. This forces spending increases in good times, while, following fiscal rules, spending could be reduced when revenues fall. In fact, governments’ ability to reduce current expenditures is limited by inherent rigidities (stability of public employment, inability to cut wages and maintenance). Therefore, adjustment comes largely in the form of cutting investment. Federal rules such as the minimum wage, the teacher’s salary floor and the *paridade* conditions enjoyed by most public-sector retirees also limit States’ flexibility over their expenditures. The numerical limits set under the fiscal responsibility law, by being expressed as a share of revenues (e.g. FRL rule on personnel) also reinforce pro-cyclical current spending as they allow for more spending whenever revenues increase. The repeated cycle of pro-cyclical increases in current spending and adjustment of investment in the downturn drives the continued increase of current spending and crowding out of public investment (Figure 1). In 2017, rigid spending (current spending plus debt service) exceeded 100 percent of net revenues in 5 states and 90 percent in all but 3 (Figure 2).



¹ “Insolvency” is defined here as States not able to close financing gaps even after significant fiscal adjustment. See Annex 1 for details on this simulation exercise.

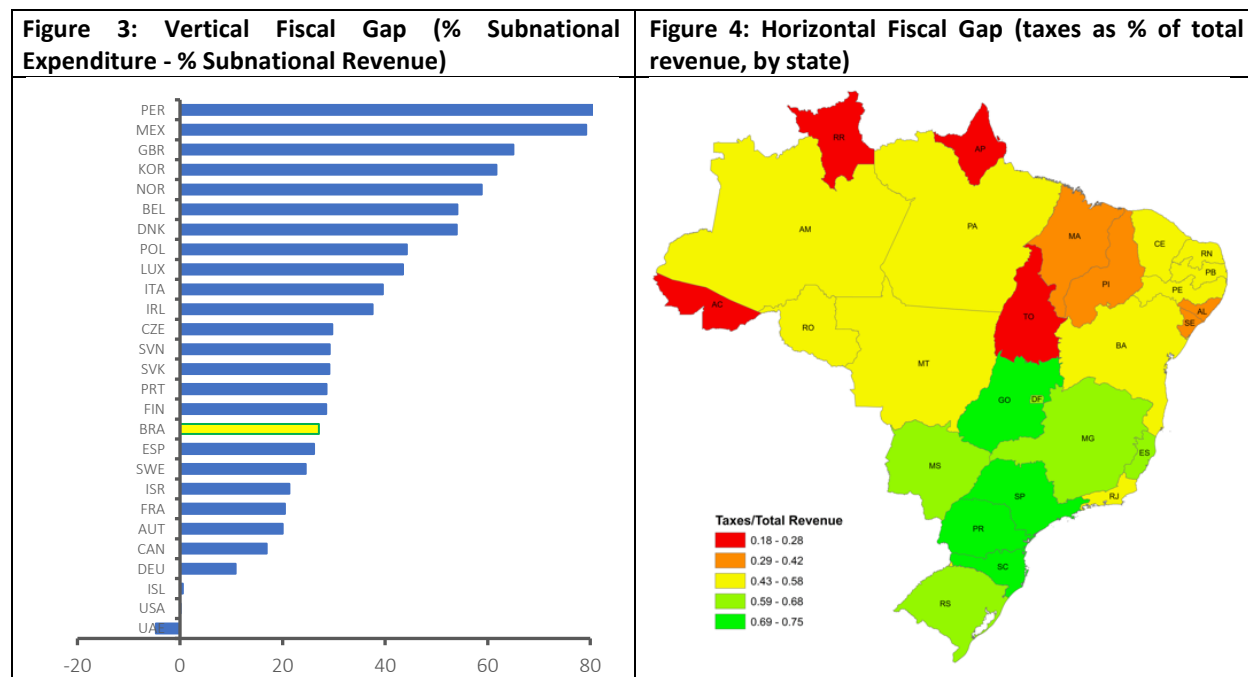
² Considering all current spending as rigid may overestimate rigidities. However, a lot of “custeio” (current spending excluding interest and personnel) is not easily cut as it includes essential third-party services (e.g. medical, security) and expenditures needed for the maintenance of essential public services (e.g. electricity, fuel, school lunches etc.).

