TESOURONACIONAL

Report

Federal Fiscal Risks

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Presentation

This Federal Fiscal Risks Report is published by the National Treasury (Secretaria do Tesouro Nacional - STN) to offer society a fiscal transparency tool that synthetically shows the nature of the Fiscal Risks to which the Federal Government is exposed. The report is a tool that seeks to contribute to the restoration of the country's fiscal sustainability by following international best practices that allow for the identification, analysis, incorporation into the budget, and disclosure of the countries' fiscal risks.

The role of the STN regarding federal fiscal risks is provided for in item XXXV, Article 49 of the Internal Regulations of the Ministry of the Economy, approved by Decree Nº 9,745 of April 8, 2019. In order to fulfill this regulatory mission, STN's General Coordination Staff of Fiscal Planning and Fiscal Risks (COPEF) works to identify and evaluate risks that have an impact on medium- and long-term fiscal projections.

This Risks Report complements the role played by the Fiscal Risks Annex (ARF) of the Budget Guidelines Law (LDO), by including the identification and quantification of the main fiscal risks, thus establishing a system for the monitoring and evaluation of fiscal risks. While the ARF addresses each of the risks to which the Federal Government is exposed, without, however, elaborating on evaluations, this Fiscal Risks Report proposes to offer a more synthetic view of a management-level assessment of the main fiscal risks.

Identifying the risks and evaluating their possible impacts is essential for the government to design policies that measure up to the country's social demands. Moreover, the events analyzed, should they come to fruition, will threaten compliance with important Brazilian fiscal rules, such as the Spending Cap and the Golden Rule, in addition to compromising the fiscal targets and goals set forth in budget laws. It is therefore important to anticipate the repercussions of fiscal risks, in order to mitigate their consequences both in the fiscal sphere and in their social reflexes.

It should be noted that fiscal risks are monitored throughout the financial budget execution phase, pursuant to the provisions of Article 9 of Complementary Law Nº 101 of 2000, which regulates the process of bimonthly reviews of revenues and expenditures and establishes that the branches of government and the Public Prosecutor's Office must, at their own initiative, take measures to limit commitments and financial transactions to an amount compatible with the primary or nominal balance targets set in the Fiscal Target Appendix.

Executive Summary

Macroeconomic Fiscal Risks

1. **Approximately 93 percent of Brazil's primary revenue is subject to the volatility of real GDP, inflation, wage bill, exchange rates, interest, or oil prices.** Revenues Managed by the Brazilian Federal Revenue Service (RFB), such as income tax and social security contribution represents the largest risk-prone portion due to the volatility of macroeconomic parameters.

2. **The variation in real GDP represents the greatest source of risk, followed by the variation in inflation and the wage bill.** The 1 p.p. variation in real GDP and in inflation has an impact on primary revenue of BRL 7.1 billion and BRL 6.8 billion, respectively. The 1 p.p. variation in the nominal wage bill translates into a variation of BRL 4.1 billion, mainly due to the variation in the collection of social security contributions.

3. **On the primary expenditure side, volatility is linked to variations in the minimum wage and INPC (National Consumer Price Index)**, and impacts mainly spending on social security and assistance benefits and the payment of Unemployment Insurance and the Salary Bonus. Together, these expenses account for approximately 52 percent of total primary expenditure.

4. **The increase of BRL 1 in the minimum wage entails a net increase of BRL 206 million in the RGPS deficit, of BRL 60.2 million in assistance benefits and of BRL 30.9 in FAT benefits** (Unemployment Insurance and Salary Bonus).

5. **The gross general government debt is impacted mainly by variations in interest and inflation rates and, residually, by variations in the exchange rate.** Due to the federal debt maturity profile, the maximum risk for the 1 p.p. variation in the interest rate will reach BRL 4.7 billion in 2020, while the 1 p.p. variation in the Consumer Price Index (IPCA) will amount to BRL 2.8 billion in 2022.

6. **The General Government gross debt is highly sensitive to interest rates, real GDP and primary balance.** The 1 p.p. increase in the SELIC rate in the period 2020-2022 leads to an increase of 1.63 p.p. in the GGGD/GDP ratio in 2022, while reductions of 1 p.p. in real GDP and in the primary balance lead to an increase of 3.21 p.p. and 4.08 p.p., respectively. In a scenario where adverse shocks in interest rates, real GDP and primary balance are combined, the increase in GGGD can reach 9.23 p.p. in 2022.

7. **The spectrum of alternative scenarios for the central government primary balance indicates a significant probability of a positive primary balance in 2023**, with a risk of less than 10 percent of having a primary balance below the 2019 target of a BRL 139 billion deficit.

8. **The spectrum of alternative scenarios for the General Government gross debt indicates a high probability of debt stabilization or reduction as a proportion of GDP in 2023**, with a low probability of GGGD exceeding 90 percent of GDP at the end of the period.

Specific Fiscal Risks

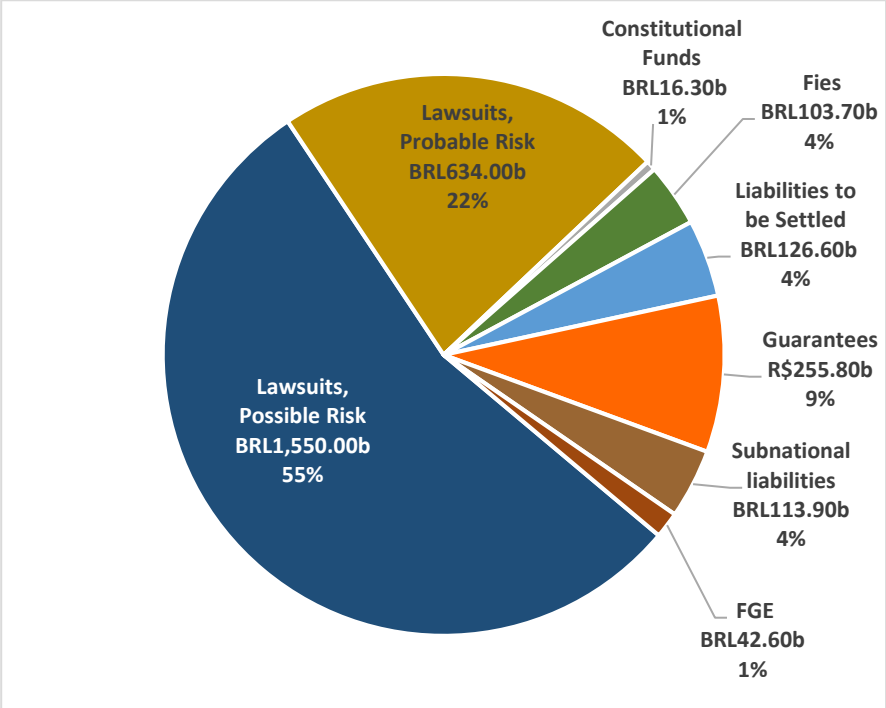
9. **The Federal Government's exposure to the specific fiscal risks presented in this Report amounted to BRL 4.25 trillion, with a BRL 507 billion increase against the increase recorded at the end of 2018**. In 2019, the exposure related to assets totaled BRL 1.4 trillion while the exposure related to liabilities amounted to BRL 2.8 trillion.

10. **The total value of lawsuits against the Federal Government increased 290 percent between 2014 and June 2019 from BRL 559 billion to BRL 2,184 billion**, with 71 percent of possible loss and 29 percent probable loss and a high concentration of tax-related lawsuits. Annual expenses incurred as a result of judicial losses have followed an upward trend: although they totaled BRL 19.8 billion in 2014, they are expected to rise to BRL 42 billion in 2019, according to the budget allocation.

11. **Federal Government contingent liabilities under settlement process within the STN, also called debts under recognition process** (debts arising from the winding up/dissolution of federal administration entities, direct Federal Government debts and debts arising from the Compensation Fund for Salary Variations – FCVS) **totaled BRL 126.6 billion.**

12. **From 2016 to August 2019, guarantees honored by the Federal Government amounted to BRL 16.5 billion, and the unexecuted amount of counter guarantees due to court rulings totaled BRL 4.2 billion.** For 2020, this expenditure flow is expected to reach BRL 17 billion. Any impossibility to execute counter guarantees directly affects compliance with the Golden Rule and increases federal public debt.

Chart 1 - Specific Fiscal Risk Factors Related to Liabilities
Data in: BRL billion
Source: AGU, STN, SIAFI



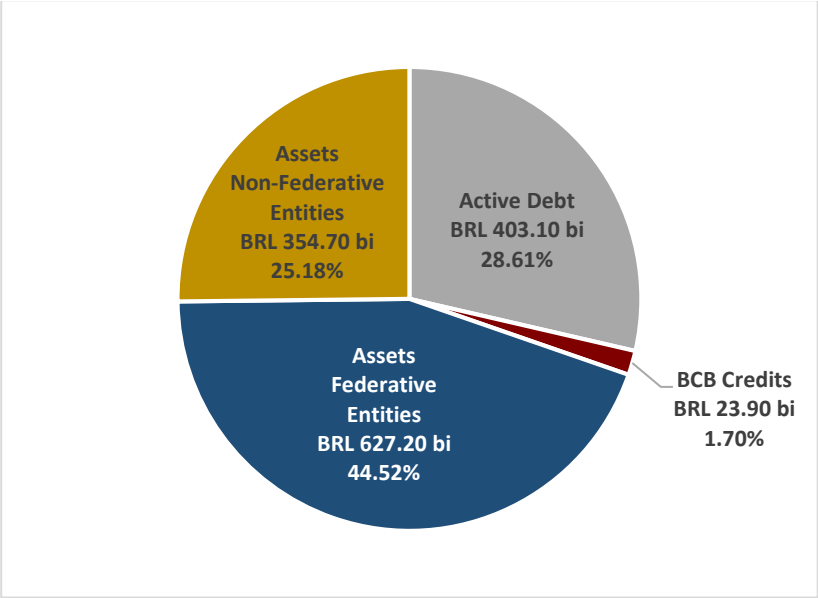
13. **Since 2004 the federal government has provided more than BRL 12 billion in private guarantee funds**, aimed at offering guarantees under public policies and government programs. Any use of the guarantees provided implies a loss of funds, which can be quite significant. An example of a materialized risk in these funds is the Shipbuilding Guarantee Fund (FGCN), which has honored guarantees in the amount of BRL 4.7 billion.

14. **The amount paid by the Export Guarantee Fund – FGE until August 2019 totaled US$ 725.3 million, of which US$ 351.2 million was paid in in 2018 and US$ 322.5 million in 2019**, while the collection of premiums has significantly decreased since 2016. Because it is classified as a primary expenditure, the materialization of the FGE's fiscal risk impacts on the Federal Government's primary balance and spending cap, since a supplementary

budget is requested when expenses exceed the limits set out in the LOA. The amount of additional funds provided totaled BRL 1.9 billion.

15. **From an asset of BRL 2,340 billion in Federal Government's Active Debt, BRL 403 billion is estimated to be recovered**, of which most will have an impact on the primary balance. This estimate is based on the history of defaults in the past fifteen years.

Chart 2 - Specific Fiscal Risk Factors Related to Assets
Data in: BRL billion
Source: AGU, STN, SIAFI



16. **Federal government assets managed by the STN not related to subnational entities** (originating from Loans granted to Financial Institutions, Rural Credit Operations, Credit Assignment Operations, Export Credit Operations, and Loans to Non-Financial Entities) **amounted to BRL 354.8 billion.**

17. In the context of the federal government's relations with subnational entities, fiscal risks come in different forms. **Assets held by States and Municipalities totaled BRL 627.23 billion while contingent liabilities arising from constitutional amendment EC Nº. 99/2019 are estimated at BRL 113.95, totaling BRL 741.18 billion.**

18. **The estimated impacts of legislative proposals that change inter-federative relations for a ten-year period amount to approximately BRL 1,400.6 billion**. These are proposals that benefit subnational entities while burdening the Federal Government. Although they are not classified as a fiscal risk according to the concept adopted by this Report, they are important sources of uncertainty for the Federal Government.

19. **The risk of the Federal Government having to make some kind of capital contribution in 2020 to any of its financial institutions is low.** As for the non-financial sector, some companies have been experiencing a deterioration of their economic and financial situations.

20. **The fiscal risks of public service concessions by the federal government are mitigated by the structure of the contracts signed.** The risk associated with the structure of concession revenues is mitigated in bimonthly evaluations of primary revenues and expenditures.

21. **At the end of the first half of 2019, the outstanding amount of the exposure of loans granted under Student Financing Fund - FIES amounted to BRL 103.7 billion.** Of this amount, BRL 53.2 corresponds to the full outstanding balance of contracts in arrears, which account for 51 percent of the portfolio. When only contracts in the amortization phase are factored in – leaving out overdue installments due to use and grace period - the total outstanding balance of contracts in arrears amounts to BRL 12.8 billion, or 41.8 percent of the total amount of the debt in the amortization phase.

22. **In a sample of 80 countries, natural disasters cost between 1.6 percent and 6 percent of GDP from 1990 to 2014, while Brazil spent between 0.01 percent and 0.06 percent of GDP** each year from 2012 to 2019 in actions aimed at these events. The budget process for Risk and Disaster Management has shown progress. A case in point are Civil Defense actions which, since 2017 have benefited from specific budget allocations at the initial stage of the budget but until then had to rely on extraordinary credits alone.

23. **The estimated impact of the demographic evolution in Brazil on selected health and education expenditures in the period 2019-2027 amounts to BRL 9.4 billion in additional demand for public expenditures**, thus reflecting the change in the age structure of the country's population, with an increase in the number of elderly people and a decline in the size of the young population.

Introduction

Fiscal Risks are defined as the possibility of occurrence of events capable of affecting public accounts, thus compromising the achievement of the fiscal balances set as targets and goals. A necessary condition for these events to be classified as fiscal risks is that they are not controlled or avoided by the government. Therefore, while unforeseen expenses resulting, for example, from court decisions unfavorable to the government are considered to be fiscal risks, expenditures stemming from government decisions or policies such as aid are not considered to be fiscal risks, even where they lead to deviations from targeted fiscal balances.

The STN, which is a central agency of the Federal Financial Administration and Federal Accounting Systems, is responsible, inter alia, for designing medium and long-term public finance scenarios, with the aim to set fiscal policy guidelines for the development of the National Treasury's financial planning and the identification of fiscal risks. Under this statutory provision, the STN identifies federal fiscal risks and carries out systematic monitoring and evaluations to improve the federal government's budgetary and financial process.

This Fiscal Risks Report presents the main risks to which the federal government is subjected in the fiscal context, and is organized into two sections, in addition to the Presentation, this Introduction and the Executive Summary. In section 1, Macroeconomic Fiscal Risks are didactically broken down according to their impacts on Revenues, Expenses and Public Debt, while some important specific fiscal risks are addressed in section 2.

1. Macroeconomic Risks

The variation of macroeconomic parameters in relation to the projections included in the budget documents is the most common source of fiscal risks. In fact, empirical experience has shown that to a greater or lesser degree all countries experience changes related to fiscal balances arising from the change in the economic context over the budget year, with a tendency towards more optimistic balance forecasts due mainly to inaccuracies in GDP and inflation growth forecasts.[1] Such deviations stem, in general, from difficulties inherent in macroeconomic projections, which depend on often simplified assumptions that are incapable of capturing all interactions between variables. Other possible sources of deviations include "group thinking" and political biases.

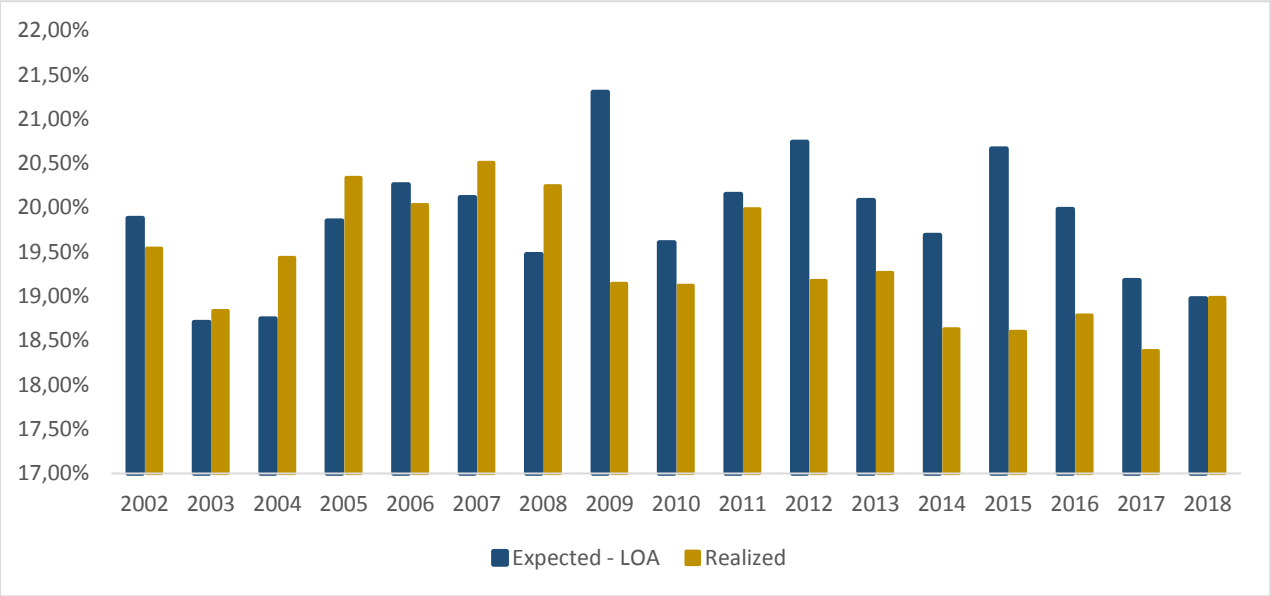
In the Brazilian case, over the last few years there has been a significant discrepancy between the amounts projected in the Annual Budget Law (LOA) and the amounts actually realized, especially regarding primary revenues (expenditures are by nature less sensitive to macroeconomic parameters in the short term), as shown in Chart 3. Much of this difference is explained by revisions in economic growth and inflation forecasts, which in recent years have been more optimistic in relation what has actually happened.

The discrepancies between revenues and expenditures projected in the budget document and those received during the fiscal year have a significant impact on budget execution. Given the need to meet the fiscal targets set under the Budget Guidelines Law (LDO), changes in macroeconomic variables, especially those related to a decrease in revenues or an increase in expenditures are reflected in the contingency of funds. Thus, the lesser the deviation from planning in relation to what has been realized, the better the budget execution.

This chapter also assesses the fiscal risks arising from the variability of the macro-economic parameters used to forecast Revenues Managed by the RFB, government primary expenditures and primary balance, as well as from the public debt. Exercises considering stress scenarios and their impacts on fiscal variables will also be presented.

[1] Jalles, J. T., Karibzhanov, I., Loungani, P. Cross-country evidence on the quality of fiscal forecasts. IMF, 2011

Chart 3 - Revenues from Taxes and Contributions – Estimated (LOA) vs. Realized
Data in: GDP %
Source: STN



1.1 Sensitivity of Revenues Managed by the RFB (Federal Revenue Secretariat)

The assessment of revenue sensitivity entails, first of all, identifying lines that are related to the economic cycle. In the budget, revenues are divided into three large groups: Revenues Managed by the RFB;[2] Net Collection for RGPS (public social security system); and Revenues not Managed by the RFB. Table 1 shows each group's share of the total primary revenue for 2018.

Revenues Managed by the RFB are the main group within the group of revenues (61 percent) and include the main taxes and contributions of the national tax system. The nature of its tax base clearly shows that there is a high correlation between the collection of these revenues and the economic cycle. Similarly, the tax base of social security revenues is payroll, which in turn is linked to the economic cycle, with increases in wages and employment level in expansion periods and an opposite behavior during recessions.

[2] Net of refunds.

Table 2 - Central Government Primary Revenues Indexed to Macroeconomic Parameters
Source: STN/ME

Revenue Items related to macroeconomic parameters	Revenue in 2018 (BRL million)	Share of Total Primary Revenue	Indexers
RFB-Managed Revenues	905,052	60.98%	GDP, Inflation, Wage Bill Interest (Over)
Social Security Revenues	391,182	26.36%	GDP, Inflation, Wage Bill
Non-RFB Managed Revenues			
Social Contribution for Education	22,048	1.49%	GDP, Inflation
Exploration of Natural Resources	59,914	4.04%	Prices of Oil, Iron Ore, Exchange Rate
Items Total	1,378,196	92.86%	
Revenues Not Related to Macro Parameters			
Concessions and Permits	21,929	1.48%	-
Contrib. from the Civil Servants' Pension Plan	13,732	0.93%	-
Dividends and Participations	7,676	0.52%	-
Others	62,705	4.22%	-
Items Total	1,484,238	100.00%	

Revenues not Managed by the RFB, on the other hand, make up a very heterogeneous group that includes, for example, revenues from Concessions and Permits, Contribution to the Civil Servants' Pension Plan (CPSS), Own Revenues, and revenues from Covenants, among others. In the analysis of items related to the economic cycle, only the Social Contribution for Education (a payroll tax levied on companies known as Salário-Educação) and to the Exploitation of Natural Resources proved significant, and in the latter the explanatory variables are the prices of specific commodities (oil, iron ore) and the exchange rate.

