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Federal Fiscal Risks

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Executive Summary

This is the 3rd edition of the Federal Fiscal Risks Report, issued by the National Treasury Secretariat (STN), highlighting the state of fiscal risks to the Federal Government. Fiscal risks are the possibility of events that could affect public finances and jeopardize the achievement of targeted fiscal outcomes. The report divides fiscal risks into two groups: macroeconomic and specific. Macroeconomic fiscal risks are related to cyclical or structural changes in the economy, while specific risks have other causes and are related to government programs and the public sector balance sheet (assets or liabilities).

Macroeconomic Fiscal Risks

Approximately 94% of primary revenues are subject to volatility in real GDP, inflation, wage bill, the exchange rate, interest rates, or oil prices. Revenues managed by the Brazilian Federal Revenue Service (RFB), such as income tax and social security contributions, represent the largest risky part due to the volatility of macroeconomic parameters.

Fluctuations in real GDP represent the largest source of risk to revenues, followed by fluctuations in inflation and wage bill. The 1 percentage point real GDP variation has an impact on primary revenues of R\$8.6 billion, while the 1 percentage point change in inflation has an impact of R\$8.0 billion. The 1 percentage point change in the nominal wage bill is reflected in a change of R\$4.7 billion, mainly due to the change in the collection of social security contribution.

On the primary expenditure side, volatility is linked to the variations in the minimum wage and the INPC (National Consumer Price Index), which mainly affects spending on social security and assistance benefits, payment of unemployment insurance, and payment of the Salary Allowance. In 2020, about 40% of total primary spending will increase due to the direct effects of inflation and the minimum wage. In 2019, the share was 51.4%.

The R\$1 increase in the minimum wage implies an increase in total expenditures of R\$356.9 million, with a net impact of R\$246.5 million on the RGPS deficit (public social security system), R\$61.7 million on assistance benefits, and R\$33.2 million on FAT (unemployment insurance and Salary Allowance).

The federal public debt decline in 2021, helped in part by the recovery in economic activity, helped reverse the increase in refinancing risk (rollover) observed in 2020, when the share of FPD maturing in up to 12 months reached 18.7% of GDP, compared to a historical average of 10.7% of GDP. The trend is for this share to decline as early as 2021 and to continue declining in subsequent years, reaching an average of 14.3% of GDP between 2022 and 2024.

The growth of the GGGD after the 2020 events has significantly reduced the country's ability to absorb new shocks affecting economic variables through debt. This debt aggregate is very sensitive to interest rates, GDP growth, and the primary outcome. An examination of the sensitivity of debt to macroeconomic variables **found that a 1 percentage point increase in the Selic rate from 2021 to 2024 causes a 1.3 percentage point increase in General government gross debt (GGGD) at the end of 2024. A 1 percentage point reduction in GDP growth and in the primary outcome alone leads to an increase in GGGD of about 3 percentage points and 4.1 percentage points, respectively, at the end of 2024.** In a scenario combining adverse shocks to interest rates, GDP growth, and the primary outcome, the increase in GGGD could reach 9 percentage points in 2024

With respect to the spending cap rule, it is possible to comply with the spending cap rule until the end of the analyzed period, 2024, even in the face of various macroeconomic shocks, as long as control over the expansion or creation of new spending is maintained.

The range of alternative scenarios resulting from the simulations of the stresses in the macroeconomic variables for the central government's primary outcome indicates a 30% probability of a positive primary outcome in 2023 and a 55% probability of a positive primary outcome in 2024.

The range of alternative scenarios resulting from simulations of stresses in macroeconomic variables for general government gross debt shows a high probability of an increase in the debt-to-GDP ratio by 2024. For example, the worst-case scenarios would be reached in the absence of reforms that contribute to fiscal consolidation and the resumption of sustainable economic growth.

Specific Fiscal Risks

Despite the limitations in the analysis that the sum of all risks implies, mainly due to the different probabilities of occurrence, **the exposure of the Federal Government to the specific fiscal risks presented in this report reached the amount of R\$4.2 trillion, an increase of R\$130 billion compared to the value registered at the end of 2020.** During 2021, asset-related exposure reached R\$1.4 trillion, while liability-related exposure reached R\$2.9 trillion.