2) The intergovernmental framework: Horizontal and vertical fiscal gap and transfers

Intergovernmental fiscal relations should address vertical and horizontal imbalances. Vertical fiscal imbalance is between levels of government (Federal, State and Municipal). Typically, federations observe a “vertical gap” with the Federal Government in a stronger position to collect revenues and subnationals with spending responsibilities beyond what they can finance with their own revenues. This gap justifies fiscal transfers from the center to the other federative entities. A second fiscal imbalance is the horizontal imbalance, measured between governments at the same level (e.g. different states) as regional disparities will lead to variance in the revenue potential and spending needs among entities. Horizontal fiscal gaps are addressed through equalization transfers.

In aggregate, the vertical fiscal gap in Brazil is relatively limited, compared to other federal countries. Brazil’s vertical fiscal gap, defined as the share of subnational governments in general government expenditure, minus their share in revenues, stands at 27 percent, lower than in many other federal countries, where subnational governments are even more dependent on federal transfers (Figure 3). This is explained by the fact that subnational governments in Brazil are given significant taxation powers (ICMS, IPVA, IPTU, ISS among others) which provide a high degree of own revenues, at least for those subnationals with a strong tax base and administrative capacity. The allocation of these taxes to subnationals may however come at cost to economic and administrative efficiency, especially in the case of goods and services taxation (see note on taxation for more detail).

However, Brazil does have large horizontal gaps, which implies a very differentiated role for federal transfers across federative entities. Disaggregating states, shows that the degree to which they are able to finance state government expenditures with their own revenues (state taxes) varies greatly. While some States cover up to 75 percent with their own tax revenues, other remain highly dependent on intergovernmental transfers.



The aim of intergovernmental transfers should be to provide subnational entities with adequate funding they cannot raise themselves. Given Brazil's large regional disparities, fiscal transfers are needed to finance an adequate level of government services in the states and municipalities with a weak tax base. This is the case for the structurally less developed areas in the North and Northeast, rural municipalities more broadly and States whose economies are reliant on commodity exports (since those are exempt from ICMS taxation). At the same time, transfers should not disincentive subnationals from raising the revenue their tax base can provide.

Brazil's main intergovernmental transfer mechanisms could be better calibrated. The main intergovernmental transfers in Brazil (FPE and FPM) are adequate instruments to address the horizontal fiscal gaps. They are financed through a fixed share of federal tax revenues and their allocation formulas do reflect horizontal fiscal gaps, providing poorer regions with greater per-capita transfers. The FPE allocation formula was frozen from 1989 to 2015, but is since being updated annually to account for demographic developments. Nevertheless, per-capita transfers could be better calibrated, as they currently favor thinly populated Northern States (which may be partly justified by the higher cost of providing public services in these areas). Additionally, cyclically adjusting the volume of transfer would reduce the pro-cyclical impulse of this financing source, providing subnational governments with a steady source of revenue to fund public services.

3) Existing instruments to deal with subnational fiscal crisis

The rules and procedures in place since 2001 did not prevent fiscal crisis and were unsuccessful in reducing the debt burden of highly indebted States. The framework put in place after the State bailout in the 1990s, centered around the fiscal responsibility law of 2001 and the "Fiscal Adjustment Programs" for individual states (PAFs), was successful for about a decade in ensuring fiscal discipline and reducing the debt of most State governments. However, the debt burden of the most indebted states (e.g. Rio Grande do Sul) remained very high and current expenditures continued to grow at high rates while revenues were ample. As the economy slowed and intergovernmental transfers declined post-2010, States were authorized to take on large amounts of new debt, which allowed for the continued expansion of current expenditures and a much-weakened fiscal position on the eve of the 2015-2016 recession, which has driven many States to the brink of bankruptcy.