Table 2 shows the effect of the 1 percentage point variation in the main parameters on the tax total that makes up the Revenues Managed by the RFB, based on the parameters estimated by the Economic Policy Secretariat (SPE/ME). A sensitivity analysis shows that

Table 1 - Revenue Managed by the RFB - % Impact of a 1 p.p. Variation in Each Parameter
Source: RFB/ME

Parameter	Impact on Revenues Managed by the RFB	
	Exceto Previdenciária	Previdenciária
GDP	0.64%	0.13%
Inflation (IER)[1]	0.61%	0.13%
Exchange Rate	0.10%	-
Wage Bill	0.06%	0.80%
Interest (Over)	0.03%	-

(1)The Revenue Estimation Index (IER) consists of a weighted average that attributes 55 percent to the average IPCA rate and 45 percent to the average IGP-DI rate.

the economic growth and inflation rates are the parameters with the stronger effect on total Revenues Managed by the RFB. It is observed that taxes are simultaneously affected by more than one parameter. By analogy, the effect of the variation of these parameters results from the combination of two factors: price and quantity effects.

As noted, Revenues Managed by the RFB, except social security revenues, are more strongly affected by the real GDP growth rate and by inflation, which influence the main taxes collected such as Contribution to Social Security Financing (COFINS), Contribution to the Social Integration Program (PIS), Contribution to the Civil Servants' Asset Formation Program (PASEP), and Tax on Income and Earnings (IR). Social security revenues are strongly related to the wage bill, which is the variable that makes up most of the tax base of this contribution.

In nominal terms, GDP is the variable with the greatest impact on primary revenues. An increase of 1 p.p. in GDP causes, ceteris paribus, an increase of BRL 7.1 billion in collection, with the largest part concentrated in Revenues Managed by the RFB (BRL 6.6 billion). Similarly, all things remaining constant, a rise in inflation results in a BRL 6.8 billion increase in total revenue. In aggregate, a joint increase of 1.1 p.p. in all variables would result in a revenue increase of BRL 19.5 billion.

Table 3 - Revenues - Impact of a 1 p.p. Variation in Macroeconomic Variables
Data in: BRL million
Source: RFB/ME. Prepared by: STN/ME

Revenue items	Impact of a 1 p.p. Variation in Macroeconomic Variables				
	Variables				
	GDP	Inflation (IER)[1]	Exchange Rate	Wage Bill	Interest (Over)
RFB-Managed Revenues	6,567	6,259	1,026	616	308
Social Security Revenues	574	574	-	3,533	-
Total	**7,141**	**6,833**	**1,026**	**4,149**	**308**

(1) The Revenue Estimation Index (IER) consists of a weighted average that attributes 55 percent to the average IPCA rate and 45 percent to the average IGP-DI rate.

It should be considered that since macroeconomic variables have a correlation with each other, assuming that one variable will move while the others remain static it is a simplification required for conducting this hypothetical exercise. Additionally, the methodology used by the RFB considers a larger set of variables in its projection, so that there may be a divergence of values between what was estimated in this exercise and the official numbers.

1.2 Sensitivity of Primary Expenditure

Primary expenditures consist of payroll expenses, social security benefits, assistance benefits related to the minimum wage, Wage Bonus and Unemployment Insurance, etc. Forecast risks[3] generally stem from variations in the estimated macroeconomic parameters and quantities. Thus, this subsection presents the sensitivity analysis of Central Government primary expenditure in relation to the macroeconomic parameters used to prepare the Annual Budget Law - LOA.

The sensitivity analysis in this section was performed based on expenditure aggregates whose variation is directly related to two main parameters: National Consumer Price Index (INPC) and minimum wage (MW). The expenditures directly impacted by these parameters are social security and assistance benefits, Wage Bonus and Unemployment Insurance, which together account for 51,5 percent of Central Government Primary Expenditure in 2018.

Table 4 - Central Government Primary Expenditure Indexed to Macroeconomic Parameters
Data in: BRL million
Source and Preparation: STN/ME

Expenditure Items Indexed to Macroeconomic Parameters	Expenditure in 2018	Share of Total Primary Expenditure	Indexer
Personnel and Social Charges	298,021	22.05%	Agreed adjustm. and INPC(1)
Social Security Benefits	586,379	43.38%	Minimum Wage and INPC
Assistance Benefits (LOAS and RMV)	56,156	4.15%	Minimum Wage
Unemployment Insurance	36,316	2.69%	Minimum Wage and INPC
Wage Bonus	17,237	1.28%	Minimum Wage
Subtotal	**994,109**	**73.54%**	
Other Compulsory Expenses	228,815	16.93%	
Discretionary Exp. - Executive branch	128,832	9.53%	
Total	**1,351,757**	**100.00%**	

(1) For expenditures on personnel and social charges, the impact of the risk related to the price index is low, since this index is an adjustment parameter applicable only to retirements and pensions of civil servants that migrated to inactivity without right to parity.

[3] Deviations from projections may also stem from the outcome of ongoing lawsuits. This topic is addressed in Section 2.1 of this document, which presents a risk analysis of contingent liabilities.

Social security expenditures and revenues are directly affected by INPC and MW, the latter being the floor for social security benefits and wages in the formal labor market. In turn, the INPC variation is the adjustment factor for social security benefits above the minimum wage and contribution brackets. Assistance benefits (Monthly Lifetime Income (RVM) and Continued Cash Benefit (BPC)) and the Wage Bonus are affected directly by MW and indirectly by INPC, as this index is currently one of the components of the minimum wage adjustment index. Unemployment Insurance, in turn, is directly affected by both indices, since the benefit payment floor is set at one minimum wage and its ceiling is adjusted for the INPC variation.

Table 5 shows the impacts of the INPC variation on selected primary expenditures. Regarding quantity, the analysis considers the historical growth of benefits, as well as population projections provided by the Brazilian Institute of Geography and Statistics (IBGE).

Table 6 shows the sensitivity of expenditures in terms of BRL millions in response to a variation of BRL 1.00 in the minimum wage or of 0.1 p.p. in INPC.[4] As it can be seen, each increase of BRL 1.00 in the minimum wage generates an increase of BRL 298.2 million per year in government expenditures. In turn, the variation of 0.1 p.p. in INPC increases expenditures by BRL 689.1 million.

Table 5 - Primary Expenditure - % Impact of a 1 p.p. Variation in INPC
Source and Preparation: STN/ME

Primary Expenditure	Tax from a 1 p.p. variation in INPC
Social Security Benefits	1.00%
RMV	1.00%
BPC/LOAS	1.00%
Wage Bonus	1.00%
Unemployment Insurance	0.75%

[4] Equivalent to an increase of BRL 0.998 in benefits of up to one minimum wage.

Table 6 - Selected Primary Expenditures – Effect of the Minimum Wage and INPC
Data in: BRL million
Source and Preparation: STN/ME

Primary Expenditure	BRL 1.00 increase in the Minimum Wage	0.01 p.p. increase in INPC[1]		
	Benefits of 1 Minimum Wage	Benefits of 1 Minimum Wage	Benefits above 1 Minimum Wage	Total
I. RGPS Collection	38.8	38.7	6.6	45.3
II. Social Security Benefits	245.0	244.5	381.1	625.6
III. RGPS Deficit (II – I)	206.2	205.8	374.6	580.3
IV. Assistance Benefits	61.1	61.0	-	61.0
IV.1 RMV	1.1	1.1	-	1.1
IV.2 BPC/LOAS	60.0	59.9	-	59.9
V. FAT	30.9	30.9	16.9	47.8
V.1 Wage Bonus	17.5	17.5	-	17.5
V.2 Unemploym. Insurance	13.4	13.4	16.9	30.3
Total (III + IV + V)	**298.2**	**297.6**	**391.5**	**689.1**

(1) The variation of INPC directly impacts expenses whose adjustment is associated with its variation or, indirectly, from its impact on the adjustment of the Minimum Wage.

1.3 Sensitivity of Public Debt

1.3.1 *Federal Public Debt (DPF)*

The Federal Public Debt (FPD) corresponds to the sum of the Domestic Federal Public Debt (DFPD) and the External Federal Public Debt (EFPD), the latter being subdivided into bonded and contractual debt. The DPF financing strategy is structured with the aim to reduce long-term costs while maintaining prudent risk levels. In this sense, risk management is a fundamental tool in FPD management.

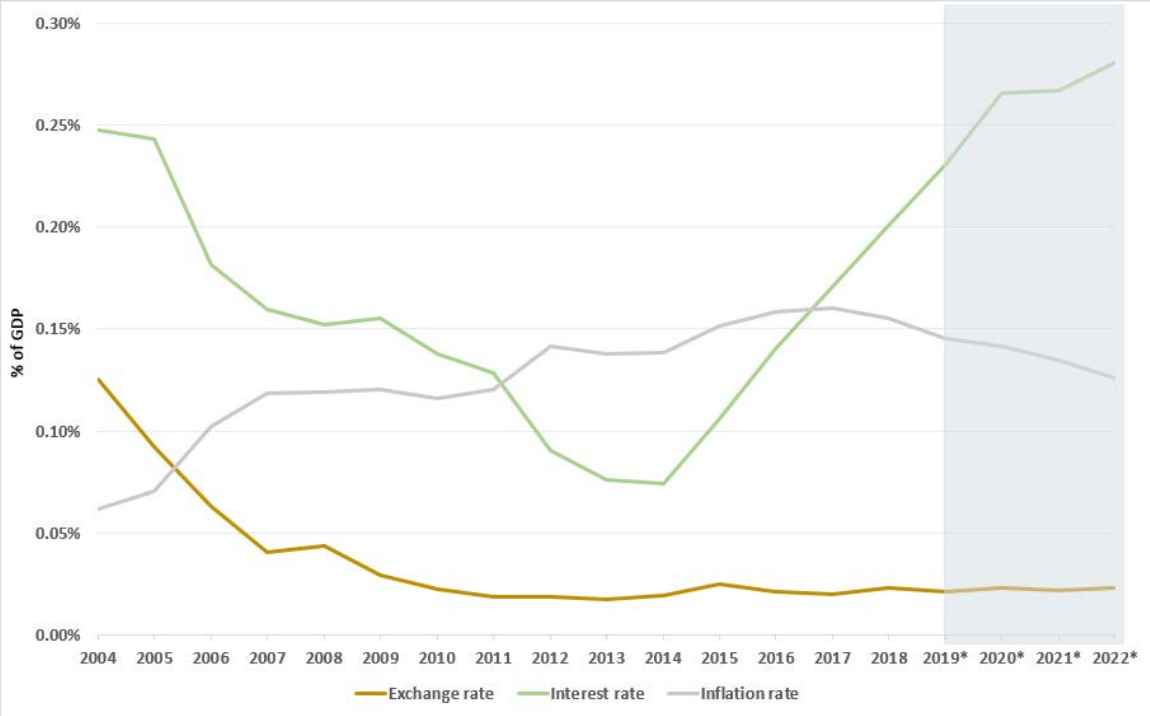
One way to evaluate the debt market risk is to estimate the sensitivity of its stock value to marginal changes in macroeconomic variables. In this case, for a better analysis the FPD to GDP ratio is used as a parameter. The effects of a 1 p.p. increase (reduction) in (Real/Dollar) exchange, inflation and interest rates (SELIC) can be seen in Chart 4.

From a historical perspective, special mention should be made of FPD sensitivity to changes in interest rates and the greater stability of its sensitivity to changes in exchange and inflation rates. This scenario reflects the increased share in FPD of floating-rate bonds, the change in composition observed since 2015 and the continuity of a scenario of short and medium term fiscal challenges.

As for PFD sensitivity to inflation variation, special mention should be made of the existence of a natural hedge of the debt portion indexed to that variable (mostly the IPCA), derived from the fact that government revenues have a positive correlation with shocks in the current inflation rate, which contributes to reducing the relevance of this risk factor.

In turn, the risk due to variations in the exchange rate is at a level compatible with the debt structure proposed by the benchmark portfolio. In addition, the spillover effects of a possible currency crisis are strongly protected by the current amount of foreign ex-

Chart 4 - Annual Sensitivity of FPD stock to 1% Shocks in Macroeconomic Variables
** Projections based on the medium-term strategy developed under the 2019 PAF.*
Source and Preparation: STN/ME



change reserves managed the Central Bank of Brazil (BCB).[5]

In addition to the analysis of impacts on the stock, the sensitivity of the debt's budget expenditure to the same macroeconomic variables can also be assessed.

As these expenditures vary according to the maturity schedule of FPD bonds, they will be higher in relation to a given economic variable in years with large amounts of maturities of bonds indexed to that same variable. In this case, the sensitivity of budget expenditures is lower than that corresponding to the PDF stock, precisely because it considers only the amount of debt maturing in a given period. This exercise will not be presented in this report, but is available in the Fiscal Risk Annex to the Budget Guidelines Law.

1.3.2 *Public Sector Net Debt (PSND) and General Government Gross Debt (GGGD)*

The FPD and the GGGD are metrics that include liabilities only and, therefore, do not measure asset accumulation by the government. Thus, it is useful to move towards the concept of net indebtedness, which provides a balance between government liabilities and assets vis-à-vis private agents. This feature is present in PSND. In addition to the General Government, the Public Sector also includes non-financial state-owned enterprises and the BCB.

Table 7 - Debt sensitivity to Interest Rates, Real GDP Growth and Primary Balance
Source and Preparation: STN/ME

Simulated shocks	Difference in Relation to the Baseline Scenario (% of GDP)							
	PSND				GGGD			
	2019	2020	2021	2022	2019	2020	2021	2022
GDP – 1 p.p.	0.54 p.p.	1.12 p.p.	1.73 p.p.	2.38 p.p.	0.72 p.p.	1.57 p.p.	2.37 p.p.	3.21 p.p.
Primary/GDP – 1 p.p.	1.00 p.p.	2.03 p.p.	3.06 p.p.	4.12 p.p.	0.96 p.p.	1.99 p.p.	3.03 p.p.	4.08 p.p.
SELIC + 1 p.p	0.24 p.p.	0.68 p.p.	1.19 p.p.	1.75 p.p.	0.23 p.p.	0.64 p.p.	1.11 p.p.	1.63 p.p.
Combined shocks	1.78 p.p.	3.87 p.p.	6.11 p.p.	8.49 p.p.	1.99 p.p.	4.32 p.p.	6.71 p.p.	9.23 p.p.

Initially, a baseline scenario was generated for projecting the PSND/GDP and the GGGD/GDP ratios for the period 2019-2022. Analyses of interest rate risk, GDP growth rate and primary balance variations were performed based on

[5] The position of reserves in November 2019 was around US$366.4 billion.

this scenario. Table 7 shows a comparative static analysis[6] in projections, always in relation to the baseline scenario, in order to show the increase in the debt/GDP ratio of a 1 p.p. upward variation in the SELIC rate, a 1 p.p. downward variation in the GDP growth rate, and a decrease in primary balance by 1 p.p. of GDP. The impacts are considered separately for each of these shocks, and a combined shock in these variables is subsequently assumed.

Although the baseline scenario for indebtedness points to stabilization in the medium term, adverse shocks on the SELIC rate, real GDP and primary balance can jeopardize this trajectory. In fact, the 1 p.p. increase in the SELIC rate in the period in question leads to a 1.63 p.p. Increase in the GGGD/GDP ratio in 2022, while 1 p.p. reductions in real GDP and primary balance over the same period lead to an increase of 3.21 p.p. and 4.08 p.p., respectively, in the debt/GDP ratio in 2022. In a scenario where adverse shocks in interest rates, real GDP and primary balance are combined, GGGD can reach 9.23 p.p. in 2022.

The impact of GDP variation is only via the denominator in this exercise, since correlations between different macroeconomic variables are not considered. The effect of a smaller primary balance is via the numerator and has as its counterpart an increase in BCB's committed operations so as to control the level of liquidity of the financial system, with no difference in relation to PSND and GGGD indicators. The sensitivity of the SELIC rate is captured by both the portion of Treasure Financial Bills (LFT) in FPD composition and the amount of BCB's committed operations. It should be emphasized that the combination of shocks does not consist of the sum of individualized shocks; it rather considers the dynamics of simultaneous shocks.

1.4 Simulations of Stress Scenarios of Macroeconomic Parameters

The stress tests of macroeconomic indicators used as midpoint the values of the Parameter Grid provided by SPE/ME[7], which served as a median (baseline scenario) for all indicators.

Five hundred shocks were carried out based on a multivariate normal distribution with the average of the parameters given by the parameter grid and a variance-covariance matrix estimated according to historical data, which generated 500 different trajectories for the macroeconomic variables. From there, the trajectories of revenues, expenditures,

[6] The analysis does not capture the effects and correlations of changes in one variable on the other. For example, the analysis may underestimate the effects of real GDP growth by not changing the fiscal result according to this new GDP, and the same reasoning applies to the decrease in real GDP, which is not reflected in a more deteriorated fiscal scenario. However, the analysis is important because it shows how sensitive debt projections are to isolated changes in each of the variables.

[7] Parameters updated on September 25, 2019.

primary balance and public debt were estimated, considering the variables relevant to each item. For the analysis of the charts presented below, the centerline corresponds to the median of all trajectories. The other lines represent percentiles 10 to 90. Thus, values at the extreme points fall in the first and tenth deciles.

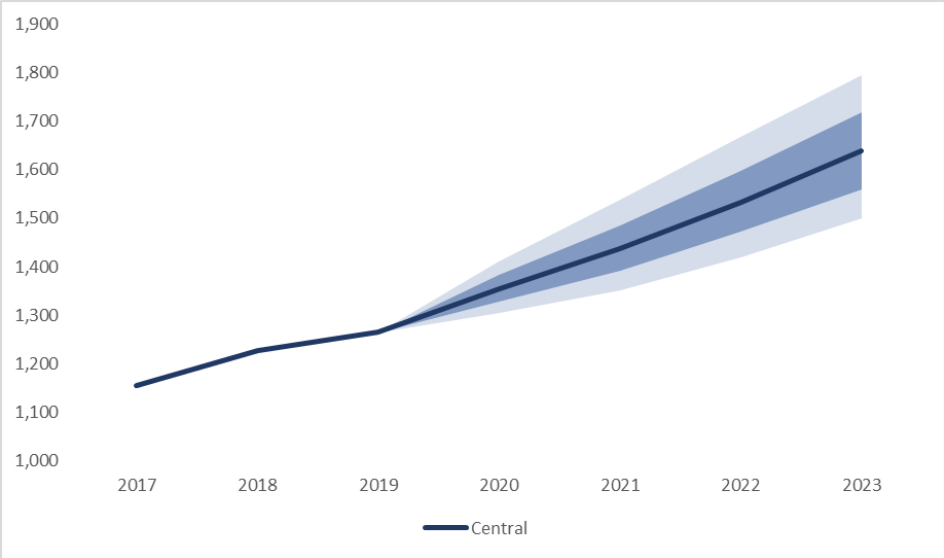
1.4.1 *Revenues*

The macroeconomic scenarios generated were applied to Revenues Managed by the RFB (except social security revenues), to social security revenues, and to revenues from the social contribution for education and Exploitation of Natural Resources (see Table 1), which corresponded to approximately 93 percent of the revenues collected in 2018. The simulations also considered the effects of the social security reform. The results, seen in Chart 5, show a cloud of possible central scenario alternatives.

The simulations performed show that net revenue can vary significantly over time, thus reflecting the high variance related to macroeconomic variables and their impact on revenues. In fact, with regard to budget, collection is the most-change prone component in the economic and/or price cycle. As expected, in periods farther from the initial point, the probability clouds expand due to growing uncertainty.

For 2020, the estimates contained in the Fiscal Targets Annex point to a net revenue of BRL 1,355 billion, an amount that can decrease or increase by up to BRL 52 billion should the lower extreme case materialize.[8] For the years 2021, 2022 and

Chart 5 - Spectrum of Alternative Scenarios for Net Revenues
Data in: BRL billion
Source and Preparation: STN/ME



[8] The extreme cases of the distribution shown in the chart would be related to percentiles 10 and 90. It is important to emphasize that occurrences below or above the amounts presented are possible, although not very probable.

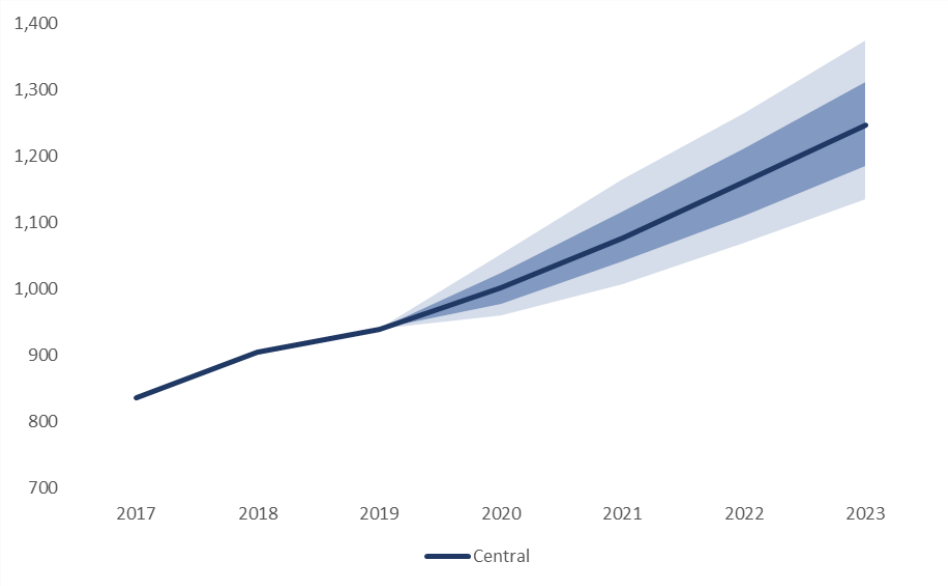
2023, a similar analysis shows a possible decrease of up to BRL 87 billion, BRL 114 billion and BRL 139 billion, respectively. On the other hand, the occurrence of the upper extreme case could lead to an increase in revenues in the same amounts indicated above for the respective years.