The value of the stock of lawsuits against the Federal Government increased by 296% from 2014 to June 2021, from R\$560 billion to R\$2,220 billion, with 58% possible losses and 42% probable losses, with a high concentration of tax lawsuits (including social security). Annual expenditures resulting from judicial losses have accompanied this upward trend: While in 2014 these expenditures amounted to R\$19.8 billion, in 2022 they are estimated at R\$89.1 billion, according to the budget allocation.

The contingent liabilities of the Federal Government under regulation under the STN, also referred to as debts in the recognition process (debts resulting from the Extinction/dissolution of federal administrative entities, direct debts of the government, and debts resulting from the Salary Variations Compensation Fund (FCVS), reached the amount of R\$115.6 billion, with approximately 95% referring to FCVS.

From 2016 to August 2021, the Federal Government's guarantees for credit operations reached R\$38.5 billion, with the unexecuted amount of counter-guarantees due to court orders reaching a similar amount (R\$38.1 billion). For 2021, the flow of this expenditure is estimated at R\$8.4 billion. The eventual inability to fulfill the counter-guarantees has a direct impact on compliance with the Golden Rule and also increases the Federal Government's public debt. The 958% increase in the stock of counter-guarantees not called by the Federal Government is indicative of the realization of fiscal risk in guarantee operations.

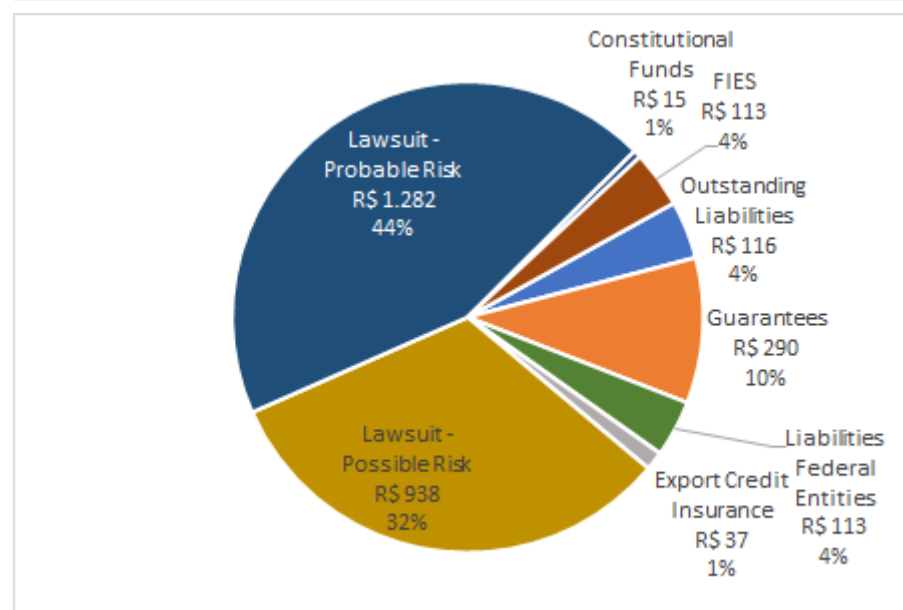
With the advent of the global Covid 19 pandemic and the resulting economic crisis, **the Guarantee Funds** were activated with the participation of the Federal Government as a tool to support public policies for economic recovery. **The credit operations related to the PRONAMPE and PEAC actions are guaranteed by the FGO (Guarantee Fund for Operations) and the FGI (Guarantee Fund for Investments), respectively, in which about R\$ 45 billion of public funds were invested in 2020.** Since 2009, more than R\$64 billion has been invested in funds of this type, an amount that represents more than 91% of the total equity of the guarantee funds.

The amount indemnified by Export Credit Insurance over the past three years was \$1,070.2 million, representing more than 90% of the indemnification history of the FGE (Export Guarantee Fund), while the collection of premiums showed a significant decrease since 2016 and a slight increase in 2020. Since it is a primary expenditure, the realization of the fiscal risk of the FGE (Export Guarantee Fund) affects the primary outcome of the Federal Government and the expenditure cap.