In response to the fiscal crisis, the Federal Government has created new instruments, in particular the *Regime de Recuperação Fiscal* (LC 159/2016). The logic of the *Regime de Recuperação Fiscal* is to provide relief on debt repayment (extended maturities and reduced interest rates) in exchange for fiscal adjustment. While this can be a sound approach, similar to an administrative bankruptcy procedure, the current regime has a number of shortcomings which have kept it from effectively resolving fiscal crisis (e.g. in the State of Rio de Janeiro). Most importantly, the fiscal adjustment under the regime fails to address the core problems of State government, as it does not reduce current and future wage bill and pension obligations. Since States remain under the federal spending mandates and pension rules, they do not gain spending flexibility. At the same time, even the limited adjustment attempted under the regime has run into difficulties of compliance and enforcement as judicial and political obstacles have prevented the implementation of important adjustment measures (particularly in the case of Rio de Janeiro).

A justified expectation of federal bailouts creates a moral hazard problem. Current political incentives do not favor subnational adjustment. Federal debt relief may not be a sufficient enticement even for highly indebted States (as States can also obtain relief by defaulting) and it is not relevant for states with no or little federal debt (e.g. Rio Grande do Norte). A stronger combination of fiscal measures and positive incentives would be needed. This would involve reducing expenditure rigidities (e.g. constitutional spending mandates, acquired rights, limits on tax rates and pension contributions) that currently limit States' fiscal adjustment options. Ultimately, an adjustment guided by principles of efficiency and equity and owned by the respective government will have the greatest chances of success.

4) How other countries have resolved problems of subnational insolvency

Problems similar to the one faced by Brazil have been dealt with by other countries in a variety of ways. Subnational solvency problems typically require a combination of a bailout (infusion of liquidity or takeover of liabilities by the central government) and stricter control of subnational governments going forward, to avoid the need for future bailouts and limit moral hazard. Three cases are summarized below.

Argentina: Financing the transition costs of a pension reform as part of the renegotiation of the revenue sharing agreement. In 1993, actuarial projections indicated that most pension systems of Argentine provinces were financially unsustainable. Although the pensions were provincial obligations, the Ministry of Economy feared that a major collapse would ultimately have to be resolved by the federal government. The federal government agreed to take over the pension system of any province that passed a law authorizing it to do so. Once transferred, the federal pension system would eventually confer on federal and provincial civil servants the same retirement eligibility conditions, contributions, and benefits that were available to the private sector. As a counterpart to this bailout, benefitting States receive reduced revenue-sharing transfers from the Federal Government.

Colombia: An administrative insolvency framework to avoid judicial obstacles. In 1999, Colombia adopted an administrative bankruptcy framework, led by a dedicated entity, the *Superintendencia de Sociedades* (SOC), in coordination with the Ministry of Finance. The SOC provided an alternative framework as courts were not well-equipped to deal with subnationals. The law was passed in response to the fiscal and debt stress of Colombia's subnational governments (SNGs) in the late 1990s and early 2000s, exacerbated by an economic downturn. The Colombian bankruptcy procedures evaluate and reconcile competing claims against the subnational debtor, according to a pre-defined priority structure.

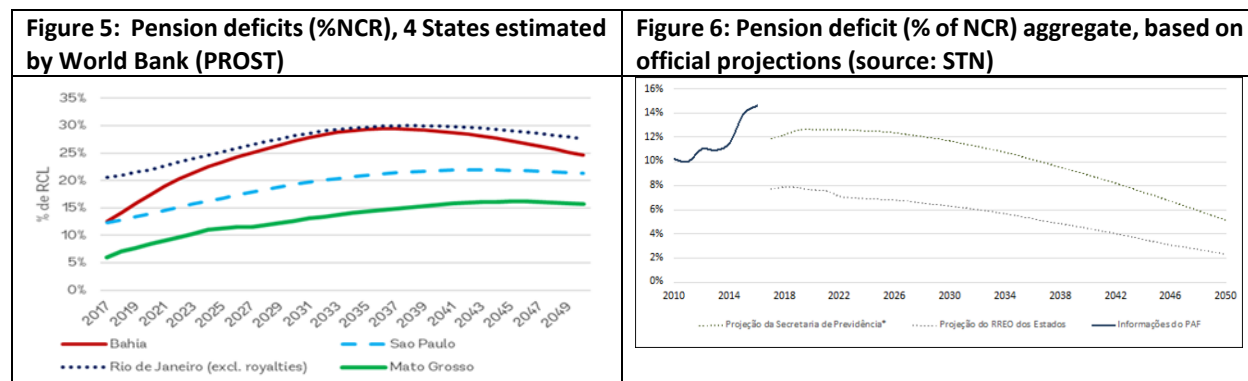
Spain: Federal Liquidity injection combined with fiscal adjustment and tight controls. Until 2011, Spanish autonomous regions had access to financing in European capital markets. However, their excessive spending and increasing debt was a major contributing factor to Spain's fiscal crisis. Regions were running deficits of 5.2 percent of GDP in 2011, and began to face difficulties in rolling over debt in the markets and paying suppliers. When they lost market access, the Central Government provided lines of financing through loans and a regional liquidity mechanism. However, the government linked this financial support to strict monitoring and conditionality (such as sharp deficit reductions) in line with a new budget stability law (BSL) enacted in April 2012. Importantly, the BSL enhanced transparency and timely monitoring of subnational finances (including through an early-warning system), and establishes strong enforcement and sanction mechanisms. After putting this framework in place, the Central Government also included a formal no-bailout clause in its constitution to reduce moral hazard.