1.4.1.1 Revenues Managed by the RFB

In disaggregated terms, Revenues Managed by the RFB (excluding social security revenues) account for the largest portion of total net revenue, in addition to presenting the greatest variability in the revenue group.

Using as reference the lower extreme scenario,[9] Revenues Managed by the RFB vary some 4.1 percent or BRL 41 billion in 2020, reaching 8.9 percent or BRL 110 billion in 2023. The main variables that explain the differences between the two scenarios are GDP and inflation (IPCA).

Chart 6 - Spectrum of Alternative Scenarios for Revenues Managed by the RFB, Excluding Social Security Revenues
Data in: BRL billion



[9] The difference from the center of the first decile to the central scenario was taken and divided by the latter to infer the Variation of the extreme.

Social security revenues show an upward trajectory due to the projected increase in GDP and the wage bill. Thus, the cloud of scenarios considers different economic growth and labor market combinations.

Similarly to managed revenues, social security revenues show a great variation according to macroeconomic scenarios, with a difference of 4 percent or BRL 17 billion between the central scenario and the extreme scenarios in 2020 and of up to 9 percent - about BRL 49 billion - in 2023.

In aggregate terms, the variance of Revenues Managed by the RFB over the period of analysis is explained mainly by the variation in income tax, RGPS, COFINS, and CSLL collection. In addition, the variance portion attributed to these taxes increases from 70 percent to 75 percent between the initial and the end period. This result is compatible with the relevance of these taxes in total collection and with the volatility of their collection bases, thus reinforcing the need for a diligent monitoring of tax collection.

Chart 7 - Spectrum of Alternative Scenarios for Social Security Revenues
Data in: BRL billion
Source and Preparation: STN/ME

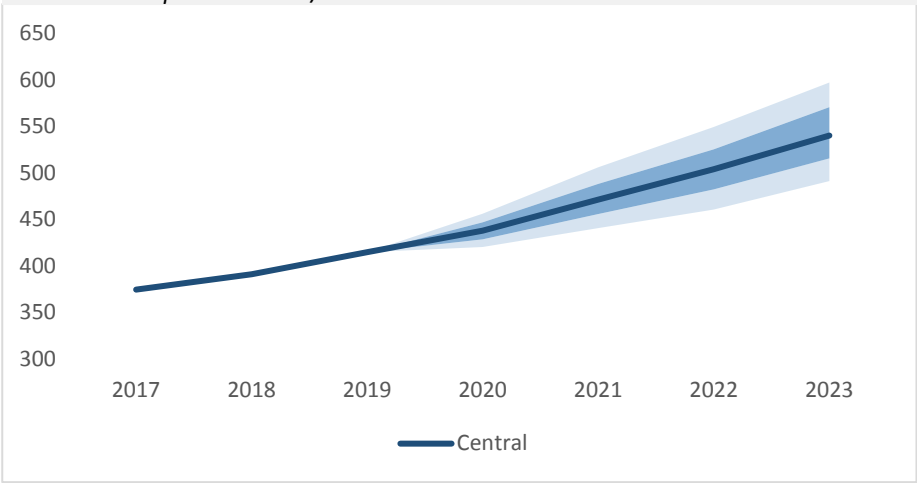
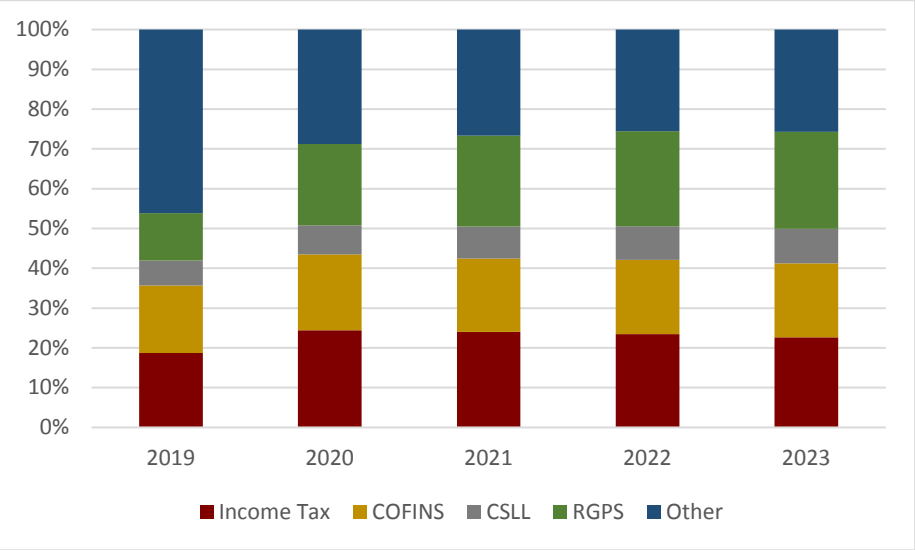


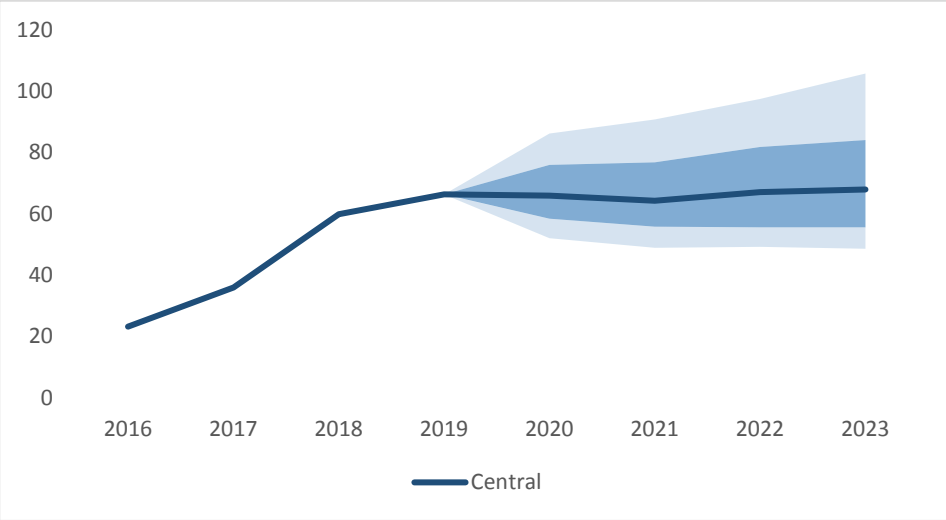
Chart 8 - Breakdown of the Variance of Revenues Managed by the RFB
Source and Preparation: STN/ME



1.4.1.2 Exploitation of Natural Resources

In the group of revenues not managed by the RFB, the Exploitation of Natural Resources accounts for the greatest relative revenue variation. This item aggregates revenues related to mineral production, use of water resources and, mainly, exploitation of oil and gas. In this sense, changes in the price of commodities like iron and oil and in exchange rates have a significant influence in the collection of taxes related to the Exploitation of Natural Resources, including in the short term. For this exercise, only variations resulting from the exchange rate were considered, all other variables remaining constant.

Chart 9 - Spectrum of Alternative Scenarios for Revenues from the Exploitation of Natural Resources
Data in: BRL $ billion
Source and Preparation: STN/ME

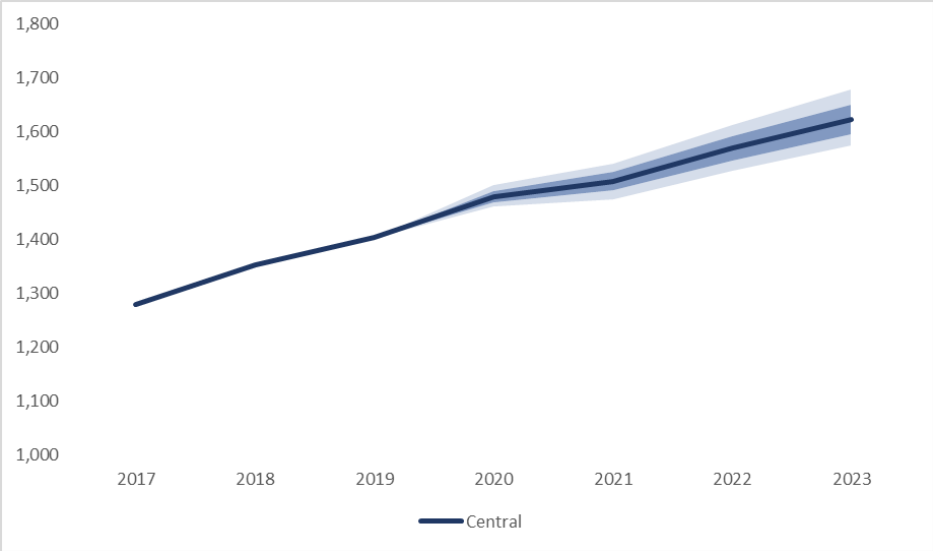


The difference between the lower extreme in terms of the central scenario reaches a 21 percent variation (about BRL 14 billion) in the central case for 2020 and exceeds 28 percent (about BRL 19 billion) for 2023. This is the case with the largest percentage variation but with a small relative share of total revenue.

1.4.2 *Expenses*

For the construction of expenditure trajectories, the different macroeconomic scenarios were applied to expenditure rules, especially expenditures on Social Security Benefits, Assistance Benefits (LOAS and RMV), Unemployment Insurance, and Wage Bonus. For this specific exercise, the impacts on Personnel and Social Charges were not considered, as this variable is under government control.[10] In turn, expenditures whose flow is controlled by the Executive Branch vary according to inflation. The premises used to conduct this exercise consider approval of the social security reform, cost-of-living adjustment to the minimum wage and no increase in civil servants' payroll.

Chart 10 - Spectrum of Alternative Scenarios for Total Expenditures
Data in: BRL billion
Source and Preparation: STN/ME



The results in Chart 10 show that the variation in expenditures is relatively lower in relation to revenues over the period. Generally speaking, this effect occurs because the number of social security or social assistance beneficiaries is associated with demographic factors, which vary little in the short term, and because the amount of these benefits is affected by two variables only – minimum wage and INPC.

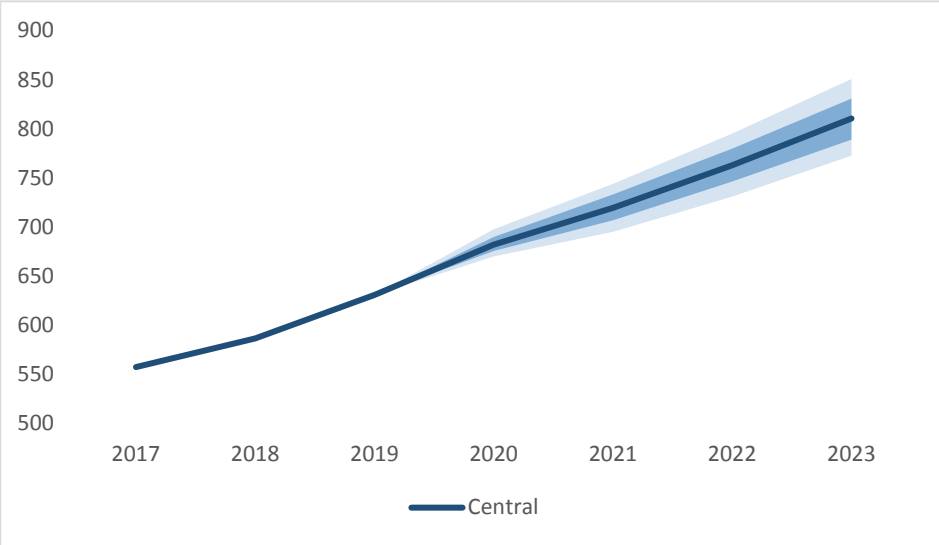
Thus, in extreme cases, which have a low associated probability, variations in expenditures of around BRL 22 billion in 2020, BRL 33 billion in 2021, BRL 42 billion in 2022, and BRL 55 billion in 2023 are expected to occur. These figures do not include any cuts or increases in discretionary spending, which could increase or reduce the amounts presented. As these decisions are under government control, they will not be considered in this analysis.

[10] Although pensions paid to civil servants who migrated to inactivity with no right to parity are somehow indexed to INPC, this amount has little significance in the context of expenditures on Personnel and Social Charges.

1.4.2.1 Social Security Expenditures

A breakdown of the analysis shows that most of the expected variations in total expenditures listed above are due to outlays for social security benefits. In addition to the high share of total expenditure (around 44 percent), social security spending is directly influenced by the minimum wage, which in turn is a function of past inflation rates, and by the increase in the average nominal income of the economy. Therefore, scenarios with higher social security benefits reflect higher inflation rates or more significant economic growth, or both.

Chart 11 - Spectrum Alternative Scenarios for Social Security Benefits
Data in: BRL billion
Source and Preparation: STN/ME

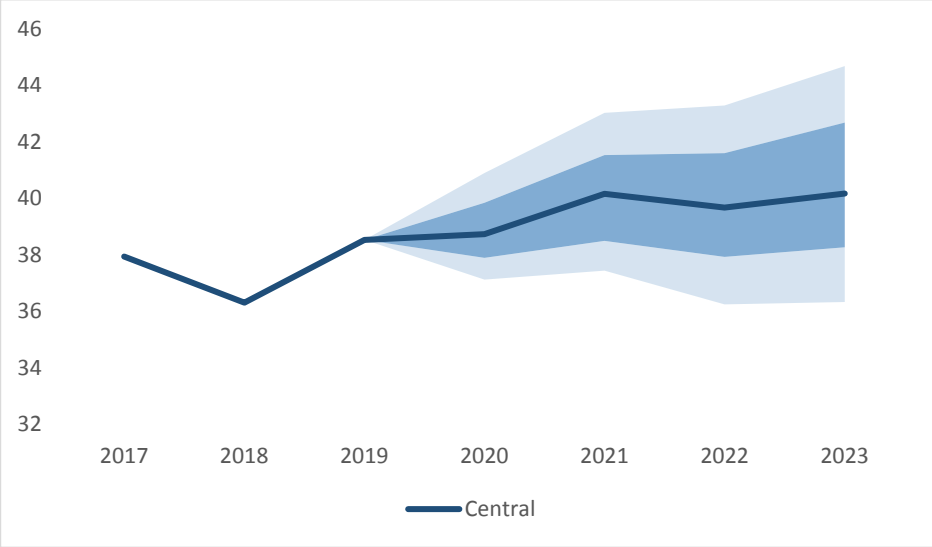


The variation of the central scenario to the extreme scenarios reaches approximately BRL 16 billion in 2020, or something around 2.5 percent, increasing to approximately BRL 40 billion in 2023 - a variation of around 5 percent. The amounts are shown in Chart 11.

1.4.2.2 Bonus and Unemployment Insurance

Wage Bonus and Unemployment Insurance are two other expenses that vary according to macroeconomic parameters, especially due to labor market movements. For example, changes in the level of unemployment affect Unemployment Insurance payments, but in the Brazilian case this relationship is pro-cyclical, since the employment composition expands in favor of formal employment in times of economic expansion. The Wage Bonus, in turn, is the payment of one minimum wage to formal workers whose income is less than two minimum wages. Therefore, this expenditure has a strong connection with formal employment and with the ratio between the MW and the average nominal income of the labor market.

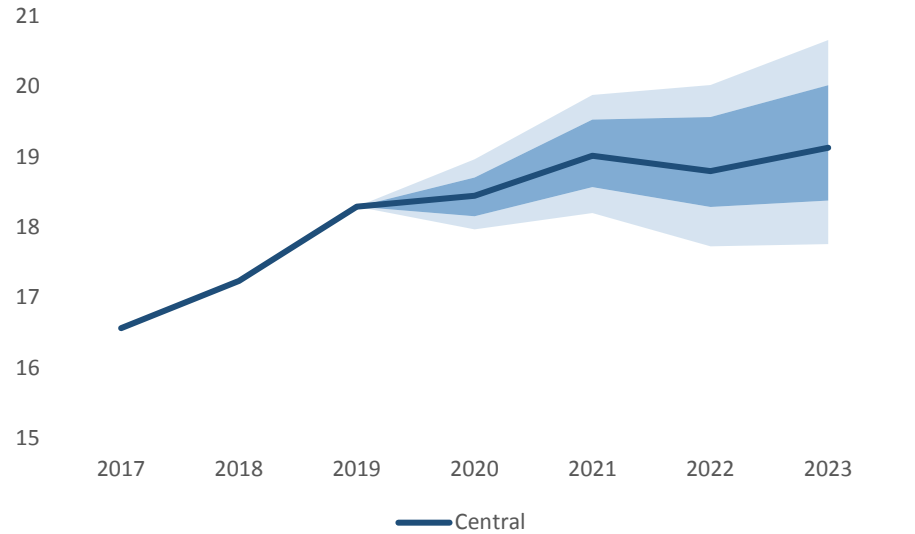
Chart 12 - Spectrum of Alternative Scenarios for Unemployment Insurance
Data in: BRL billion
Source and Preparation: STN/ME



The variation of the central scenario to the extreme scenarios is of approximately BRL 2 billion in 2020, increasing to BRL 4.5 billion in 2023. In percentage terms, these figures represent a 5.6 percent variation in this item for 2020 and exceed 11 percent in 2023. Therefore, in relative terms this is the expense with the greatest variation in both the short and medium term. However, since it accounts for a small share of total expenditure, its impact is small.

Similarly, variations in the Wage Bonus are significant in relative terms, with a difference of about R$1.5 billion, or approximately 8 percent of the extreme amounts in relation to the central amount in 2023. Nevertheless, because the Wage Bonus accounts for a small share of total expenditure, the impact of variations therein is low.

Chart 13 - Spectrum of Alternative Scenarios for Wage Bonus
Data in: BRL billion
Source and Preparation: STN/ME



1.4.3 *Primary Balance*

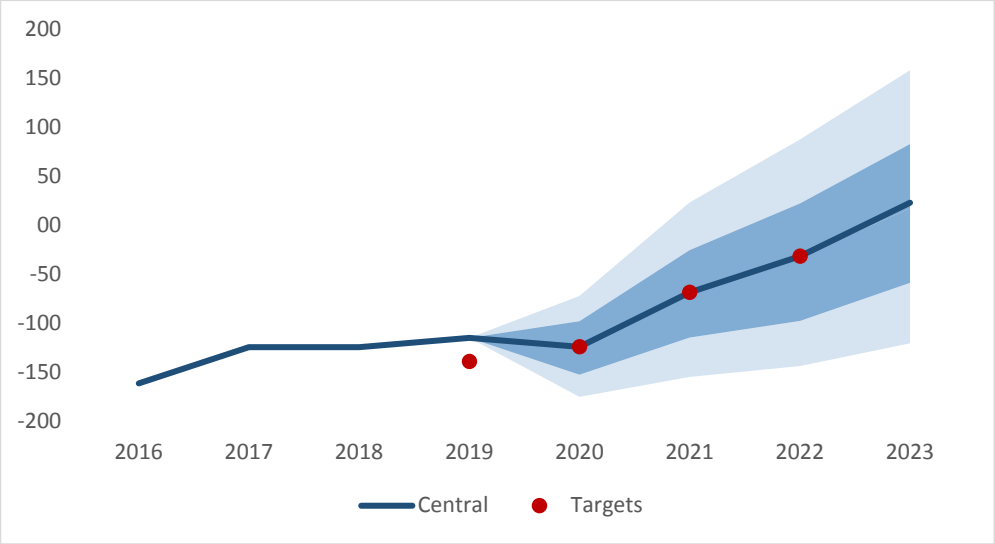
The primary balance stems from the combination of the revenue and expenditure curves generated in each different economic scenario. It should be noted that macroeconomic parameters that generate higher revenues can also generate higher expenditures and, therefore, the final outcome of primary balance scenarios differs from that of revenues and expenditures considered separately.

The primary balance trajectories presented show that in 2020 the upper and lower extreme scenarios (whose probability is very low) can be some BRL 54 billion higher or lower than the target set for the Central Government (BRL -

124.1 billion). For 2021 and 2022, the balances related to The same cases show an increase or a decrease of BRL 94 and BRL 120 billion, respectively, with a reasonable probability of a fiscal surplus.

In general, macroeconomic scenarios with greater growth of economic activity and wage bill are expected to be among those that make it possible to achieve surpluses at the end of the period. This reinforces the importance of implementing structural reforms, at both fiscal and social security levels that allow for fiscal consolidation in the medium term, and microeconomic reforms that increase the total productivity of the economy.

Chart 14 - Spectrum of Alternative Scenarios for Primary Balance
Data in: BRL billion
Source and Preparation: STN/ME



In 2019, the primary balance forecast of the Primary Revenue and Expenditure Assessment Report for the 5th two-month period of 2019 was considered. For 2020, the primary balance target of the LDO 2020 was considered.