Chart 1 - Specific Fiscal Risks factors related to Liabilities

Data in: R\$ billion

Source: AGU, STN, SIAFI



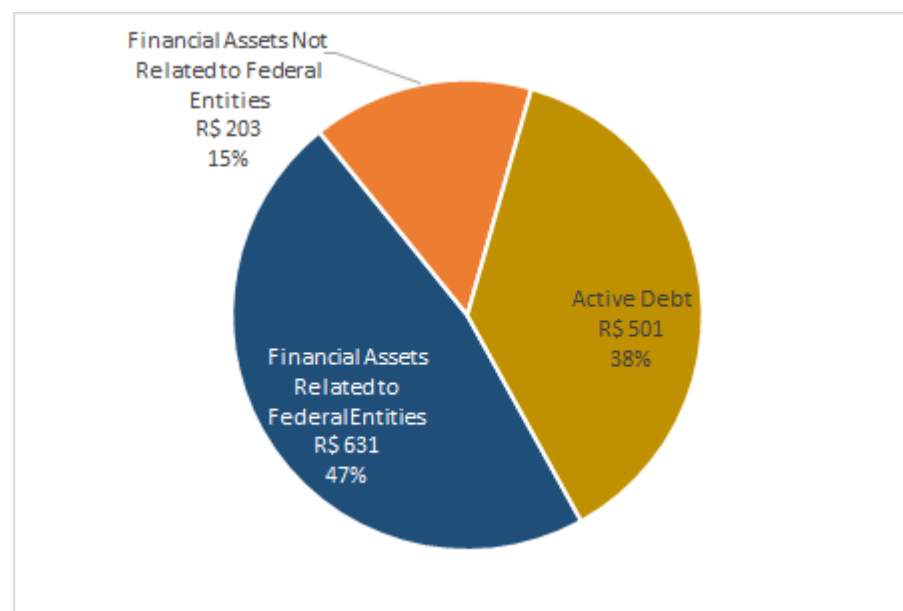
As for the **Student Financing Fund (FIES)**, the value of the exposure stock of operations previously granted under the program amounted to R\$112.8 billion as of June 2021. Of this amount, **R\$66.3 billion represents the total debit balance of contracts in arrears, or 59% of the total portfolio**. The amount of the adjustment for estimated losses is R\$ 30.7 billion.

From an asset of R\$ 2,639 billion in Federal Government's Active Debt, R\$ 271 billion is estimated to be recovered, of which most will have an impact on the primary balance. This estimate is based on default trends over the past fifteen years.

Chart 2 – Specific Fiscal Risks factors related to Assets

Data in: R\$ billion

Source: AGU, STN, SIAFI



The financial assets of the Federal Government managed by the STN, other than those related to subnational entities (derived from loans to financial institutions, Rural Credit Operations, Credit Assignment Operations, Export Credit Operations, and loans to non-financial companies), **reached R\$ 203.2 billion**.

In the context of relations between the Federal Government and subnational entities, fiscal risks present themselves in different configurations. The assets of the states and municipalities amount to R\$ 894.6 billion, while the contingent liabilities, estimated from EC no. 99/2019, amount to R\$ 115.1, for a total of R\$ 1,009.7 billion.

The estimated impact of legislative proposals that alter interfederal relations is approximately R\$644.1 billion over a ten-year period. These are proposals that benefit subnational entities while burdening the Federal Government. Although they are not classified as fiscal risks under the concept of this report, they represent an important source of uncertainty for the Federal Government.

As far as state-owned enterprises are concerned, the risk of lost revenue from dividends and interest on equity is considered low. However, the possible or small risk of the need for emergency financing is considered, mainly because of the concrete difficulties faced by some enterprises.

The fiscal risks of Federal Government concessions for public services are mitigated by the structure of the signed contracts themselves. The risk of revenue shortfalls in concessions during the year is mitigated by the bimonthly assessments of primary revenues and expenditures.

Regarding the fiscal risk of disasters, spending on prevention and mitigation in Brazil is not meaningful at 0.02% of GDP.