5) Structural challenges of subnational finances and need for federal action

States are facing structural problems which may be irresolvable without significant Federal action. The most paramount of these problems is their RPPS pensions systems. Due to overly generous pension rules enshrined in the Federal Constitution, decades of irresponsible personnel policies and unfavorable demographics, most States are facing a rapid increase in pension spending and pension system deficits. Some states are already paying more on pensions than on active personnel and most others are catching up quickly. Projections of future pension obligations are not being produced in a systematic and realistic manner.³ However, World Bank analysis of a few states suggests that the financing of pensions deficits can be expected require as much as 30 percent of States net current revenue over the coming decades (see note on pensions for more on the challenges and reform option for subnational RPPS). A tax system

³ Actuarial projections provided by States to the federal pension secretariat are not realistic (see Figure 6).

characterized by competition for investment through the granting of tax exemptions (*“guerra fiscal”*) limits the potential for revenue increases to contribute to the needed adjustment.



6) Potential policy options for Brazil

A new instrument is needed to address the current crisis. Establishing a federal “fiscal stabilization fund” could be an effective administrative approach to resolve the current crisis by providing states with fresh liquidity in exchange for greater fiscal discipline. However, such an approach would need to be very robust, since in the past administrative mechanisms have been repeatedly circumvented. In particular, it would need to be shielded against rulings of the judiciary, which have often favored subnationals and their employees’ and citizens’ entitlements. Further, it would need to be set up to resist the political power of subnational governments, which have enabled them to extract bailouts without significant counterpart measures in the past.

Looking beyond the current crisis, structural reforms should provide states with greater flexibility to adjust spending and reduce moral hazard. Structural reforms (including constitutional changes) should allow States more flexibility in reducing personnel numbers, salaries and pensions. Alternatively, the structural pension problem could be addressed by transferring subnational pensioners to the federal government’s own pension system (RPPS) or the general pension system (RGPS). Rules aimed to resolve future crisis could also allow for a federal intervention to a state unable to meet its obligations. These changes would provide incentives for subnational governments and their creditors to avoid arriving at a situation of “fiscal calamity”. A constitutional “no-bailout clause” could also limit moral hazard by tying the hands of the federal government.

Ultimately, access to capital markets should be revisited as a reward for the most prudent subnational governments. In the long-term, those subnational governments that have managed their finances in a responsible manner could be graduated to market-based financing, whereby subnationals issue non-guaranteed debt and are responsible for developing their track-record as borrowers. This would provide market oversight and discipline with both positive and negative incentives. A credible “no bailout clause” and a subnational bankruptcy framework would be necessary for market discipline to work. This may require constitutional changes, and would need to be designed in collaboration with the judiciary.

Annex 1: Simulation of States' Insolvency

A model first developed for the simulation to the CAPAG regulation and updated using PAF data (provided by STN) to project States' fiscal balances. Insolvency is defined as a State experiencing a financing shortfall (an open gross financing need, GFN). The model simulates series of sequential adjustments, aimed at closing this financing shortfall:

- Adjustment measure 1: cutting investment spending by 50%.
- Adjustment measure 2: cutting the remaining investment.
- Adjustment measure 3: cutting other (non-payroll and interest) current expenditures (OCE) by 20%.