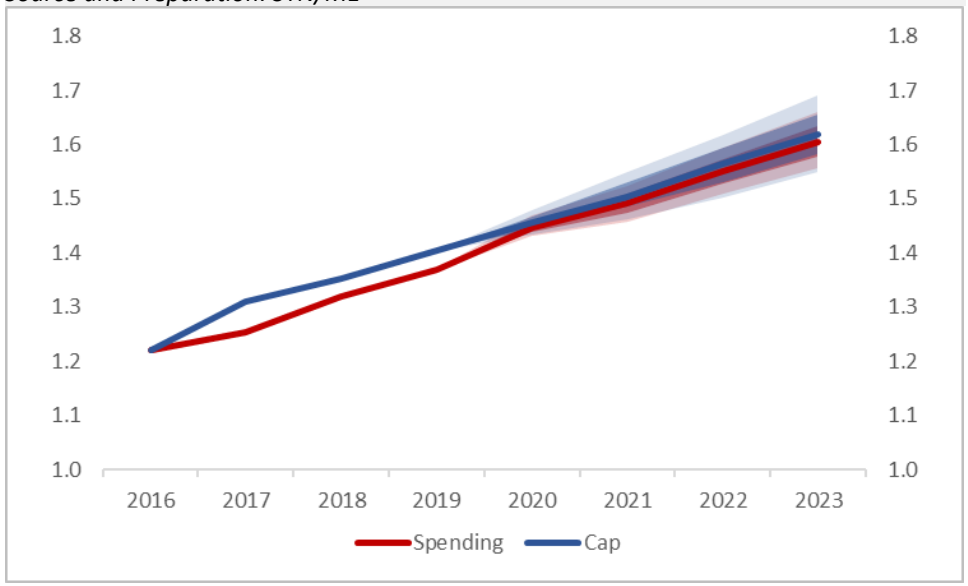
1.4.4 *Spending Cap*

Established by Constitutional Amendment Nº 95 (Articles 106 to 114 of the Transitional Constitutional Provisions Act - ADCT), the spending cap stipulates a limit for a group of primary expenses of each government branch and autonomous agencies for a period of 20 years. In the first ten years, that is, until 2026, this limit is adjusted annually for inflation as measured by the National Broad Consumer Price Index (IPCA). Thus, the variation in inflation is the only explanatory variable to determine the various possible trajectories of the spending cap.

Expenses subject to the cap are a subset of total expenditure (approximately 98 percent) and are affected by both economic (IPCA, GDP, minimum wage) and demographic (population aging) variables. It should be noted that since 93 percent of the expenditure is compulsory by constitutional or legal provision and its growth is higher than inflation, if no measures are taken to reverse this growth trajectory, the spending cap will impose a continuous shrinking of discretionary expenses.

In Chart 15, the red and blue solid lines represent baseline projections for the spending cap and the sum of expenses subject to the cap. The red shaded area represents the uncertainty related to the IPCA, which adjusts the spending cap, while the blue shaded area represents the uncertainty related to the indexing parameters of expenditure (MW, INPC, labor market, etc.). The more overlapping the two shaded areas, the greater the likelihood that the spending cap will be met. The exercise was based on a projection with strict control of expenses in the years considered, including expenses classified as discretionary, and considering the use of the total expenditure assumptions presented in this report. This confirms the possibility of compliance with the spending cap rule by the end of the analyzed period, including in the presence of possible macroeconomic shocks.

Chart 15 - Spectrum of Alternative Scenarios for the Spending Cap
Data in: BRL trillions
Source and Preparation: STN/ME



1.4.5 *Public Debt*

Charts 16 and 17 show the stochastic results of the PSND and GGGD simulations. The trajectories of the baseline scenario for these indicators are very close to those of the distribution medians and consist of the solid line of the respective charts. The projections are in line with the latest update released by the STN.

While GGGD is stabilizing, the trajectory of PSND continues to follow an upward trend on the horizon of the 2020 LDO, although a medium-term explosive behavior cannot be inferred in alternative scenarios in which strong discontinuity (in the pessimistic direction) cannot be foreseen in relation to the baseline scenario. Fiscal consolidation is a fundamental premise for envisaging a reversal of the growth trajectories of indebtedness indicators.

Chart 16 - Stochastic Scenarios for GGGD/GDP
Source and Preparation: STN/ME

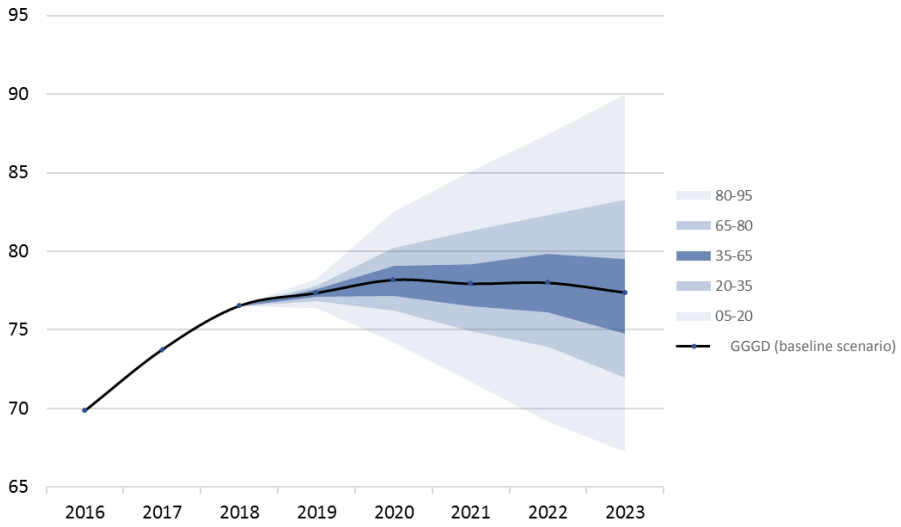
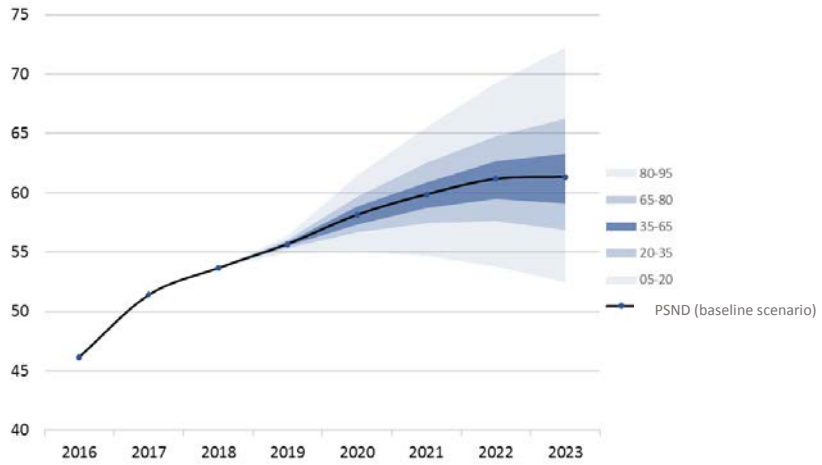


Chart 17 - Stochastic Scenarios for PSND/GDP
Source and Preparation: STN/ME



2. Specific Fiscal Risks

Specific fiscal risks are of different natures and the sum of their exposures amounts to BRL4.2 trillion. These risks can materialize both by the non-receipt of revenues associated with Federal Government assets and by the increase in unforeseen expenses related to Federal Government liabilities. During 2019, the exposure related to assets and liabilities amounted to BRL1.4 trillion and BRL2.8 trillion, respectively.

Table 8 - Fiscal Risk Factors Related to Liabilities and Assets
Data in: BRL million
Preparation: STN/ME

Fiscal Risks Related to Central Government LIABILITIES	Primary (P) Financial (F) Impact	Type of potential impact	Stock		% of Grand Total	Flows	
			2018	2019 *		2019	2020
Federal Government contingent liabilities to be settled	F	↑expenditure	121,760.50	126,584.70	2.98%	13,842.00	19,058.70
Debts guaranteed by the Federal Government	F	↑expenditure	258,226.55	255,756.89	6.01%	8,426.26	13,977.86
Financial liabilities related to federative entities	F	↑expenditure	112,935.90	113,945.00	2.68%	ND	ND
Export credit insurance	P	↑expenditure	51,898.05	42,586.70	1.00%	ND	ND
Liabilities related to lawsuits - possible risk	P	↑expenditure	1,528,000.00	1,550,140.00	36.46%	42,970.25	53,614.18
Liabilities related to lawsuits - probable risk	P	↑expenditure	117,600.00	634,020.00	14.91%		
Liabilities related to Constitutional Funds	P	↑expenditure	16,327.60	16,327.60	0.38%	1,271.70	1,295.70
Granting of FIES credit	P	↑expenditure	98,913.37	103,697.19	2.44%	ND	ND
Subtotal of Risks Related to Liabilities			**2,305,661.97**	**2,843,058.08**	**66.9%**	**66,510.21**	**87,946.44**

Fiscal Risks Related to Federal Government ASSETS	Primary (P) Financial (F) Impact	Type of potential impact	Stock		% of Grand Total	Flows	
			2018	2019 *		2019	2020
BCB Credits	F	↓revenue	24,824.10	23,891.20	0.56%	ND	ND
Financial Assets related to federative entities	F	↓revenue	621,424.40	627,228.30	14.75%	26,105.70	23,876.30
Financial assets not related to federative entities	F	↓revenue	395,132.40	354,751.40	8.34%	74,701.00	33,408.50
Active Debt	P	↓revenue	397,617.00	403,097.00	9.48%	ND	ND
Subtotal of Risks Related to Assets			**1,438,997.90**	**1,408,967.90**	**33.1%**	**100,806.70**	**57,284.80**

Total Federal Government Exposure			**3,744,659.87**	**4,252,025.98**	**100.0%**		

The charts show the composition of the total of fiscal risks. It is noticed that 33 percent of risks are related to assets and 67 percent to liabilities. As regards classification by type of potential impact, 65 percent of risks would have a primary impact, while 35 percent would have a financial impact.

Chart 19 - Impact of Fiscal Risks

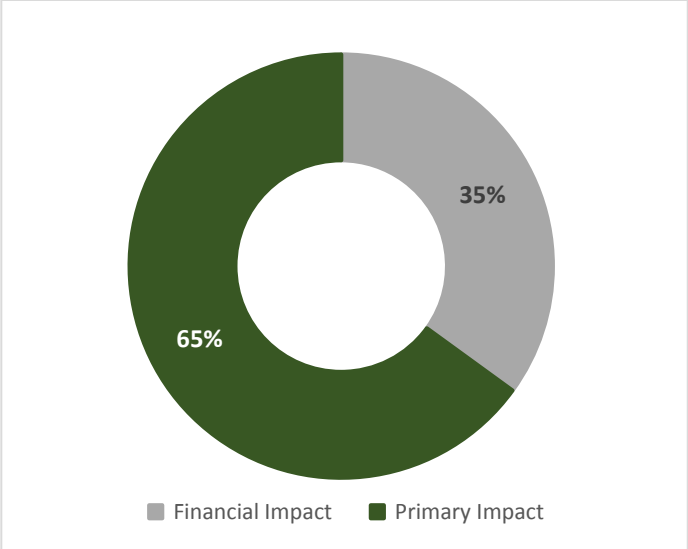
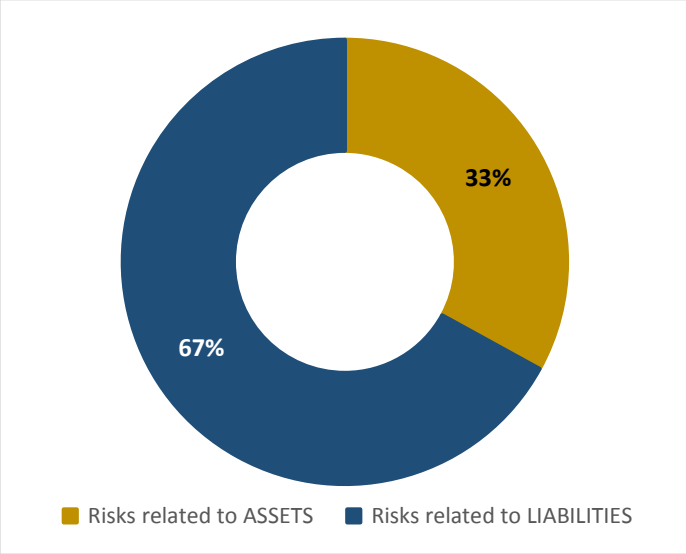


Chart 18 - Composition of Fiscal Risks



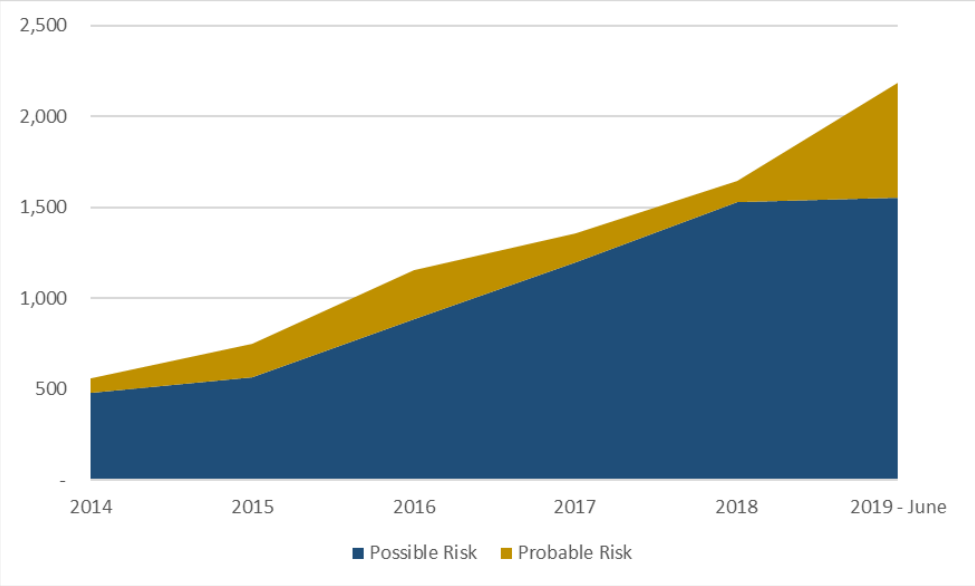
2.1 Contingent Liabilities

2.1.1 *Lawsuits*

The assessment of the fiscal risk related to lawsuits involves a degree of subjectivity in terms of both its probability to occur and adjustment parameters, in addition to presenting inaccuracy in time estimates, since decisions unfavorable to the Federal Government always have the possibility of being overruled by a higher court.

Lawsuits with probable risk of loss, in which the Federal Government appears directly on the liability side, are accounted for by the National Treasury in provision accounts to cover legal losses, making the Federal Government's Balance Sheet sensitive, given the probability of an outflow of resources in the future and the possibility of estimating its amount with sufficient certainty. Lawsuits with possible risk of loss are considered contingent liabilities and therefore do not impact the Federal Balance Sheet, but are listed and published in the Fiscal Risk Annex to the Budget Guidelines Law and included in the explanatory notes of the Federal Government's General Balance Sheet.

Chart 20 - Evolution of the Stock of Lawsuits against the Federal Government
Data in: BRL billion
Source: AGU Preparation: STN/ME

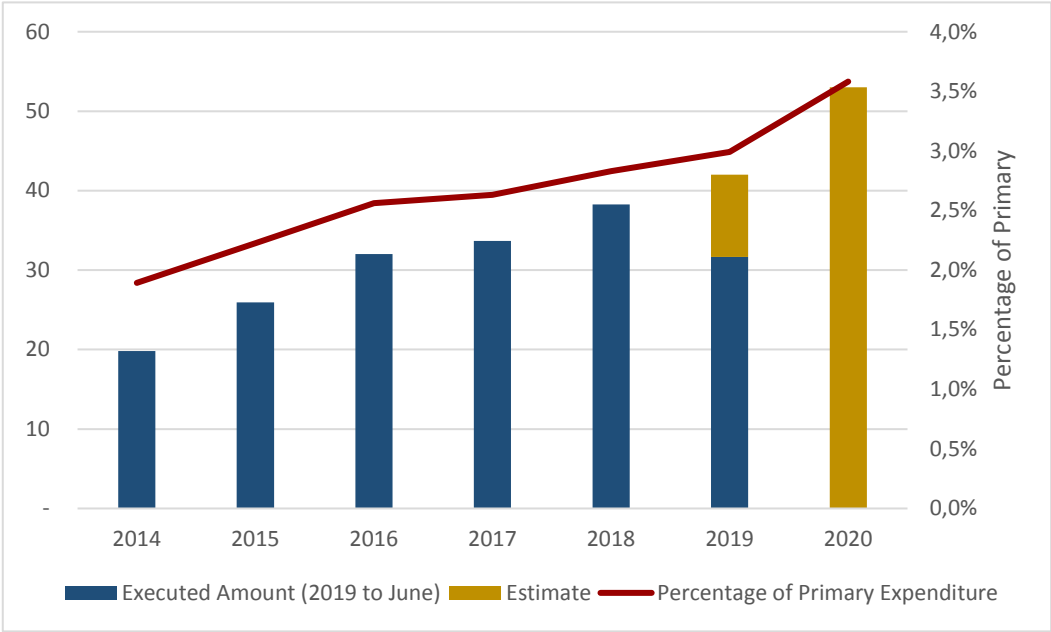


Lawsuits against the Federal Government, its autonomous entities or foundations are classified according to the probability of loss and may be of probable risk, possible risk or remote risk, according to criteria defined by the Attorney General's Office (AGU) through AGU Ordinance Nº 40/2015, and as amended by AGU Ordinances Nº 318/2018 and Nº 514/2019. Lawsuits against the Central Bank of Brazil and dependent state-owned enterprises follow the same classification but with criteria of their own.

From 2014 to June 2019, the number of lawsuits against the Federal Government increased by 290 percent from BRL 559 Billion to BRL 2.184 billion, as shown in Chart 20. Of this amount, 71 percent (BRL 1,550 billion) refers to lawsuits of possible risk while 29 percent (BRL 634 billion) are classified as of probable risk of loss and provided for in the

Federal Government's Balance Sheet on September 30, 2019. The increase in the amounts of contingent liabilities related to lawsuits against the Federal Government shows the need for special attention to the matter.

Chart 21 - Evolution of Expenditures on Lawsuits
Data in: BRL billion
Source: STN/ME



In addition to the increased stock of lawsuits that represent a fiscal risk for the federal government, there is also an increase in the occurrence of this type of risk, as shown in Chart 21. While in 2014 payments related to lawsuits stood at BRL 19.8 billion, in 2018 they amounted to BRL 38.2 billion (a 93 percent increase), accounting for 2.8 percent of all primary expenditures. In June 2019 they amounted to BRL 31.6 billion and could reach BRL 42 billion at the end of the fiscal year. For 2020, according to the allocation presented in the Annual Budget Bill (PLOA), these expenditures can be as high as BRL 53 billion.

The structure of the financial impact of the risks of lawsuits shall be (article 4 of AGU Ordinance nº 40/2015):

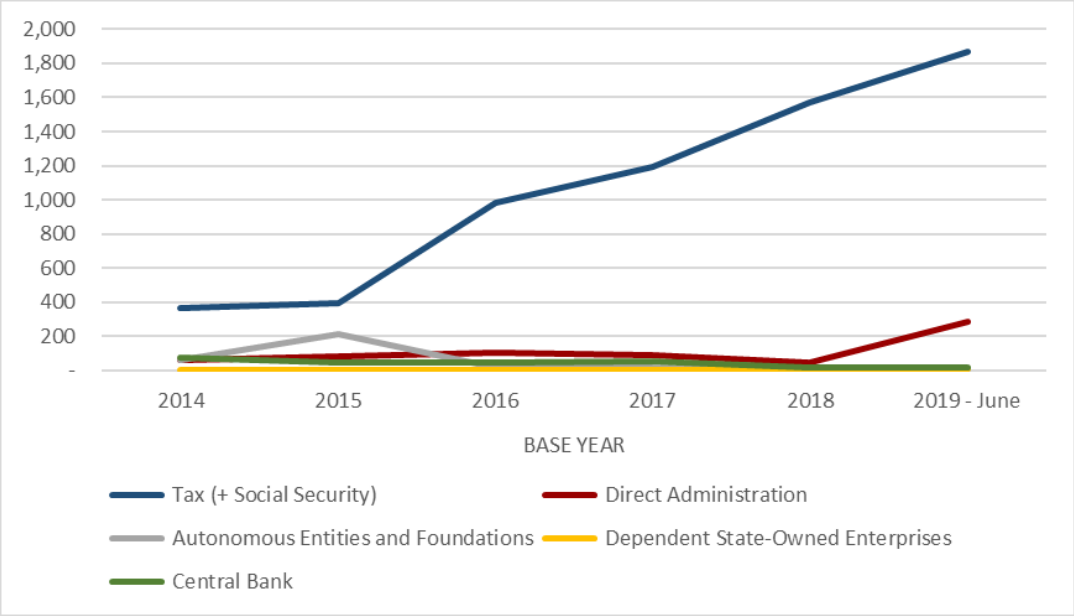
"I - in court rulings ordering the Public Treasury to pay, the result of the sum of the estimated amounts:

a) of court payments consisting of overdue installments contained in the final and unappealable court decision as an obligation to pay; and

b) of administrative payments consisting of the installments falling due, in the event that they are provided for by the final court decision as an obligation to do so.

II – in court rulings against the Public Treasury that result in loss of revenue, the result of the sum of the estimated amounts of reductions in collection due to compliance with a court decision, considering as such the equivalent to the estimated collection of 1 year for the future and of 5 years for past instalments.

Chart 22 - Lawsuits against the Federal Government by Type
Data in: BRL billion
Source: AGU



As shown in Graph 22, the most significant amounts of lawsuits against the Federal Government are of a tax nature (including social security), which has shown a significant growth since 2015.

Considering that expenses related to lawsuits are primary expenditures, their upward trajectory poses a threat to the Brazilian fiscal balance, as it directly impacts on important fiscal parameters such as the spending cap and the primary balance target.