The estimated impact of Brazilian demographic trends on selected health and education expenditures for the period 2021-2030 is an additional need of R\$12.4 billion, reflecting the change in the age structure, with an increase in the number of elderly and a decrease in the number of young people in the population.

Introduction

The Report on the Federal Government's Fiscal Risks, now in its third edition, is a publication of the National Treasury Secretariat (STN) that synthesizes the situation of fiscal risks facing the Federal Government. The transparency of the information presented here is intended to help restore the country's fiscal sustainability. It does so by following best international practices that provide for the identification, analysis, mitigation, budgetization, and disclosure of countries' fiscal risks.

The activity of the STN in relation to the fiscal risks of the Federal Government is established by Item XXXV of Article 49 of the Regimental Structure of the Ministry of Economy, approved by Decree No. 9,745 of April 8, 2019. To fulfill this mission of the Regiment, the STN's General Coordination of Planning and Fiscal Risks (COPEF) is involved in consolidating the identification and assessment of risks that affect medium and long-term fiscal projections.

This risk 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 introducing a systematization of the monitoring and assessment of fiscal risks. As in ARF, the risks facing the Federal Government are presented. However, the main fiscal risks are assessed graphically and objectively so that the data can be updated during the year and new prospects for the coming years can be identified.

In addition to this introduction and summary, the third edition of the Fiscal Risk Report is divided into three sections. Section 1 focuses on the conceptual aspects of fiscal risk management, while section 2 didactically divides macroeconomic fiscal risks according to their impact on revenues, expenditures, and government debt. Section 3, in turn, discusses the main specific fiscal risks, divided into contingent liabilities, asset-related risks, and other specific risks.

1. Fiscal Risk Management

1.1 Definition

Fiscal risks are the possibility of events that may affect the public accounts and jeopardize the achievement of fiscal results set as objectives. A necessary condition for these events to be classified as fiscal risks is that they cannot be controlled or avoided by the government. Thus, while unforeseen expenditures resulting, for example, from court decisions unfavorable to the government are considered risks, expenditures resulting from government decisions or policies, such as subsidies, are not considered fiscal risks even if they lead to deviations from fiscal targets.

Since fiscal risks are hypothetically infinite and it is not possible to cover all potential risks faced by governments in a single report, identification should not aim to cover all fiscal risks, but rather support policymaking and promote monitoring and accountability.

The Organization for Economic Cooperation and Development (OECD)¹ and multilateral organizations recommend that countries: (1) develop tools to identify fiscal risks, (2) formulate means to address them, and (3) consider them in debates about the direction of fiscal policy. This recommendation supports the disclosure and management of fiscal risks as one of the pillars of transparent and sound fiscal policy and underscores the need for clarity and accountability in a government's policy choices and financial tradeoffs.

It is important to note that not all fiscal risks can be measured. However, if this is the case, the imperatives of transparency require disclosure of at least the descriptive information about the fiscal risk involved. Thus, even without measuring a particular fiscal risk, it is possible to understand it immediately.

1.2 Categorization

It is important that fiscal risks be categorized, because a long list of risks would not be easy to understand and would actually hinder policymaking. Although each country makes its own classification depending on the specifics of its finances, the main categories of fiscal risks identified by countries can be summarized in four groups:

¹ OECD Best Practices for Managing Tax Risks, 2020.

- a) macroeconomic risks: these refer to cyclical or structural changes in the economy that would affect the government's economic outlook or influence its spending forecast;
- b) risks associated with government policies or programs: They are associated with the implementation of government policies or programs that, if they do not occur as planned, will result in lost revenue or additional expenditures;
- c) contingent liabilities: those obligations formally incurred by the government or commitments that the government cannot avoid but that are not included in the budget forecast because they are uncertain or not measurable; and
- d) balance risks: related to changes in the values of the government's assets or liabilities.

According to the OECD guidelines², fiscal risks related to government debt, which include interest rates and exchange rates, may be presented as a separate category or included in one of the above categories. In the Brazilian case, fiscal risks related to government debt are presented in the macroeconomic section.

1.3 Prevention and Mitigation

Countries have developed approaches to prevent and mitigate certain fiscal risks they face. It is important to clarify that prevention should be understood as policies that reduce the likelihood of a fiscal risk occurring, while mitigation measures aim to reduce the financial impact of the occurrence of a fiscal risk.