Hence the situation of each State in any year can be classified depending on the stage in which they fall after undergoing the simulation:

ADJ NEED 1: The state has an unmet GFN, thus the fiscal adjustment is to cut half of investments;
ADJ NEED 2: The state remains with an unmet GFN, thus it cuts the other half of investments;
ADJ NEED 3: The state remains with an unmet GFN, thus the fiscal adjustment is to cut 20% of OCE;
BANKRUPT 4: The state remains with a GFN and there is no more fiscal adjustment available;
FISCAL ADJ 1: The state has closed its GFN after the cut of half of the investment;
FISCAL ADJ 2: The state has closed its GFN after the cut of the other half of the investment;
FISCAL ADJ 3: The state has closed its GFN after the cut of 20% of ODC;

The status of 'BANKRUPT 4' can be defined as definite insolvency.

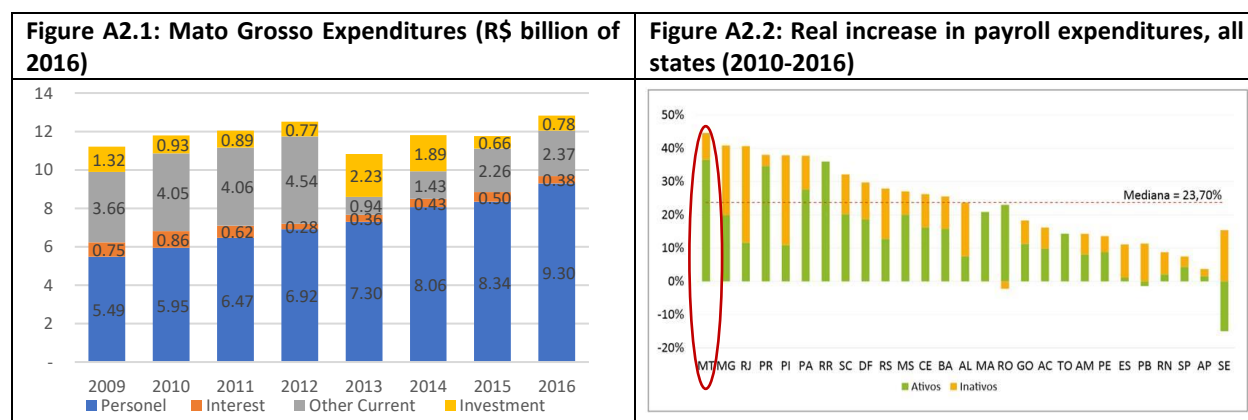
Table A1.1: State Fiscal Simulations, Baseline Scenario					Table A1.2: State Fiscal Simulations, Recession Scenario				
State	2018	2019	2020	2021	State	2018	2019	2020	2021
AC	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3	AC	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
AL	ADJ NEED 1	ADJ NEED 2	FISCAL ADJ 2	FISCAL ADJ 2	AL	ADJ NEED 1	ADJ NEED 2	FISCAL ADJ 2	FISCAL ADJ 2
AM	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3	AM	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3
AP	ADJ NEED 1	ADJ NEED 2	FISCAL ADJ 2	FISCAL ADJ 2	AP	ADJ NEED 1	ADJ NEED 2	FISCAL ADJ 2	ADJ NEED 1
BA	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3	BA	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
CE	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3	CE	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3
DF	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3	DF	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
ES	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4	ES	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
GO	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3	GO	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
MA	ADJ NEED 1	ADJ NEED 2	FISCAL ADJ 2	FISCAL ADJ 2	MA	ADJ NEED 1	ADJ NEED 2	FISCAL ADJ 2	FISCAL ADJ 2
MG	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4	MG	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
MS	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3	MS	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
MT	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3	MT	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
PA	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3	PA	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3
PB	ADJ NEED 1	ADJ NEED 2	FISCAL ADJ 2	FISCAL ADJ 2	PB	ADJ NEED 1	ADJ NEED 2	FISCAL ADJ 2	ADJ NEED 1
PE	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3	PE	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3
PI	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4	PI	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
PR	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4	PR	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
RJ	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4	RJ	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
RN	NA	NA	NA	NA	RN	NA	NA	NA	NA
RO	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4	RO	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
RR	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3	RR	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3
RS	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4	RS	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
SC	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4	SC	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
SE	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	FISCAL ADJ 3	SE	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
SP	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4	SP	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4
TO	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4	TO	ADJ NEED 1	ADJ NEED 2	ADJ NEED 3	BANKRUPT 4