Table 9 - Lawsuits of Probable and Possible Risk and Legal Expenses
Data in: BRL billion
Source: AGU. Preparation: STN/ME

PROBABLE RISK	BASE YEAR					
	2019 - June	2018	2017	2016	2015	2014
Direct Administration	66.74	42.73	87.86	98.91	84.49	56.45
Tax (+ Social Security)	547.37	60.33	56.31	152.53	65.84	17.74
Autonomous Agencies and Foundations	4.07	2.51	7.02	8.52	22.00	-
Dependent State-Owned Companies	6.77	3.07	2.68	2.87	3.45	2.62
Central Bank	9.07	9.00	8.71	6.91	5.96	4.38
LAWSUITS TOTAL – PROBABLE RISK	634.02	117.64	162.58	269.74	181.74	81.19

POSSIBLE RISK	BASE YEAR					
	2019 - June	2018	2017	2016	2015	2014
Direct Administration	219.46	3.73	3.09	4.00	1.00	2.10
Tax (+ Social Security)	1,318.22	1,512.76	1,139.51	828.29	326.98	345.08
Autonomous Agencies and Foundations	3.51	3.51	8.30	8.30	194.70	60.80
Dependent State-Owned Companies	2.01	2.02	2.12	2.04	2.00	2.09
Central Bank	6.94	5.98	42.07	41.32	40.37	68.66
LAWSUITS TOTAL – POSSIBLE RISK	1,550.14	1,528.00	1,195.09	883.95	565.05	478.73

	BASE YEAR						
	2020**	2019*	2018	2017	2016	2015	2014
AMOUNTS PAID - LAWSUITS	53.61	42.97	38.25	33.67	32.02	25.93	19.81
TOTAL PRIMARY EXPENDITURE	1,472.53	1,424.17	1,351.76	1,279.01	1,249.39	1,164.46	1,046.50
% Total Lawsuits/Primary Expenditure	0.04	0.03	0.03	0.03	0.03	0.02	0.02

*Estimate based on the allocation presented in the 2019 LOA.

Expense does not include amounts paid to Petrobrás regarding the offsetting of the onerous assignment contract.

** Estimate based on the allocation presented in the 2020 PLOA.

More detailed information on the fiscal risk of lawsuits against the Federal Government can be obtained in the Fiscal Risks Annex and in its updates at:

- *http://www.economia.gov.br/assuntos/orcamento/orcamentos-anuais/2020/arquivos/anexo-v-riscos-fiscais/view*
- *http://www.economia.gov.br/assuntos/orcamento/orcamentos-anuais/2020/ploa/volume_04.pdf*

2.1.2 *Contingent Liabilities under Recognition by the STN*

Federal government contingent liabilities in the settlement process within the STN, also called debts in the recognition process, can be classified as: Debts from the Winding Up/Dissolution of Federal Administration Entities; Federal Government Direct Debts; and Debts from the Salary Variation Compensation Fund (FCVS).

Table 10 - Obligations Arising from Contingent Liabilities to be Settled
Data in: BRL million
Source and Preparation: STN/ME

Classification	Creditors	Planned settlement 2019	Planned settlement 2020	Estimated Stock	BGU 06/30/2019
Winding up of entities	Several	92	119	246.0 [a]	246.0 [a]
Direct debt	Caixa	-	5.189.7 [b]	5,189.70	5,189.70
FCVS VAFs 1 e 2	SFH Agents or their assignees	12,840.00	12,840.00	113,200.00	128,000.0 [c] [d] (14,800.0) [e]
FCVS VAFs 3 e 4	FGTS, with possible transfer to SFH agents or their assignees	910	910	7,949.00	7,949.00
Total		**13,842.00**	**19,058.70**	**126,584.70**	**126,584.70**

(a) The estimated stock of liabilities arising from the winding up of entities takes into account the stages already completed in the project in course since 2018, which assesses the situation of settlement processes within the STN that should be formally and definitively closed.

(b) Direct debt to the Federal Savings Bank (Caixa) is unrelated to the FCVS. These BRL 5.19 billion refer to the consolidation of contingent liabilities of the Federal Government to the Federal Savings Bank, which are pending full recognition for the respective administrative settlement processes to continue. In the BGU, this liability falls in the "Fiscal Risks" category.

(c) Estimate for June/2019 from the actuarial evaluation prepared by DuoConsultoria for the Federal Savings Bank.

(d) Liabilities

(e) Assets

** VAFs - Fiscal Added Values; SFH - Housing Financial System; FGTS - Government Severance Indemnity Fund for Employees*

Exceptions aside, payments of the said liabilities to creditors are made in federal government debt securities, a process known as securitization.

2.1.3 *Guarantees*

2.1.3.1 Direct Guarantees from the Federal Government to Subnational and State-Owned Enterprises

Within the STN, the Guarantee System comprises the granting, control and execution of guarantees and counter guarantees. Thus, the STN monitors delays in payments of guaranteed contracts, setting deadlines for settling overdue payments and warning debtors of the sanctions, penalties and consequences provided for in contracts and relevant legislation.

If the borrower fails to make the payment within the established deadlines, the federal government, as guarantor, settles the debt with the creditor and then takes the necessary measures to recover the amounts spent, which include, in addition to the original amount owed, late payment interest, fines and other charges provided for in loan contracts.

To ensure greater efficiency, security and transparency to the guarantee granting process, the STN carries out constant monitoring and evaluations and, when potential risks or opportunities for improvement arise, the methodologies and respective regulations are revised and updated.

In this sense, the STN has been conducting, since 2015, a comprehensive process to modernize the Guarantee System in order to extend its effectiveness to other entities and state-owned enterprises interested in contracting credit operations with Federal Government guarantee. The process also seeks to ensure the solvency and balance of the indebtedness process so that entities will enter credit operation contracts in sustainable amounts and conditions. Actions taken include:

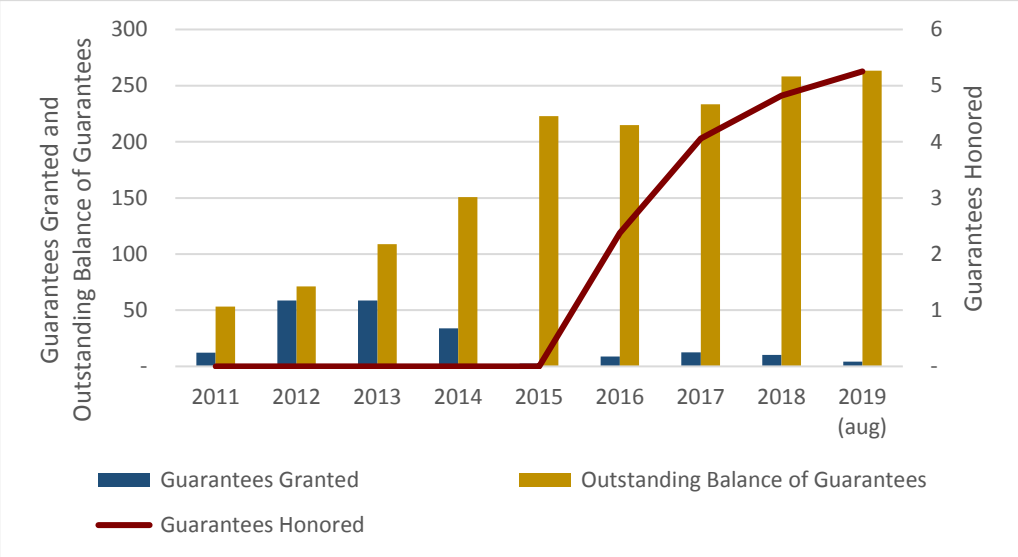
- Establishing the STN Guarantee Committee;
- Changing procedures for the analysis of Payment Capacity, sufficiency of counter guarantees and implementation of the analysis of the cost of credit operations;
- Improving the mapping and control of guarantees granted through the Integrated Debt System (SID);
- Producing reports with statistics of guarantees granted and honored;
- Preparing a weekly report on borrowers who are temporarily suspended from obtaining new loans with Federal Government guarantee, according to the criteria established in items I and II, article 13, of Ordinance MF Nº 501 of 11/23/2017; and
- Changing the flows of analysis of operations with Federal Government guarantee.

As provided for in item IV, Article 29 and Article 40 of Complementary Law Nº 101/2000 (Fiscal Responsibility Law - LRF), the Federal Government can provide guarantees in internal or external credit operations. This mechanism is defined as the commitment to comply with financial or contractual obligations assumed by a federative entity or an entity linked thereto.

Chart 23 shows the evolution of the amounts of credit operations with Federal Government guarantee from 2011 to 2019. Following a period of high amounts granted, from 2012 to 2014, which exceeded BRL 52 billion in 2013, a significant decline in this trend is perceived starting in 2015, already as a reflection of the modernization of the STN Guarantee System. The outstanding balance of guarantees, in turn, shows an upward trajectory throughout the sample, with the exception of 2016, when there was a slight decrease in relation to the previous year. The outstanding balance recorded in August 2019 totaled BRL 263 billion.

After a period of 11 years (2005 to 2015) without the need to honor guarantees, in 2016 the STN went back to honoring debts related to contracts under the responsibility of states and municipalities, thus accumulating an amount of BRL 16.5 billion in guarantees honored from May 2016 to August 2019, as shown in Chart 23. The non-executed number of counter guarantees due to court orders amounts to BRL 4.2 billion. In August 2019 the total amount honored reached BRL 5.2 billion, with BRL 8.4 billion at the end of the fiscal year. For 2020, the STN estimates that the flow of this expenditure will reach BRL 17 billion.

Chart 23 - Evolution of Federal Government Guarantees for Credit Operations
Data in: BRL billion
Source: STN



The outstanding balance of guarantees increases due to new disbursements made under existing contracts, the contracting of new credit operations with disbursements, the indexation of the outstanding balance (in the domestic guaranteed debt), and the increase in exchange rates (in the external guaranteed debt). On the other hand, the outstanding balance decreases owing to amortizations and the appreciation of the Brazilian currency (BRL) against foreign currencies.

As payments of guarantees are classified as financial expenses, they do not affect the primary balance. However, the impossibility of executing counter guarantees directly affects the Golden Rule, in addition to increasing the federal public debt, since sources of operations of public securities issuance are used for paying them.

Every four months the STN publishes the Guaranteed Credit Operations Report (RQG) with the most relevant information on credit operations with Federal Government guarantee. Issues of this report can be accessed at:

- *http://www.tesouro.fazenda.gov.br/-/relatorios-garantias-e-contratacoes-diretas*

2.1.3.2 Private Guarantee Funds with Federal Government Participation

In order to provide guarantees aimed at mitigating risks and enabling the participation of the private sector and the granting of credit for financing operations linked to public policies and government programs, such as in the areas of major infrastructure works and student loans, specific guarantee funds for various sectors of the economy have been established since 2009.

The main private guarantee funds in which the federal government participates as shareholder are:

a) Shipbuilding Guarantee Fund (FGCN): aimed to guarantee the credit risk of financing operations for the construction or production of vessels and the performance risk of Brazilian shipyards;
b) Popular Housing Guarantee Fund (FGHab): aimed to provide guarantees for housing financing contracts under the My House My Life Program (PMCMV), in cases of Death and Permanent Disability (MIP), Physical Damage to Property (DFI), and Temporary Reduction of Payment Capacity (RTCP)/unemployment;
c) Infrastructure Guarantee Fund (FGIE): aimed to provide risk coverage for infrastructure operations described in §7, Article 33 of Law 12,712/2012;
d) Educational Credit Operations Guarantee Fund (FGEDUC): aimed to guarantee the risk in educational credit operations under the Higher Education Student Financing Fund (FIES) until the end of 2017;
e) Guarantee Fund of the Student Loan Fund (FG-FIES): aimed to guarantee student loans under FIES starting from the first half of 2018.

Federal Government resources allocated to these funds are a hedge for providing guarantees within the scope of underlying public policies. In the context of implementation and operationalization of these policies, there is a direct fiscal risk for the federal government if the guarantees provided are used, since the guarantees are honored through payment with fund resources.

In this sense, the structuring of funds of this nature must be very well thought out and justified. As an example, in the context of shipbuilding operations, the FGCN honored guarantees in the amount of BRL 4.7 billion between 2015 and 2016. In the context of student loan contracts guaranteed by FGEDUC, at the end of 2017 BRL 1.55 billion had been earmarked for the honor of guarantees.

In addition to the fiscal risk arising from the use of guarantees, there are also other risks related to the need for additional allocations to the funds in case of an actuarial imbalance required to support the implementation of policies.

The guarantee funds listed here are of private nature and have their own equity separate from the shareholders' equity, and are subject to their own rights and obligations. The funds' equity is formed by the contribution of assets and rights made by shareholders through paid up shares and income obtained from management thereof.

The Federal Government can be a single shareholder or participate in the funds together with other shareholders. The funds are usually managed by a federal financial institution or public company, which represents in the judicial and extrajudicial spheres and is compensated for the services provided.

In addition to the funds mentioned above, the Federal Government participated as a shareholder in three other private guarantee funds: Investment Guarantee Fund (FGI), Operations Guarantee Fund (FGO) and Guarantee Fund for Public Private Partnerships (FGP). The first two, mainly aimed at offering guarantees to micro, small and medium-sized companies, are currently operating without federal government participation as a shareholder, while the FGP was discontinued in 2017. Table 11 presents the main private guarantee funds, indicating that since 2009 the Federal Government has allocated more than BRL 12 billion to guarantee funds.

Table 11 - Private Guarantee Funds
Data in: R$ million *Position: June/2019*
Source: STN

Guarantee Fund	Object of the guarantee	Amount paid-up by the Federal Government	Equity
Guarantee Fund Discontinued			
FGP	Public-Private Partnership (PPP) Contracts	3,270.3	0.0
Guarantee Funds currently without federal government participation			
FGI	Financing to micro, small and medium-sized companies for the acquisition of capital goods	430.3	1,156.9
FGO	Financing to micro, small and medium-sized companies for working capital and investment	1,033.9	3,287.5
Guarantee Funds currently with federal government participation			
FGEDUC	Educational credit operations under the Higher Education Student Financing Fund (FIES), until 2017	2,535.8	5,389.5
FG-Fies	Educational credit operations under the Higher Education Student Financing Fund (FIES) starting from 2018	1,000.0	1,247.1
FGCN	Financing for the construction or production of vessels	2,845.6	51.4
FGIE	Large infrastructure projects	1.0	620.1
FGHab	Housing financing under the Housing Financial System	960.1	2,396.0
Total		**12,077.0**	**14,148.5**

In relation to the funds in which the Federal Government still participates as a shareholder, some have already lost or are slated to lose large resources in the form of honor of guarantees. Others do not operate properly, either because they unnecessarily accumulate resources that would be useful in other areas, or because they expose the federal government to the risk of losing resources. Table 12 shows the situation of each of these funds.

Table 12 - Current Situation of Guarantee Funds
Source: STN

Guarantee Fund	Current Situation
FGEDUC	Due to operational reasons, the Fund has not yet honored guarantees. Currently, with the changes in FIES and the creation of FG-FIES, the Fund is no longer providing guarantees, except for advances on contracts signed until 2017. The Fund should have its equity used up in the coming years due to the high rate of default in FIES.
FG-Fies	The Fund was established in 2018 and there are not operations to be honored yet. The amount of BRL3 billion is expected to be fully paid up by the federal government over a 6-year period.
FGCN	The Fund currently is not providing guarantees, as its Equity was used up in the honor of guarantees under Petrobrás' Sondas Project. The amount honored totaled BRL4.7 billion.
FGIE	Since it was established in 2014, this Fund has provided one single guarantee in the amount of BRL6 million to the municipality of Salto, state of São Paulo. Currently it has more than BRL600 million in available balance not committed to guarantees.
FGHab	Frequently honors guarantees for Death and Permanent Disability and Physical Damage to Property. Since its establishment, this Fund has paid some BRL352 million in honor of guarantees with funds proportional to the shares belonging to the federal government.

Box 1 - Shipbuilding Guarantee Fund (FGCN)

The FGCN is an example of a materialized risk that involved high amounts of guarantees honored and resulted in the loss of Federal Government assets, thus showing the importance of a careful analysis of the risks assumed by the funds. The FGCN was created in 2010 with an initial capital contribution of BRL 1.3 billion from the Federal Government in shares of Banco do Brasil S.A. (98.58 percent) and 28 other companies. In 2012, in a second contribution, the Federal Government provided more than BRL 2.5 billion in paid-in shares of Banco do Brasil. In the same year, the Federal Government redeemed BRL 1 billion. Shares were also paid in by the beneficiaries of the guarantees; however, the federal government is the majority shareholder, with 97.88 percent of the Fund's total shares in December 2018.

The first FGCN guarantees were provided in August 2012, under Petrobras' Sondas Project. This project involved the construction of 29 drilling rigs in ultra-deep waters, intended for the exploration of oil and natural gas in the pre-salt region.

It was a large project that required a long time for the construction of the rigs, before they went into operation and began to generate resources. Therefore, it was structured so that short-term loans (bridge loans) were granted to start the construction of vessels. Subsequently, long-term loans would be contracted with the BNDES at lower interest rates, which would be used to repay the bridge loans.

In February and March 2015, the bridge loans matured. However, long-term loans were not granted, due to uncertainties in the economy and, mainly, to suspicions of corruption at Petrobrás raised by Operation Lava-Jato (Car Wash). As none of the rigs had been completed, Sete Brasil, which was a fully pre-operational company, was unable to pay back the creditors of the bridge loans.

The FGCN was then activated. However, as all guarantees were triggered almost simultaneously, the Fund did not have sufficient equity to honor all guarantees. The option was to pay proportionally to the total balance of guarantees, partially paying the debts to each creditor. As a result, the fund's equity was virtually used up, with a large liability still hanging over it.

Therefore, the Fund honored guarantees in the amount of BRL 4,814,863,918.41 in 2015 and 2016. Currently, its shareholders' equity is only BRL 46.9 million (position in December 2018), which is sufficient to cover the Fund`s administrative costs and monitor of the Judicial Recovery process of Sete Brasil.

The FGCN is not currently contracting new guarantees. It awaits definition of the Judicial Recovery process of Sete Brasil to try to recover some percentage of its assets.

2.1.3.3 Export Guarantee Fund (FGE)

FGE funds are used to back the Export Credit Insurance (SCE), which is the Federal Government's coverage for exports of domestic goods or services against commercial, political and extraordinary risks that may affect economic and financial transactions linked to export credit operations. In addition, the SCE can be used by exporters and financial institutions, export credit agencies, insurance companies, reinsurers, investment funds, and international organizations that finance, refinance or guarantee the production of goods and services for Brazilian exports and Brazilian exports of goods and services.

The Fund's equity totals US$7.8 billion (book value), with a solvency margin (required equity) of US$1.7 billion (position in December 2018). Its exposure, in terms of resources, has shown a decrease over time, and while in 2014 the exposure was approximately US$31.1 billion, including approved operations and completed operations, on 06/30/2019 it fell to US$11.1 billion for both types of operations, as detailed in Table 13.

The FGE, established by Provisional Measure Nº 1,583-1/97 and converted into Law Nº 9,818/99 is a public federal fund of an accounting nature, linked to the Ministry of the Economy and managed financially by BNDES. Its purpose is to cover guarantees provided by the Federal Government export credit operations.

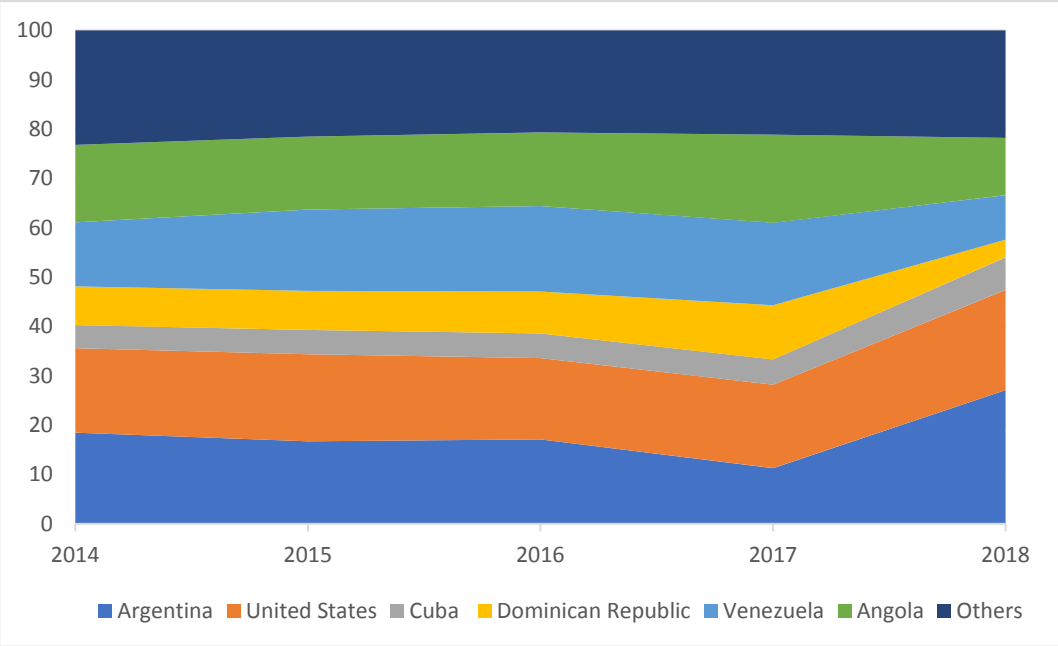
Table 13 - FGE Exposure by Residual Term and Operation Phase
Data at: US$ million
Source and Preparation: CAMEX/ME

Residual Term (in years)	APPROVED				COMPLETED				TOTAL			
	Exposure (USD)	%	Qt	%	Exposure (USD)	%	Qt	%	Exposure (USD)	%	Qt	%
00 - 05	418.1	25.4	5	41.7	3,829.30	40.4	229	87.4	4,247.30	38.2	234	85.4
05 -10	180.7	11	3	25	3,553.80	37.5	22	8.4	3,734.50	33.6	25	9.1
10 - 15	1,046.20	63.6	4	33.3	1,183.40	12.5	6	2.3	2,229.60	20.1	10	3.6
15 - 20	-	-	-	-	767.5	8.1	4	1.5	767.5	6.9	4	1.5
20 - 25	-	-	-	-	135.7	1.4	1	0.4	135.7	1.2	1	0.4
Total	**1,645.00**	**100**	**12**	**100**	**9,469.60**	**100**	**262**	**100**	**11,114.60**	**100**	**274**	**100**

SCE operations may be in an "approved" or "completed" status. Approved operations are those processed in decision-making bodies, with the issuance of a coverage offer by the FGE, but without the issuance of a policy. Completed operations are those in which the export credit insurance policy has already been issued.