Different types of fiscal risks require different prevention and mitigation measures, depending on regulatory requirements that, for example, discourage risk-prone behavior, encourage actors to share risks, or limit the extent of government involvement.

1.4 Provisions and Reserves

It is important that countries include a reserve, provision, or "fiscal space" in their fiscal planning in case certain risks materialize. However, their value is not linked to the evolution of the stock of fiscal risks. If such provisions or reserves are included in the budget, best practice should be to avoid the impression that additional spending can be financed unconditionally. Therefore, criteria for accessing these funds should be defined, in particular limiting the amounts for additional borrowing during budget execution and for financing unexpected events.

² OECD, op. cit.

The OECD³ emphasizes the responsibility of departments and agencies to monitor and prevent their respective fiscal risks, allocate resources in their budgets for likely occurrence, and identify resources in their own budgets in the event that an unexpected risk occurs before drawing on funds from the general budget reserve.

³ OECD, op. cit.

2. Macroeconomic Risks

The variation of macroeconomic parameters from the projections included in budgets is the most common source of budgetary risks. Indeed, empirical experience has shown that all countries experience more or less pronounced changes in fiscal targets resulting from changes in the economic environment during the fiscal year. Such deviations generally arise from the inherent difficulties of macroeconomic projections, which are based on assumptions that are often simplified and cannot capture all interactions among variables.

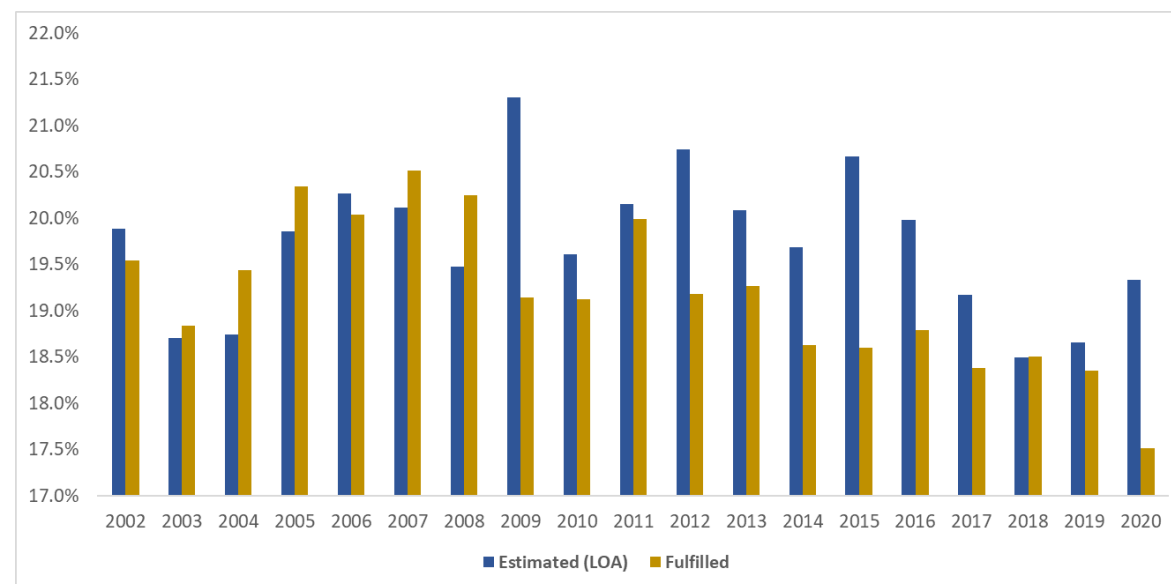
In the Brazilian case, a significant discrepancy has been observed between the projections contained in the annual budget law (LOA) and the realized values in primary revenues⁴, especially from 2009 onward, as can be seen in Chart 3. Much of this difference is explained by revisions in forecasts for economic growth and inflation, which have been more optimistic in recent years than they have actually been confirmed in individual years.