(data for RN not available)

Annex 2: Case studies: Fiscal adjustment in two subnational governments

a) Mato Grosso State

The State of Mato Grosso has confronted a fiscal crisis since 2015, as the rapid expansion of payroll expenditures has outpaced sluggish revenue growth. Mato Grosso's payroll expenditures have been on a steep upwards trend over the past decade, rising faster than in any other state. With revenues falling short in recent years and the State unable to effectively tax its export oriented agribusiness, a liquidity shortage has resulted in an increase in arrears with suppliers and difficulty to make debt and salary payments on time.



Overly generous salary policies are driving fiscal unsustainability. The State is practicing a generalized annual inflation adjustment and has conceded significant real adjustments to most careers. For example, for workers in the education sector, annual real salary increases mandated until 2023 by a 2012 law, reach an accumulated (compounded) increase of 100%. Besides these generous salary adjustments, government workers also progress very rapidly in their careers (typically every 3 years) with very large salary increases based on seniority and academic qualifications, without serious consideration or merit or improvements in performance.

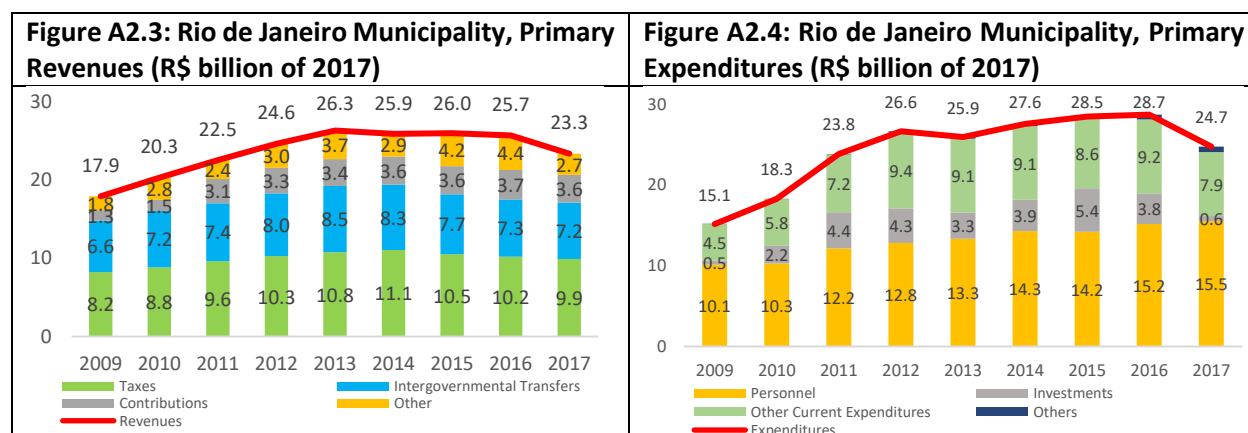
Salary table for primary school teachers in Mato Grosso (typical career progression in red).

Level\Class	A	B	C	D	E	Year
1	1,649.63	2,474.49	2,804.38	3,335.56	3,794.18	0
2	1,715.60	2,573.44	2,916.57	3,468.99	3,945.95	3
3	1,789.86	2,684.80	3,042.76	3,619.09	4,116.68	6
4	1,872.32	2,808.50	3,182.96	3,785.87	4,306.37	9
5	1,963.06	2,944.61	3,337.19	3,969.32	4,515.08	12
6	2,062.05	3,093.02	3,505.45	4,169.41	4,742.68	15
7	2,177.50	3,266.28	3,701.79	4,402.92	5,008.28	18
8	2,325.98	3,488.96	3,954.15	4,703.13	5,349.77	21
9	2,474.49	3,711.69	4,206.58	5,003.35	5,691.26	24
10	2,523.93	3,785.91	4,290.69	5,103.42	5,805.07	27
11	2,573.42	3,860.15	4,374.81	5,203.46	5,918.87	30
12	2,622.93	3,934.39	4,458.98	5,303.56	6,032.72	33