Chart 24 shows the evolution of FGE exposure by importing country. From 2014 to 2018, there was an increase in exposure with Argentina, Cuba and the United States. In the case of Argentina, the share of total Fund exposure went from 18.5 percent to 27.1 percent over the mentioned period. Although there are no restrictions as to the type of goods or services or to the importer's country, FGE exposure should not show concentration in terms of either countries or products offered, since dispersion reduces the total risk of the portfolio of guaranteed operations.

Chart 24 - FGE Exposure by Importing Country (%)
Source: ABGF



In 2018, FGE's total expenses amounted to BRL 1.4 billion, and the amount paid in compensations (coverage of guarantees) accounted for about 8 percent of the total amount paid. On the revenue side, the amount of BRL 2.8 billion was collected from the following sources:

a) Yields from funds deposited in the National Treasury Single Account: BRL 2.44 billion;
b) Revenue from National Treasury Notes (NTN) received that make up FGE's equity: BRL 280 million;
c) Premiums collected from the SCE: BRL 72 million;
d) Financial transfers received: BRL 17.8 million;
e) Recovery of compensations paid: BRL 493,000.

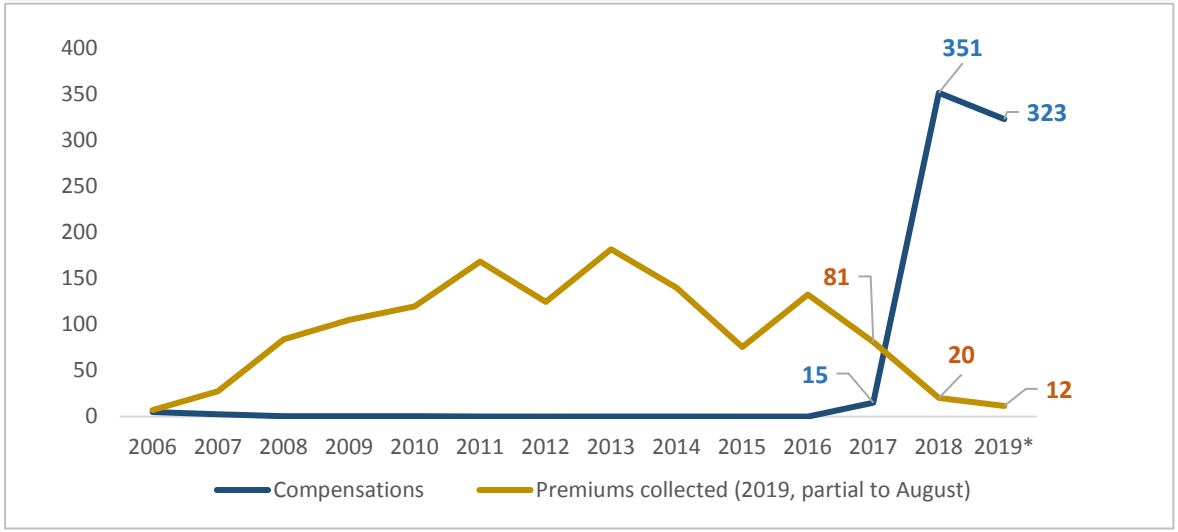
In FGE approved operations, the residual term is the disbursement term plus the repayment term, counted from the base date of the evaluation.

In completed operations, the residual term is defined as:

- *In the event of lack of balance to be disbursed on the base date of the evaluation, the remaining repayment term;*
- *In the event of operations with balance to be disbursed, the theoretical maximum disbursement period established on the base date of the evaluation (excluding any disbursement that has occurred up to that date), plus the repayment term.*

Compensations paid by the FGE from the beginning of its operation until August 2019 amounted to USD 725.3 million, of which USD 351.2 million were paid in 2018 and US$322.5 million in 2019 (until August), representing a jump in the payment of compensations, while the collection of premiums has significantly decreased since 2016, as shown in Chart 25. Most of the amount of compensations paid in the period in question went to exports destined to Mozambique, Venezuela and Cuba.

Chart 25 - FGE: Premiums Collected vs. Compensations Paid
Data in: USD million
Source: ABGF



Because it is characterized as primary expenditure, the materialization of the FGE's fiscal risk affects the Federal Government's primary balance and the limit of the spending cap, insofar as it represents a need for a supplementary budget when payments of Fund expenses exceed the limits set in the LOA (in 2018, an additional credit of BRL 1.9 billion was required).

The amounts paid as compensation by the FGE do not represent a definitive loss, since they are subject to credit collection and recovery actions, as determined by Law Nº 11,281 / 2006.

The total amount of claims with FGE guarantee from the beginning of operations until Dec/2018 is USD 902.3 million, of which 36.5 percent were settled before the compensation, 44.7 percent led to compensations, 17.5 percent refer to the unsecured quota, 1.2 percent to the uncharacterized quota, and 0.1 percent to the provision for claims to be settled.

2.1.4 *Liabilities Related to Constitutional Funds*

The balance sheet of Constitutional Funds on December 31, 2018 for the Central-West Financing Constitutional Fund (FCO), the Northeast Financing Constitutional Fund (FNE) and the North Financing Constitutional Fund (FNO) shows that in 2018 expenses on provisions for doubtful debts amounted to BRL 17.1 million, BRL 885.9 million and BRL 333.1 million respecively, totaling BRL 1,236.3 million. These amounts are shown in the income accounts of the balance sheets of the respective funds. Additionally, the banks managing these funds project the provision amounts expected for future years, as shown in Table 14.

The Federal Constitution of 1988 earmarks 3 percent of the proceeds from the collection of taxes on income and earnings (IR) and on industrialized products (IPI) for financing programs to the productive sectors of the North, Northeast and Central-West regions. This led to the creation of the Constitutional Financing Funds of the North (FNO), the Northeast (FNE) and the Central-West (FCO), to which those resources are transferred.

Table 14 - Liabilities Related to Constitutional Funds
Data in: BRL million
Source: Managing Banks

Funds	Years				
	2018	2019	2020	2021	2022
FCO	17.3	9.5	8.7	8	7.4
FNE	885.9	881.7	881.7	878.4	870.8
FNO	333.1	380.5	405.3	431.7	459.8
Total	**1,236.30**	**1,271.70**	**1,295.70**	**1,318.20**	**1,338.00**

On the other hand, credits written off as loss and recorded in memorandum accounts can be recovered in the future, even if in a small fraction. These credits, which previously had a negative fiscal impact at the time of the provision, may positively affect the primary balance in the event of recovery.

Table 15 - Recovery of Credits and Receivables Written Off as Losses
Data in: BRL million
Source: Managing Banks

Funds	Recovery of credits written off as loss (A)	Outstanding credits written off as loss (B)	Recovery ratio (A/B)
FCO	2.4	3,013.9	0.08%
FNE	477.5	9,776.7	4.88%
FNO	213.2	3,537.0	6.03%
Total	**693.1**	**16,327.6**	**4.25%**

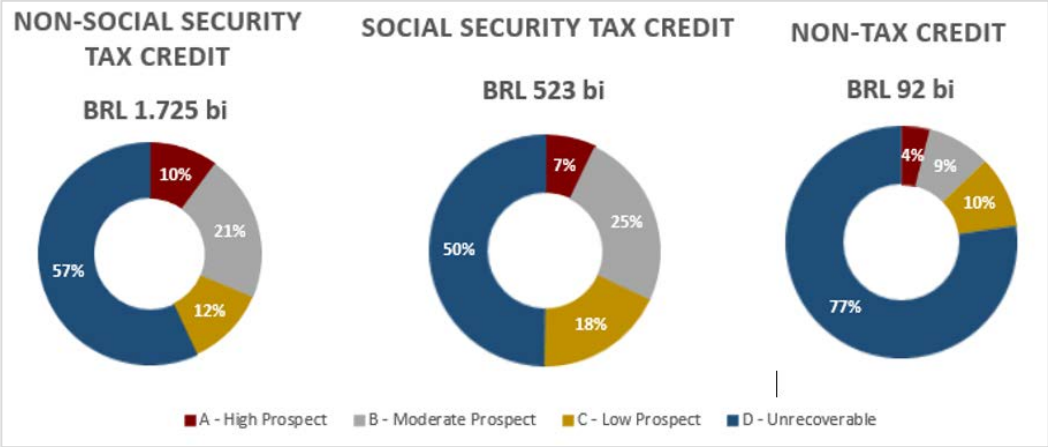
2.2 Assets

2.2.1 *Federal Active Debt*

The Federal Active Debt refers to amounts owed to the federal government not paid by debtors upon maturity. The government is therefore authorized to charge interest, impose fines and demand the monetary restatement of the amounts owed. The fiscal risk involved lies in that the Federal Government might not receive the amounts to which it is entitled at all or receive them after the previously scheduled deadlines.

Chart 26 shows the amounts of the Federal Active Debt as of June 2019 by credit type and rating, totaling BRL 2,340 billion. Of this amount, BRL 1,313 billion (56 percent) refers to unrecoverable credits, while only BRL 213 billion (9 percent) refers to credits with a high prospect of recovery. The other credits are classified between low and moderate prospect of recovery.

Chart 26 - Distribution of the Federal Active Debt by Credit Type and Rating (June/19)
Data in: BRL billion
Source: PGFN



The Attorney General's Office of the National Treasury (PGFN) is the entity responsible for managing the Active Debt, and must record the credits claimed by different government agencies, as well as see to the necessary collections, whether in a friendly or judicial manner.

The classification methodology for credits recorded in the Active Debt has the following rating structure:

a) Class "A": credits with a high prospect of recovery;

b) Class "B": credits with a moderate prospect of recovery;

c) Class "C": credits with a low prospect of recovery;

d) Class "D": unrecoverable credits.

Based on the payment history of the last fifteen years, there is an expectation that 70 percent and 50 percent of class "A" and class "B" credits, respectively, will be recovered within the next 15 years, with consequent adjustments for losses of 30 percent and 50 percent, respectively, as shown in Chart 27. Therefore, of the BRL 2,340 billion balance, approximately BRL 1,937 billion (82 percent) are considered losses, that is, BRL 403 billion are expected to be recovered, with the majority impacting on the primary balance.

Chart 27 - Federal Active Debt – Distribution by Rating – Expected Recovery
Data in: BRL billion
Source: BGU 2018 and DW PGFN Preparation: STN/ME

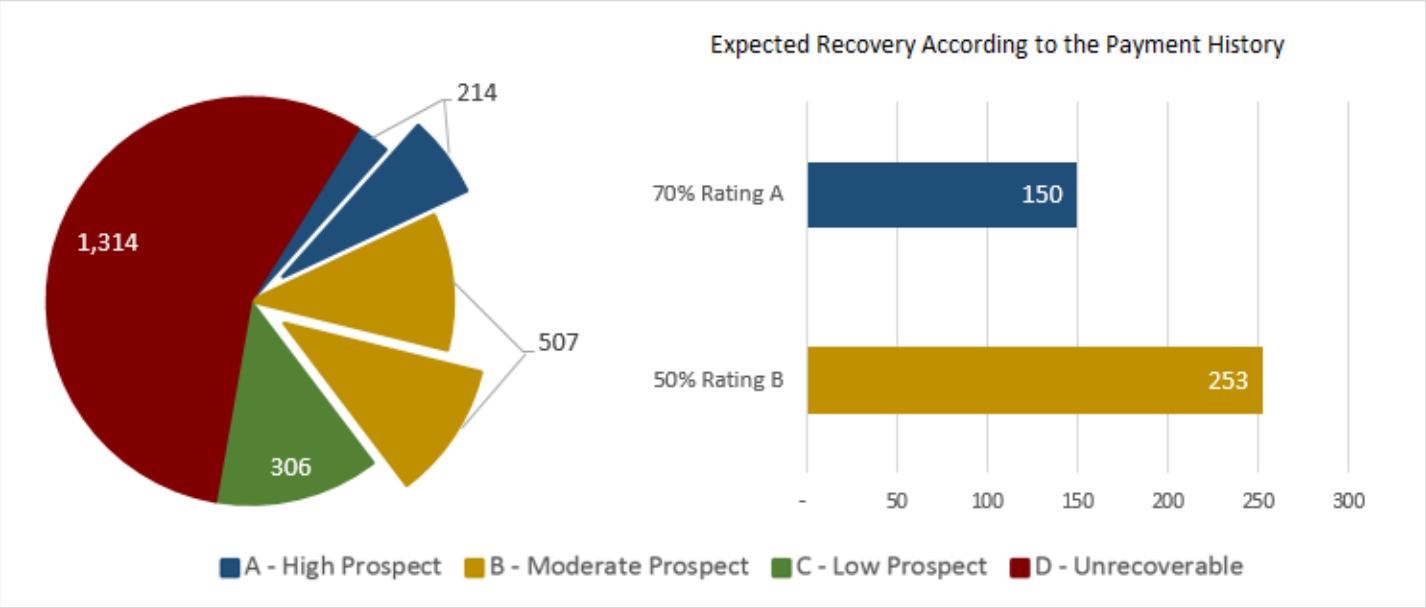


Table 16 - Distribution of the Federal Active Debt by Credit Type and Rating (June/19)
Data in: BRL billion
Source: PGFN

Type of Registration	Rating	2018	2019 (June)	Variation (%)
Non-Social Security Tax Credit	A	157,588	172,921	9.73%
	B	352,351	368,449	4.57%
	C	306,096	201,611	-34.13%
	D	735,139	982,113	33.60%
	Subtotal	**1,551,173**	**1,725,094**	**11.21%**
Social Security Tax Credit	A	37,855	37,358	-1.31%
	B	136,070	130,060	-4.42%
	C	158,592	95,540	-39.76%
	D	158,692	260,201	63.97%
	Subtotal	**491,209**	**523,159**	**6.50%**
Non-Tax Credit	A	11,435	3,718	-67.49%
	B	17,184	8,089	-52.93%
	C	22,743	9,185	-59.61%
	D	87,339	71,346	-18.31%
	Subtotal	**138,701**	**92,338**	**-33.43%**
Total		**2,181,082**	**2,340,591**	**7.31%**

2.2.2 *Credits of the Banco Central do Brasil (Central Bank of Brazil)*

The fiscal risks related to the assets of the Banco Central do Brasil (BCB) refer to credits with institutions in liquidation originating from operations under the Program of Incentives to the Restructuring and Strengthening of the National Financial System (PROER). BCB credits with institutions in extrajudicial liquidation per fiscal year are listed in Table 17, with the position in June/19.

Table 17 - BCB Credit with Institutions in Extrajudicial Liquidation
Data in: BRL million *Source: BCB*

Institutions in Extrajudicial Liquidation	Credit
Banco Nacional	18,327.80
Banco Econômico	5,350.50
Banco Banorte	212.9
Total	**23,891.20**

2.2.3 *Financial Assets Not Related to Subnational Entities*

The Federal Government's financial assets not related to subnational entities and under STN management are currently classified into five categories, according to the rule or act that gave rise to them: Arising from Loans granted to Financial Institutions, Arising from Rural Credit Operations, Arising from Credit Assignment Operations, Arising from Export Credit Operations, and Arising from Loans to Non-Financial Entities.

Table 18 - Financial Assets Not Related to Subnational Entities
Data in: BRL million
Source: STN/ME

Financial Asset	Stock
Loans to Financial Institutions	323,680.70
Rural Credit Operations	12,395.40
Credit Assignment Operations	14,641.60
Export Credit Operations	3,963.40
Loans to Non-Financial Entities	70.30
Total	**354,751.40**

2.3 Subnational Entities

In the context of relations between the Federal Government and subnational entities, fiscal risks take different forms and shapes. A risk that is very likely to materialize is that of judicial authorization for new suspensions of payments by states and municipalities of debts to the Federal Government. Recently, the states of Minas Gerais and Rio Grande do Sul secured such court injunctions and other states followed suit.

A second potential source of fiscal risk for the Federal Government stems from credit operations with federal guarantee contracted by subnational entities. In 2019, the STN had to honor guarantees in default of the states of Goiás, Minas Gerais and Rio Grande do Norte, in addition to Rio de Janeiro, which enjoys this prerogative for having joined the Fiscal Recovery Regime (RRF). Further details on this risk can be seen in Section 2.5 of this Report, which deals specifically with Federal Government Guarantees for Credit Operations.

Considering these factors, Table 19 shows the Federal Government's stock of assets held by states and municipalities, representing the exposure of this risk.

Table 19 - Fiscal Risks from Assets Held by States and Municipalities
Data in: BRL billion Position: 08/31/2019
Source: STN

	Stock	Flow of Receipts			
		2019	2020	2021	2022
Brazil-France Agreement	0.0	0.0	0.0	0.0	-
Sanitation Portfolio	0.4	0.1	0.1	0.1	0.1
DMLP	6.0	0.3	0.3	0.3	0.3
Assignment Contracts - Royalties	0.4	1.1	0.7	0.0	-
Law 8,727/93 – Federal Gov. Revenues	5.1	0.6	0.5	0.6	0.6
Law 8,727/93 – Other Creditors	2.7	0.4	0.2	0.1	0.0
Law 9,496/97	533.5	18.2	18.7	20.7	24.3
PM 2,185	31.0	3.2	3.3	3.4	3.6
BACEN-BANERJ	14.8	-	0.1	1.1	2.4
Guarantees Honored – Account A	0.6	-	-	-	-
Guarantees Honored	2.3	2.3	-	-	-
RRF – Guarantees Honored	10.0	-	-	-	-
RRF – Law Nº. 9,496/97	14.8	-	-	-	-
RRF - BACEN-BANERJ	5.5	-	-	-	-
Total	627.2	26.1	23.9	26.3	31.2

Considering the cooperative nature of Brazilian federalism, coupled with the fact that there is no institutional framework in national legislation to resolve cases of insolvency of federal entities and with the establishment of precedents resulting from previous episodes of Federal Government financial aid to states and municipalities, it appears that, ultimately, all expenses, debts and financial obligations of subnational entities make up the largest set of fiscal risks for the Federal Government.

In addition to these risk and uncertainty factors, recently some subnational entities have secured court injunctions granting them the advance payment of credit operations provided for by Constitutional Amendment Nº. 99, which establishes that the Federal Government must finance, directly or through financial institutions under its control, the payment of the remaining balances of overdue and unpaid precatórios (court-issued registered warrants) of states and municipalities by the end of 2024. An estimate of the maximum potential impact of this amendment could be the current amount of outstanding precatórios of states and municipalities, which reaches BRL 113.95 billion (on 12/31/2018), if the Federal Government were ordered to immediately provide a line of credit in the amount of the total balance.

Table 20 - Fiscal Risks Arising from Intergovernmental Relations
Data in: BRL billion Position: 08/31/2019
Source: STN

Fiscal Risks	Stock
Arising from Holdings (assets)	627.23
Court Injunctions CA No.99/2019 (liabilities)	113.95
Total	741.18

Although it does not represent a fiscal risk, according to the definition adopted by this Report, it is important to mention that another source of uncertainties for the federal government in its inter-federative relations stems from

the passing of laws that benefit subnational entities while burdening the federal government. One of the bills being processed by the National Congress reestablishes compensatory transfers resulting from tax relief for exports under the Kandir Law (PLP 511/2018). The new transfers would amount to BRL 39 billion a year, adjusted by the IPCA variation, and therefore twenty times higher than the amounts transferred in recent years, which are no longer included in the budget forecast because the deadline initially stipulated for compensation has elapsed.

Another relevant bill pending in the Federal Senate is PLS 561/2015, which provides for another reduction in the interest charged by the federal government on operations in which the debts of states and municipalities have been rolled over. Interest rates would be limited to adjustment for inflation and the change in the index would be retroactive to the signing of the original contracts.

Table 21 - Uncertainties Arising from Legislative Proposals
Data in: BRL billion *Position: 08/31/2019*
Source: STN

	Proposal Analyzed	Impact on the Federal Government's cash flow	
		2020	Next 10 years
Kandir Law	Bill 511/2018	39.0	551.5
FPE	PEC 51/2019	4.4	165.7
FPM	PEC 391/2017	1.1	35.2
FUNDEB	PEC 65/2019	0.0	259.4
Extension of LC 138	Bill 561/2015	212.2	388.8
Total		256.7	1400.6

Congress is also analyzing amendments to the Federal Constitution that introduce an additional transfer of 1% to the Municipal Participation Fund (slated to occur in September - in addition to the two that are already occurring in July and December), increase the rate of the State Participation Fund from 21.5 percent to 26 percent, and also quadruple the federal contribution to FUNDEB from 10 percent to 40 percent of the fund's value. Table 21 shows the immediate and estimated impacts of these legislative proposals with a financial impact on the Federal Government over a ten-year period.

It is worth mentioning that, except for the topic related to court injunctions under CA Nº 99, other fiscal risks associated with lawsuits filed by federative entities against the Federal Government were not addressed in this section. These disputes are discussed in section 2.1.1 of this report.

More detailed information on subnational entities can be found in the section on Municipal and State Governments on the STN website, at:

- *http://tesouro.gov.br/web/stn/prefeituras*

2.4 State-Owned Enterprises

The analysis of fiscal risks related to the need for capitalization in state-owned enterprises should take into account the specific characteristics of the economic activity sector in which they operate: financial institutions and other institutions.

The risk of capitalization of a non-financial enterprise in general can be observed by analyzing its economic and financial situation and, especially, by monitoring the performance of its cash flow. The deterioration of this indicator without any remedial measures indicates that, at some point, the enterprise will require support from its controlling shareholder.

It should be noted that the mapping carried out herein does not consider routine capitalizations to cover investments - a situation that occurs annually, especially with the Docas companies and dependent enterprises - but rather an assessment of the need for capital contribution from the Federal Government to ensure the financial or operational sustainability of non-dependent state-owned enterprises.

On the other hand, the risk of capitalization found in financial institutions in general is not related to cash shortages (liquidity) but rather to insufficient regulatory capital. Thus, tracking leverage indicators and other prudential indices (Basel, principal, tier I capital, exposure by client, exposure to the public sector, etc.) is essential for monitoring this risk.

2.4.1 *Financial Institutions*

Table 22 shows the indices of federal financial institutions for the 2nd quarter of 2019 (latest available data) compared with the minimum regulatory index of the three Basel III capital indicators in effect since January 2019 (including capital conservation and systemic buffers and excluding countercyclical capital buffers). The BNB and BASA indices are lower because they do not include the systemic risk buffer (of 1 percentage point), applicable only to institutions whose total exposure is greater than 10 percent of GDP.

Table 22 - Indices of Required Capital vs. Actual Capital
Quarterly Information (ITR) - Q2 2019 and CMN Resolution Nº. 4,193 and regulations.
Preparation: STN/ME

Indicators	IFF with Systemic Relevance				IFF without Systemic Relevance		
	Min. Required	BNDES	BB	CEF	Min. Required	BASA	BNB
Principal	*8.00%*	24.30%	10.00%	13.90%	*7.00%*	11.90%	10.10%
Tier I Capital	*9.50%*	24.30%	13.40%	13.90%	*8.50%*	11.90%	11.60%
Basil	*11.50%*	34.00%	18.50%	20.20%	*10.50%*	11.90%	15.80%

It should be noted that at the end of the second quarter of 2019, the capital levels of all institutions were above regulatory limits and had a reasonable buffer, with Banco da Amazônia presenting the smallest margin. It is important to note that the institutions should maintain a buffer in order to mitigate possible shocks throughout the year.

Thus, there is a low risk that the federal government will have to make some kind of capital contribution to one of its financial institutions in 2020 for it to safely comply with its operational limits. However, it is impossible to obtain a risk measurement with sufficient safety.

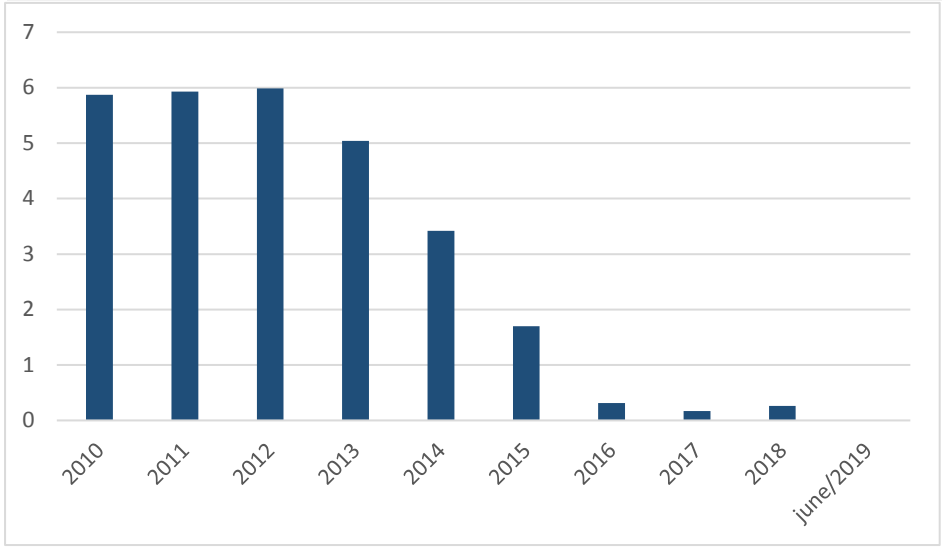
2.4.2 *Other Enterprises*

As for enterprises in the non-financial sector, it is noticed that some companies have been experiencing a deterioration of their economic-financial situation, with emphasis on the Mint (CMB), the Brazilian Post and Telegraph Company (ECT), the Asset Management Company (EMGEA), and TELEBRAS. However, the federal government has been taking measures to correct this situation by including the CMB and EMGEA in the National Privatization Plan (PND), in order to assess the viability of these companies through either the total or partial disposal of their assets or their liquidation. As for the Post, studies will be conducted under the Investment Partnership Program (PPI) to evaluate possible partnership with the private sector and propose efficiency gains and results for the company, so as to ensure its economic and financial sustainability.

Brazilian Post and Telegraph Company (ECT)

According to the financial statements of 06.30.2019, ECT shows accumulated losses in the amount of BRL 2.762 billion and a borderline equity structure about to become unsecured liabilities. Chart 28 shows the evolution of the company's Equity in the last fiscal years.

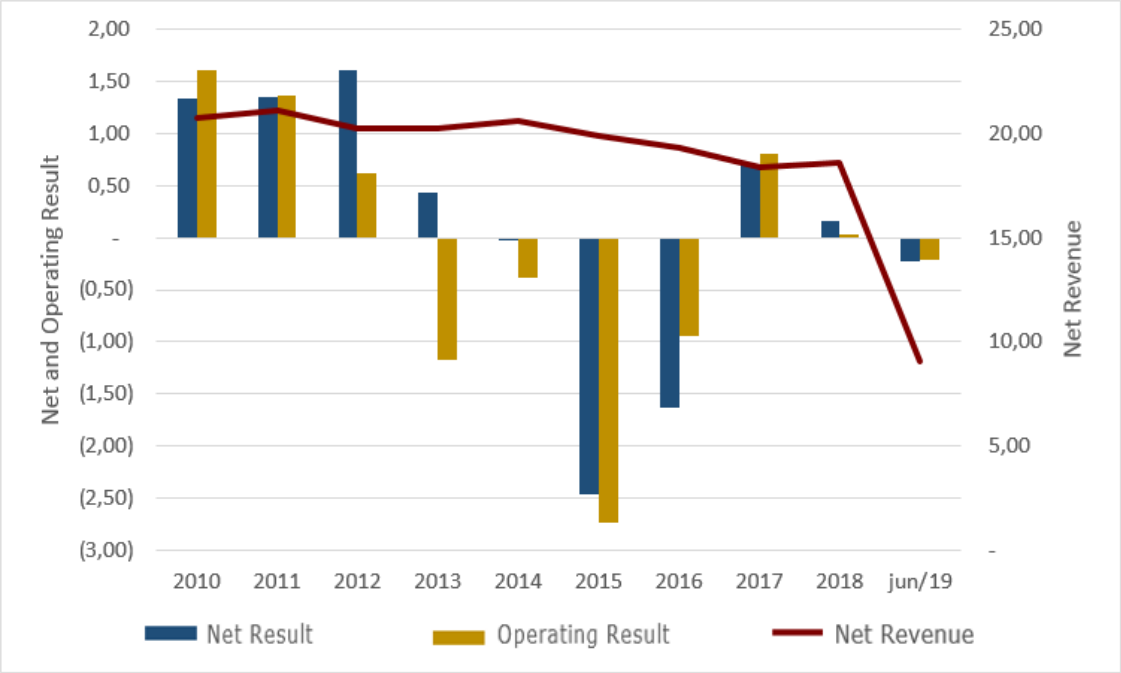
Chart 28 - ECT Equity
Data in: BRL billion - PL amounts referring to the end of the respective fiscal years, excluding financial statements
Source and Development: STN/ME



Due to negative operating and net results and the decrease in revenue in real terms, as seen in Chart 29, at the end of the 1st half of 2019, ECT's liquidity was compromised and its negative net working capital amounted to BRL 1.080 billion. Its short-term financial investments fell from BRL 818 million in December 2018 to only BRL 83 million in June 2019.

In addition, considering the significant balance of accumulated losses in ECT equity and its critical liquidity situation, even if the company achieves positive results, it is unlikely that it will pay dividends in the coming years. Furthermore, economic and financial data indicate that there is uncertainty about the Company's operational capacity, which may eventually become dependent on federal funding.

Chart 29 - Net Result, Operating Result and Net Revenue (ECT)
Data in: BRL billion, deflated by the IPCA
Source and Development: STN/ME



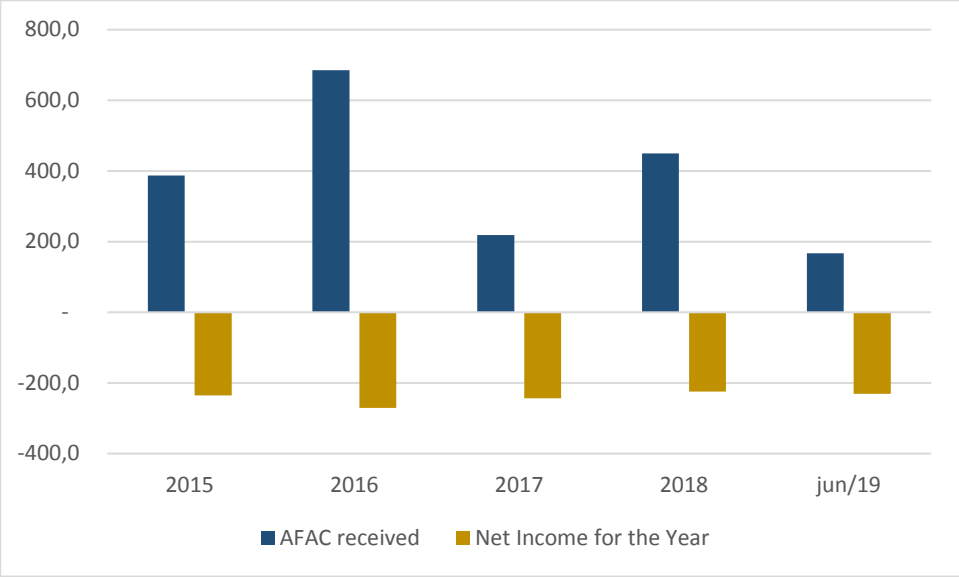
TELEBRAS

According to the financial statements of September 30, 2019, TELEBRAS shows accumulated losses of BRL 1,470 million, a gross debt of BRL 474 million and a net debt of BRL 262 million. In the last fiscal years, the Company reported recurring negative results, having experienced a net loss of BRL 231 million in the 1st half of 2019, as shown in Chart 30.

TELEBRAS' losses are a reflection of the Company's operating results, whose revenues come basically from the infrastructure of the National Broadband Network and, more recently, from satellite operations. These revenues are not sufficient to cover the Company’s operating expenses, which has also experienced a negative operating cash flow in recent years.

The 2020 Annual Budget Bill (PLOA) included the company's revenues and expenses. If the 2020 LOA is passed as is, TELEBRAS will be classified as a company dependent on federal funding. Regarding the fiscal risks related to the status of TELEBRAS as a dependent company, according to estimates the impact on the base of the spending cap will amount to approximately BRL 700 million. If no adjustments are made to the base of previous years, this will be the size of the reduction in the amount of funds for the Federal Government's discretionary spending in 2020.

Chart 30 - AFAC* Received and Net Result in the Year (TELEBRAS)
Data in: BRL million Source and Development: STN/ME
**AFAC - Advance for Future Capital Increase*



EMGEA - Asset Management Company

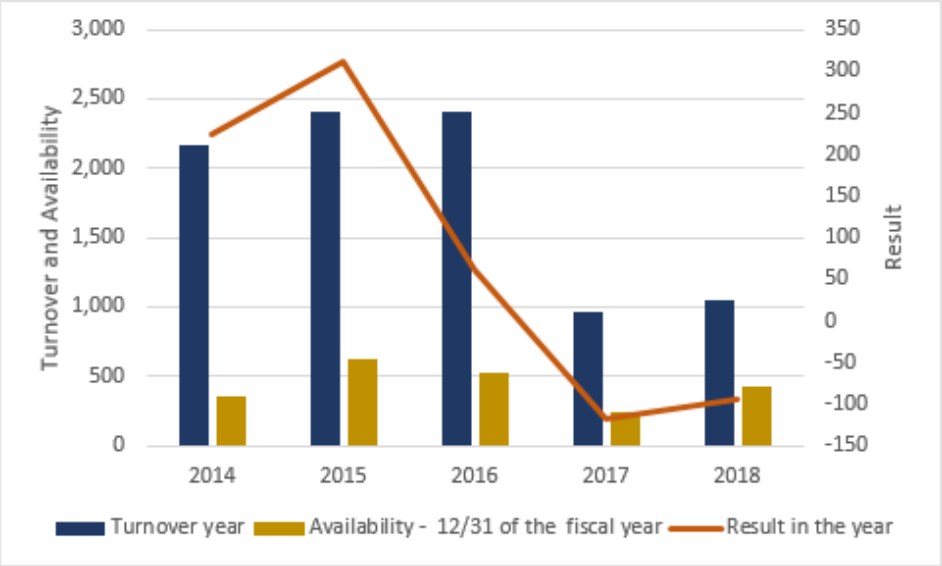
EMGEA's main revenue comes from credits with the FCVS resulting from real estate credit agreements that are expected to be covered by the Salary Variation Compensation Fund (FCVS). As the operations are settled or renegotiated, credits are generated with the FCVS. These credits can be converted into federal public securities - upon the novation of the Fund's debts with the federal government, under the conditions provided for in Law Nº 10,150/2000 - or used as currency for the acquisition of new assets.

However, this revenue has not materialized, as there has been no credit novation with the FCVS in recent years. Thus, the company's revenue has been progressively reduced. On the expense side, disbursements for payment of the service debt to the FGTS represent the main cash outflow item. However, in the absence of novation, the mismatch between these two flows, as it has been happening, implies a significant restriction on the company's cash. Thus, unless EMGEA succeeds in promoting measures to correct this mismatch between revenues and expenses, the company may become dependent on the National Treasury in the coming years.

The Brazilian Mint – (Casa da Moeda do Brasil – CMB)

As shown in Chart 31, between 2016 e 2018 the Brazilian Mint experienced a sharp deterioration of its financial situation, which can be attributed to some factors that will be addressed below.

Chart 31 - Financial Situation of the Mint
Data in: BRL million
Source and Development: STN/ME



The main cause of this deterioration was the loss of revenue resulting from the issuance by the Brazilian Federal Revenue Secretariat (SRFB) of Executive Declaratory Acts Nº 75 and Nº 94 of October 17, 2016 and December 12, 2016, respectively, suspending the mandatory use of the Beverage Production Control System (SICOBE) by bottling companies as of December 13, 2016. It should be noted that SICOBE was the CMB's biggest source of revenue, having accounted for more than 62 percent of the company's gross revenue in 2016.

Secondary explanatory factors include: a) reductions in the budget of the Central Bank of Brazil for the acquisition of banknotes and coins produced by the CMB; b) legislative authorization for the Federal Government to buy coins and banknotes from foreign suppliers (Law 13.416/2017); c) 10 percent increase in the rate of the De-earmarking of Federal Revenue (DRU) through Constitutional Amendment Nº. 93/2016, which rose from 20 percent to 30 percent, negatively affecting the company's revenue from liquor and tobacco tax stamps; d) the retention, in 2016 and 2017, of 70 percent of revenues (approximately BRL 807 million, according to the company) related to the collection of the fee for the use of stamps manufactured for taxing tobacco, liquor, and equipment to count the production of these products, which used to be allocated to the CMB under Article 13, § 5 of Law 12,995 of 06/18/2014.

2.5 Concessions of Public Service and Public-Private Partnerships

2.5.1 *Concessions of Public Service*

The model of infrastructure concession contracts uses the guideline for transferring to concession holders all risks inherent in the business, as is the case with risks related to construction, demand and interest rate variations. The federal government is responsible for extraordinary events that may be recognized, such as acts of God or force majeure, that is, when an action generates consequences, unpredictable effects that cannot be avoided or prevented, or *factum principis*, in case of unilateral amendments to the contract.

Some contracts contain economic and financial rebalancing clauses and provide for compensation mechanisms, such as tariff adjustment or discount or extension of the contractual term, which helps to avoid fiscal risks for the Federal Government.

In addition, contracts can be terminated either early or at expiration. In these cases, if investments have been made in reversible assets that have not yet been fully amortized or depreciated, the Federal Government may have to compensate concession holders, pursuant to Article 36 of Law Nº 8,987/1995, depending on the form of compensation to be defined.

However, even in these cases the risk that the Federal Government will have to make any payments to the concession holder can be mitigated, as there is a possibility that the asset will be re-bid, in which case the compensations will be borne by future contracted parties, as provided for in Decree Nº 9.957 of August 6, 2019 regulating the procedure for re-bidding partnership contracts in the highway, railway and airport sectors, according to Law Nº 13,448 of June 5, 2017.

In the case of concession contracts involving larger amounts - which entail the receipt of revenue by the Federal Government - either at the time of signature or throughout the life of the contract -, the realized revenue may differ from the estimated amount, and this is also characterized as a fiscal risk. These differences are due to several factors, including concession holders in default or arrears or even the suspension of new contracts foreseen for that period, due to the unfeasibility of the schedule of the auctions that precede these contracts or to the non-receipt of bids at concession auctions held by the federal government.

To mitigate the schedule risk, every change in estimate is reflected in the bimonthly evaluations of primary revenues and expenditures. In addition, to mitigate the risk of deserted auctions, the model of infrastructure contracts has

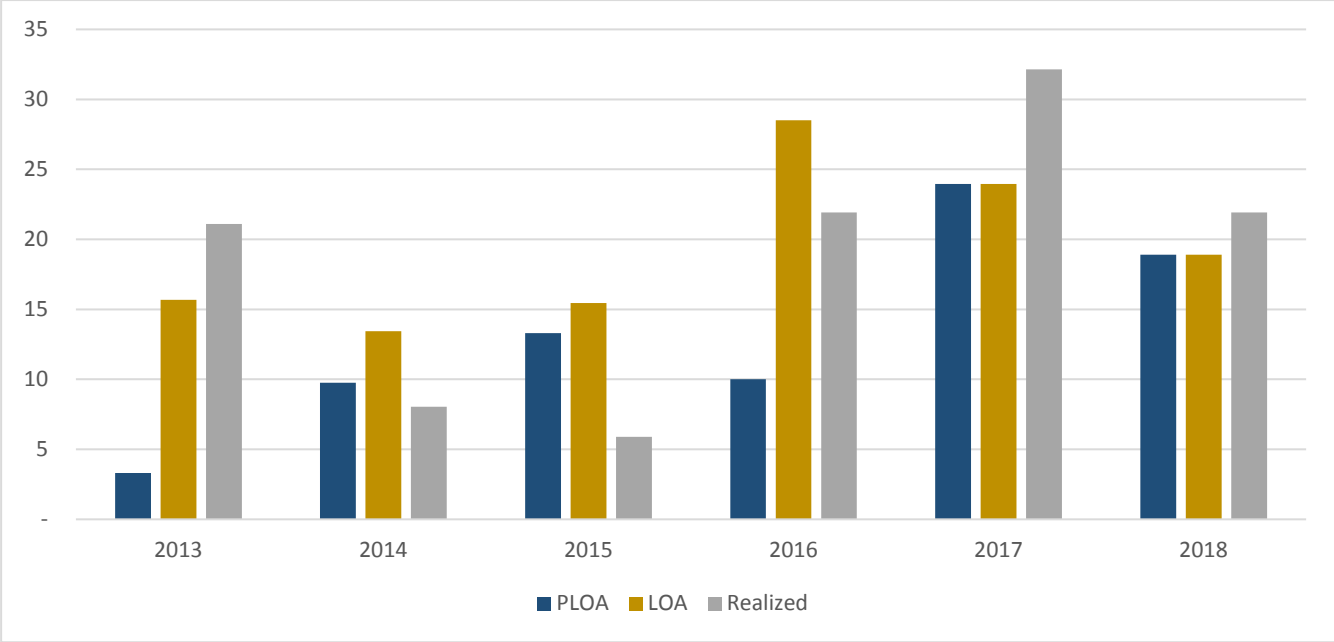
Concessions are governed by Law Nº 8,987/1995, which defines the concession of public service as "the delegation by the granting authority of the provision of such service through bidding procedures, in the form of competition, to the legal entity or consortium of companies that demonstrates capacity to perform said service at their own risk and for a specified period". Infrastructure concession auctions can be of two types:

- *Lowest tariff (for example, highways); and*
- *Greater amounts (airports, for example).*

sought to ensure greater adherence of the economic model to market expectations, as well as transparency to the process, in which stakeholder participate through public hearings.

Chart 32 shows the evolution of concession revenues and the dynamics between the amounts of the PLOA, the LOA and the Revenue actually realized. Given that the projections for the PLOA are from June/July of the year before that to which the exercise refers, there are variations between the amounts provided for in the budget documents and the amounts actually realized, since it is common for new bidding processes to be published in this meantime. In addition, any premiums for auctions not yet held are not considered in the projections.