To regain short-run liquidity and safe-guard long-term solvency, the State needs profound reforms to break the trend of excessive wage bill growth. The State is taking revenue measures (fiscal emergency fund) and hopes to gain increased revenue from export compensation (Lei Kandir/ FEX). However, given the underlying trend of rapid personnel costs, only changes to this dynamic will be a sustainable solution. As a first step towards expenditure control, the State passed an expenditure ceiling in 2017. However bottom-up reforms to public sector pay, pensions and careers are still missing.

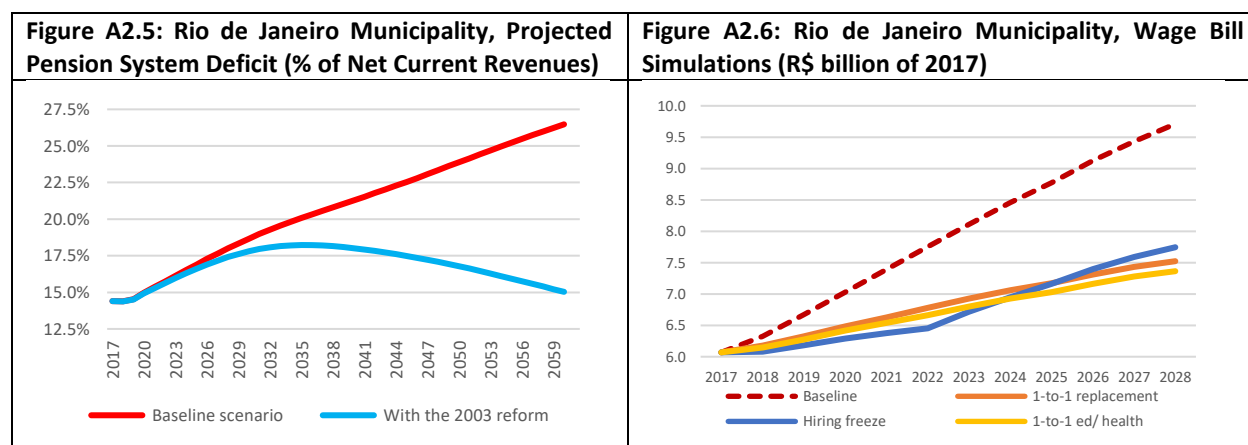
b) Rio de Janeiro Municipality

The fiscal crisis in the municipality of Rio de Janeiro has both structural and cyclical origins. Structurally, the municipality is facing pressure from personnel spending, intensified by rapid hiring and an unreformed pension system. Further, the municipality has not effectively taken advantage of its large tax potential tax base for the IPTU property tax. In terms of cyclical factors, the municipality suffered a decline in revenues due to the economic crisis which has been particularly deep in the Rio de Janeiro region. The municipality also recorded high investment expenditures between 2011 and 2016 in the leadup to the Rio Olympic Games.



Absent strong adjustment measures, the wage bill (without pensions) is projected to grow by another 50 percent in real terms by 2025. Yet, this increase could be contained to less than half with strong controls on hiring and wage adjustments (see Figure A2.6 below).

The municipality failed to implement the 2003 pension reform until March 2018. This federal reform removed important privileges such as full replacement rates (*integralidade*) and adjustment in line with active staff (*paridade*), for those who entered the civil service after its approval in 2003. The failure to implement this reform earlier has contributed to the rising pension deficit. Given the gradual impact of this reform, the municipal pension deficit is still expected to increase for almost 20 years, but will be contained over the long term.



A fiscal adjustment in Rio de Janeiro is feasible, but would require bold action on payroll and broadening the tax base. The implementation of the 2003 pension reform is an important step for the long-term sustainability of Rio's finances. However, over the short and medium term, the municipality will need further adjustment measures to reduce the growth of personnel expenditures and strengthen own revenues, ideally by broadening the base of its main taxes (IPTU and ISS).