Chart 32 - Concession Revenues
Data in: BRL billion
Source: STN



For 2019, revenues from concessions and permits have been estimated at about BRL 70.1 billion, according to the Extemporaneous Report on the Evaluation of Primary Revenues and Expenditures, of October 2019. Of this amount, BRL 22.5 billion corresponds to the result of the Auction of the Surplus of the Onerous Assignment of November 6.

However, the amount projected for 2020 is BRL 21.1 billion, according to Complementary Information provided by the Executive Branch for the 2020 PLOA.

2.5.2 *Public-Private Partnerships*

Public-Private Partnerships (PPPs) within the scope of the Federal Government and State, Federal District and Municipal governments are governed by Law Nº 11,079 of December 30, 2004. Article 4 of this law establishes that "the guidelines to be observed in public-private partnership contracts should include the objective distribution of risks between the parties".

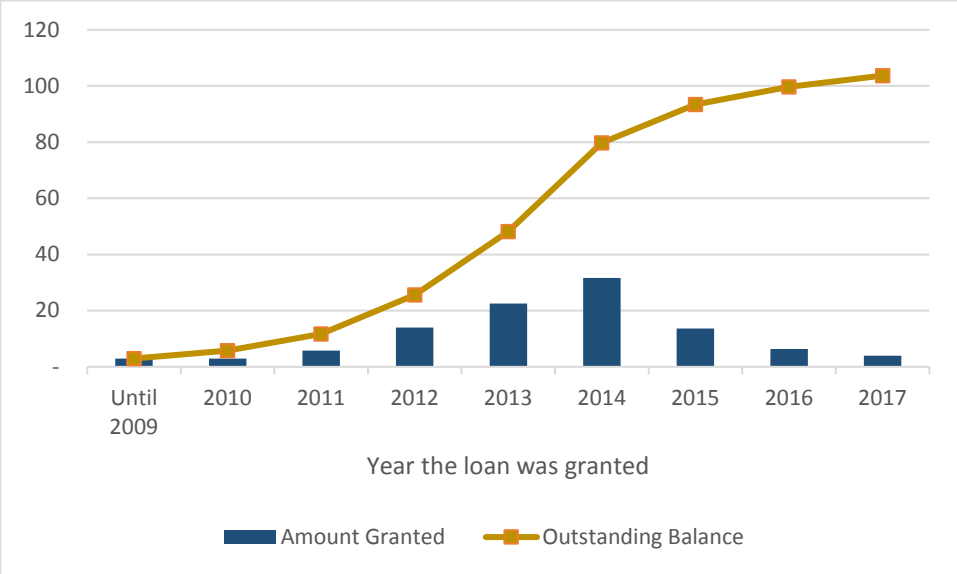
In this sense, with regard to federal PPPs it should be noted that the Federal Government, including its direct and indirect administration, currently has only one PPP contract, which is the Data Center Complex contracted by a consortium formed by Banco do Brasil and Caixa Econômica Federal with GBT S/A. However, since the state-owned enterprises involved are not dependent on federal funding and the contracts do not provide for any type of guarantee from the granting authority to the concession holder, no risks are allocated to the federal government.

2.6 Student Financing Fund (FIES)

FIES is a fund of an accounting nature linked to the Ministry of Education (MEC), aimed to provide financing to students who are enroled in private higher education institutions and obtain a positive evaluation in the processes conducted by MEC. From its establishment in 1999 until June 2019, the program had provided approximately 3.25 million loans in Brazil.

Granting loans to students exposes the Federal Government to FIES' credit risk in case of delays and defaults in repayment. In June 2019, the Fund's outstanding exposure amounted to BRL 103.7 billion, as shown in Graph 33. This exposure accumulates outstanding balances on loans granted, especially in the period 2012 to 2014, when FIES experienced a substantial increase in its operations. Considering the additional exposure of BRL 9.2 billion related to funds still to be released, the total exposure of FIES amounts to BRL 112.9 billion.

Chart 33 - FIES Exposure by Loan Granting Period in 2019
Data in: BRL billion
Source: FNDE. Preparation: STN/ME



Delays in students' repayment of loans granted until 2017, counting from one-day overdue, were found in 60.6 percent of the total of contracts (1,649,040). The full outstanding balance of contracts in default totals BRL 53.2 billion and accounts for 51 percent of the total portfolio, as detailed in Chart 34.

For the purpose of adjusting for losses, the risk level of FIES loans is classified according the installments in default during the contract amortization phase; this calculation does not included the installments in default during the use

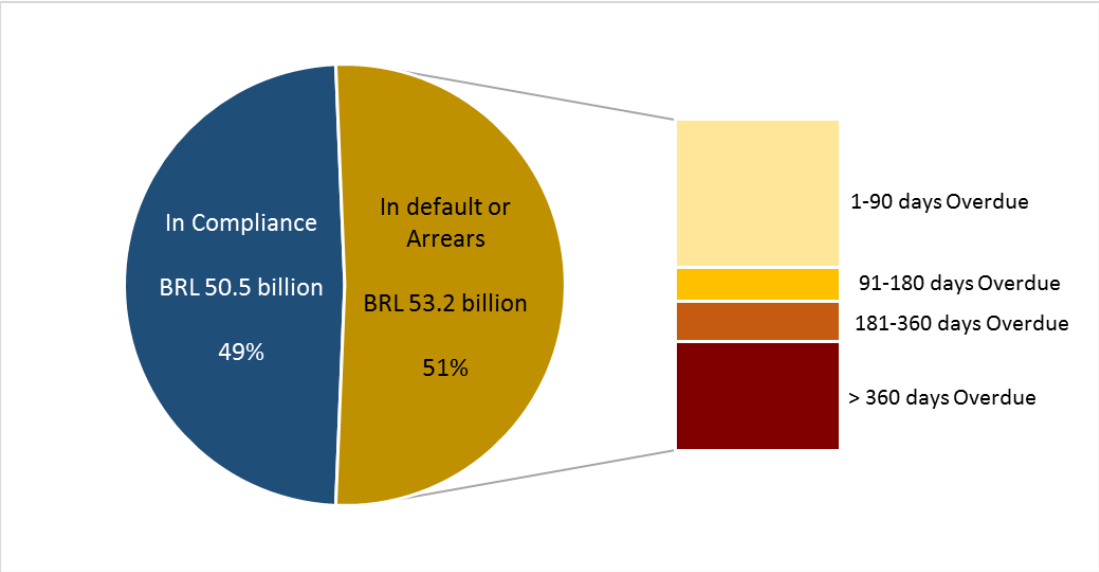
The portfolio of loans granted under FIES is distributed in three phases, according to the contractually expected evolution:

- *Use phase - period in which the student is enrolled in higher education, limited to the period of regular duration of the course, with quarterly interest payments;*
- *Grace phase - an 18-month period that begins right after completion of the course, with quarterly interest payments;*
- *Amortization phase - period beginning in the month immediately following the end of the grace phase, when the amount of the monthly payment is established.*

and grace periods. According to this criterion, the full outstanding balance of contracts in default amounted to BRL 12.8 billion, which represented 41.8 percent of the total debt in the amortization phase.

The Program has some risk mitigating tools, such as conventional guarantee, joint guarantee and the Educational Credit Operations Guarantee Fund (FGEDUC), with 67.5 percent of the contract portfolio guaranteed exclusively by FGEDUC.

Chart 34 - Situation of FIES contracts awarded until 2017
Position: 06/30/2019
Source: FNDE. Preparation: STN/ME



When simultaneous coverage by the Guarantee Fund and the guarantee is considered, this figure rises to 78.1 percent of the portfolio. Contracts formalized until 2009, however, are not covered by guarantee funds, relying only on conventional guarantee or joint guarantee.

Law 13,530/2017 promoted enhancements to the student loan program, focusing on the sustainability and improvement of the fund's management in order to limit the fiscal impacts of FIES in the long run. Thus, since 2018 the offer of new loans has been conditional on the adhesion by the entity sponsoring the educational institutions to both the new student financing model (New FIES) and the FIES Guarantee Fund (FG-FIES).

For more detailed information about FIES, visit:
- *https://www.fnde.gov.br/index.php/financiamento/fies-graduacao/o-fies/sobre-o-fies*

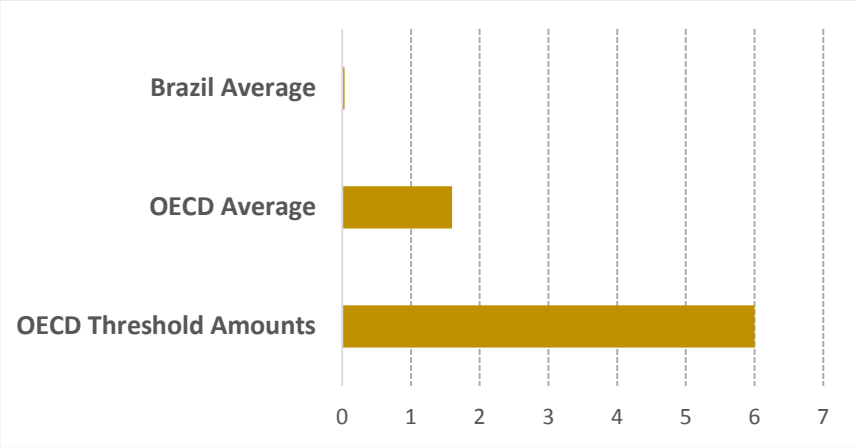
2.7 Disasters

All over the world, several countries are exposed to natural disasters that can cause great losses, depending on the magnitude and time interval at which these events occur, with significant impacts on public finances. This is because when certain disasters occur, it is common to expect that governments will be involved in mitigating the losses and their impacts, whether material or not.

Contingent liabilities related to disasters can be explicit, based on contracts or laws containing a legal provision for payment associated with the materialization of risks, or implicit, when expenses are incurred as a result of society's moral expectation that the government will take action, as well as due to political pressure or attempts to accelerate the economic recovery of the affected location.

In Brazil, events associated with natural disasters are predominantly droughts or excessive regionalized rainfall, mainly in the Northeast and South. Despite the country's large area, the amount of funds allocated to disasters is relatively small when compared to other countries. According to the OECD report Fiscal Resilience to Natural Disasters,[11] while in a sample of 80 countries natural disasters cost, on average, 1.6 percent of GDP, reaching the limit of 6 percent of GDP in the period 1990 to 2014, Brazil spent between 0.01 percent and 0.06 percent of GDP each year from 2012 to 2019 (until June) on actions to mitigate the impacts of these events, including the planning and control of associated risks, as shown in Chart 35.

Chart 35 - Fiscal Cost of Natural Disasters
Data in: GDP %
Source: OECD and Management Treasury



Depending on the magnitude of the events, the impact on public finances can be significant, requiring timely actions that involve large amounts of funds; this may momentarily cause countries to move away from their fiscal targets. Thus, for international organizations such as the International Monetary Fund (IMF) and the Organization for Economic Cooperation and Development (OECD), natural disasters are considered an important source of fiscal risk.

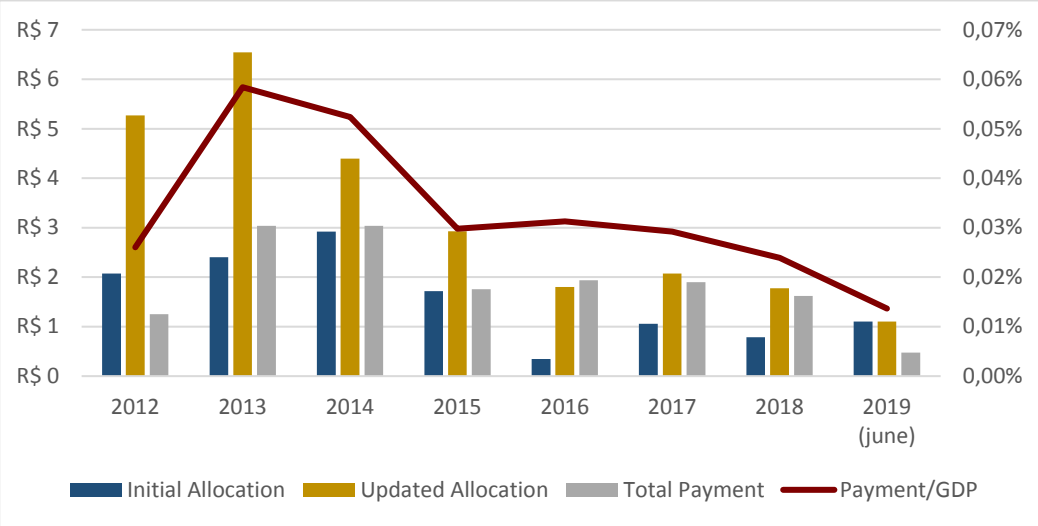
[11] OECD/World Bank (2019), Fiscal Resilience to Natural Disasters: Lessons from Country Experiences, OECD Publishing, Paris, https://doi.org/10.1787/27a4198a-en

The government's Risk and Disaster Management program, which is contained in the LOA, focuses specifically on prevention and control actions, as well as on disaster response actions. This program includes several Government Actions aimed, inter alia, at:

- Identifying the risks of natural disasters;
- Supporting the reduction of risks of natural disasters in critical municipalities;
- Improving the coordination and management of preparation, prevention, mitigation, response, and recovery actions for civil protection and defense;
- Monitoring and issuing natural disaster alerts;
- Promoting response actions to assist the affected population and recover scenarios impacted by disasters in order to complement the actions of states and municipalities, especially by providing financial, material and logistical resources.

Chart 36 presents the evolution of the budgetary execution of the Risk and Disaster Management program, illustrating the significant mismatches between initial allocations, updated allocations and total payments, in virtually the entire sample analyzed. When, for example, the initial allocations are not sufficient and require a supplementary budget, or when only part of the allocation is actually executed, these differences weaken fiscal planning and end up hampering the achievement of the established fiscal targets. In this sense, it is important to emphasize that progress has been made, as is the case of Civil Defense Actions (a major component of the government's Risk and Disaster Management Program), which until 2016 relied exclusively on funds from extraordinary credits, and since then has benefited from specific allocations in the early stages of the budget.

Chart 36 - Risk and Disaster Management Program - LOA and Share of GDP
Data in: BRL billion
Source: SIAFI, IBGE



Main instruments in the legal framework for addressing disaster risks:

- *Law nº 8.742/1993 - provides for the competence of the Federal Government to implement emergency assistance actions together with the other federative entities;*
- *Decree nº 7,257/2010 – provides for the state of emergency and the state of public calamity;*
- *Law Nº 12,340/2010 (amends Law Nº 12,983/2014) - provides for transfers of federal government funds to agencies and bodies of the federative entities for the prevention of and response to disasters;*
- *Law 12,608/2012 - establishes the National Civil Protection and Defense Policy (PNPDEC) and provides for the National Civil Protection and Defense System and the National Civil Protection and Defense Council (CONPDEC).*

Box 2 - The Brumadinho Disaster

The collapse of Vale's tailings dam in Brumadinho, state of Minas Gerais, is classified as a disaster according to the current Brazilian legislation, since it was caused by man on a vulnerable ecosystem, leading to material and immaterial damage. At the time, the need for the State to act promptly in the region, find the victims affected by the collapse and ensure emergency assistance measures, justified the joint action by the affected municipality, the state of Minas Gerais and the federal government in the allocation of resources to help the victims and others affected by the calamity.

The federal government provided assistance by paying each of the 2,280 persons affected the lump sum of BRL 600.00, totaling BRL 1.3 million, as provided for in Provisional Measure Nº 874 of 12/03/2019 authorizing extraordinary credit for "Emergency Financial Assistance to beneficiaries of Bolsa Família, BPC and RMV Affected by the Calamity in Brumadinho – MG".

Thus, despite the budget forecast for Civil Defense action under the Risk and Disaster Management program, the government can provide funds via extraordinary credits in certain situations that require swift and specific action.

The impacts of the disaster in Brumadinho, in addition to the loss of priceless lives, also affected the level of the country's activity. As reported by the Institute of Applied Economic Research (IPEA) in its Situation Letter Nº 43, Q2 2019), Brazil's Gross Domestic Product (GDP) fell 0.2 percent in the 1st quarter of 2019 in relation to the fourth quarter of 2018, free of seasonal effects. This was the first negative variation since the 4th quarter of 2016, with the mining industry falling 3 percent in the 1st quarter of 2019 in the seasonally adjusted comparison, influenced mainly by the tragedy in Brumadinho.

Still according to IPEA, if the problem in the dams had not occurred, the result for the mining industry would have been an estimated growth of 3.2 percent in 2019. The difference from 3.2 percent to 0 percent, which constitutes the scenario of stagnation predicted by the Institute for the extractive industry, represents a loss of 0.1p.p. for the annual GDP result in 2019.

2.8 Demographic Changes

While the use of the vegetative growth of social benefits for estimating expenditures is reasonably reliable for short-term analyzes, there are non-negligible medium-term risks arising from the increase in expenditures associated with institutional and structural elements that are not always under government control. In the coming decades, Brazil will undergo a profound change in its age structure, with an increase in the number of elderly people and a reduction in the number of young people. This demographic transformation poses challenges to public policies, as it directly influences the demand for different forms of government action.

A case in point is the Continued Cash Benefit (BPC), in which the potential effects of the demographic transformation on spending, for example, are significant, suggesting the need for greater attention to this issue. The aging of the Brazilian population and the increase in life expectancy, coupled with the annual minimum wage increase above the growth of average income, suggest that spending on BPC is expected to increase substantially in the near future.

Another significant analysis can be performed in relation to Education and Health expenditures. With regard to Education, this dynamic works in a favorable way, in that it generates less pressure on spending since the size of the young population has fallen in both relative and absolute terms. In the Health sector, on the other hand, there is a strong pressure to increase expenditure due to the population aging process, given that the older population requires proportionally more health services.

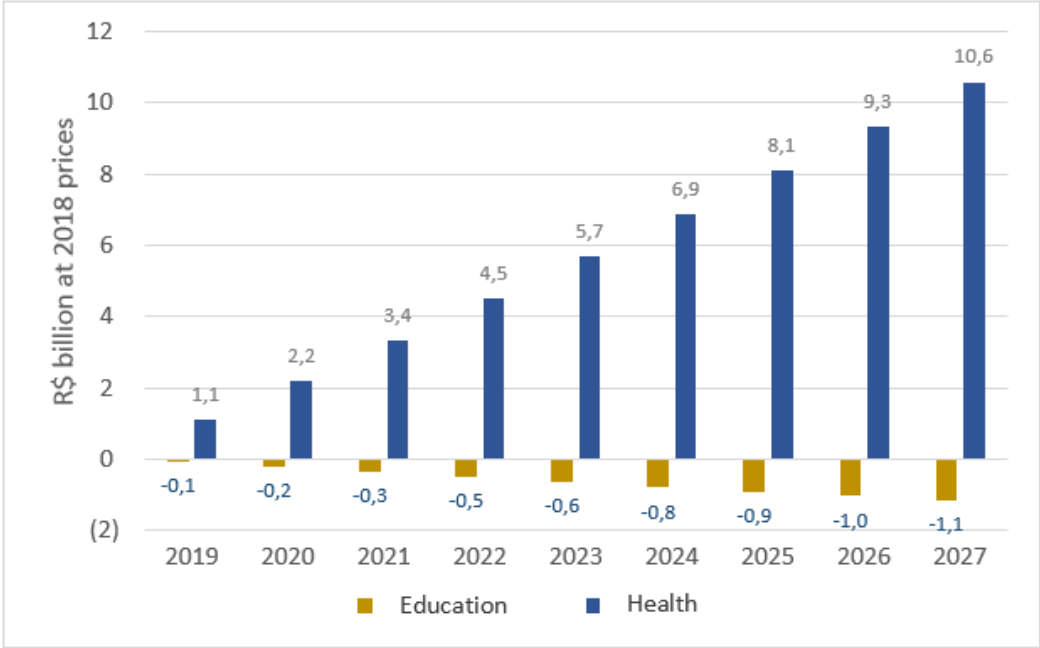
To estimate the impact of the demographic evolution on health expenditures, the analysis considered the areas of Pharmaceutical Assistance - including Popular Pharmacy - and Medium and High Complexity Care (hospital and outpatient care). In education expenditures, the analysis considered the so-called flow-control expenses, which correspond roughly to all expenditures in the area, except for active and inactive personnel, FUNDEB, Social Contribution for Education and the primary impact of FIES. Together, the expenditures analyzed amounted to BRL 93.4 billion in 2018, of which BRL 59.5 billion were related to health and BRL 33.9 billion to education.

Chart 37 presents an estimate of the impact of the demographic evolution on selected health and education expenditures in the period 2019-2027. This impact was measured as the difference between

the projected expenditures considering the demographic evolution of the population (growth and change in age composition) as projected by the IBGE[12], in relation to a counterfactual scenario in which the size and composition of the population remained constant at 2018 levels. These scenarios also assume as constant the current coverage of the services provided and the current level of efficiency in the provision of services.

As can be seen from the Chart, in the case of health there is a pressure for an increase (+ BRL 10.6 billion in 2027) in expenses related to the demographic evolution (population growth and aging). In turn, the demographic evolution reduces the pressure for spending on education (-BRL 1.1 billion in 2027). As a consequence, an additional demand for public expenditures is observed, which in 2027 would reach approximately BRL 9.4 billion at 2018 prices. This figure represents 10.1 percent of the amount spent in 2018 on the same programs.

Chart 37 - Demographic Impact on Selected Health and Education Expenditures
Data in: BRL billion
Source and Preparation: STN/ME



[12] IBGE. Population projections: Brazil and Federative Units: 2018 review, 2n ed., Rio de Janeiro: IBGE, 2018.