The year 2020 in particular proved to be a challenge for Brazil's public finances. The impact of the Covid 19 pandemic on economic activity exceeded the worst-case scenarios presented in the Fiscal Risks Report, 2019 edition. The public sector response to the health crisis led to a significant

Chart 3 - Tax and Contribution Revenues - Estimated (LOA) vs. Fulfilled

Data in: % GDP

Source: STN



⁴ Compared with revenues, expenditures are naturally less sensitive to macroeconomic parameters in the short term.

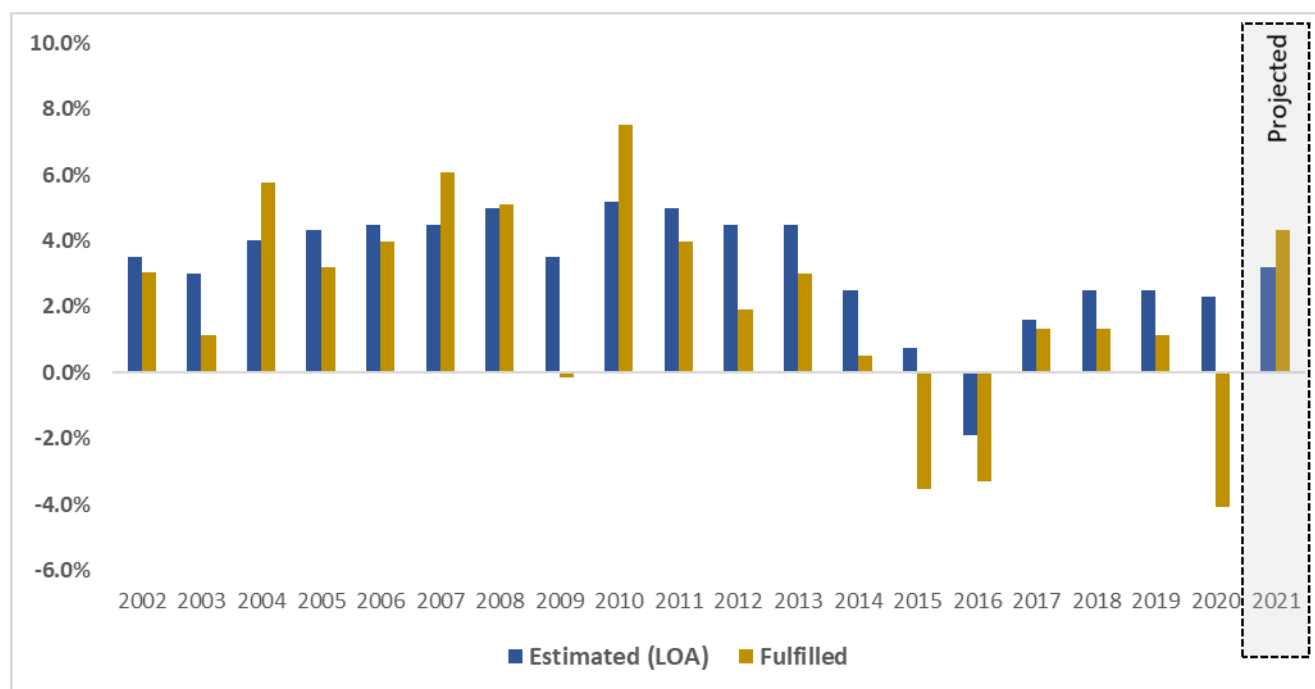
increase in public spending and revenue waiver measures, of which we highlight the emergency financial aid for people in precarious situations, financial aid for states and municipalities, the temporary reduction to zero of the IOF rates for credit operations.

In this scenario, the impact on this year's fiscal plan and on the development of the central government's medium term primary outcome was therefore significant. Indeed, the discrepancy between the economic projection used in the budget pieces and the amount realized in 2020 was the largest since 2002.

Chart 4 - Real GDP Variation – Estimated (LOA) vs. Fulfilled

Data in: %

Source: LOA, IBGE and SPE Grid dated 11/11/2021



Despite the recovery of revenues in 2021, some measures have contributed to the expansion of spending, such as the creation of Brazil Aid and the maintenance of the payroll tax relief. Although the net central government revenues presented in this report are higher than those projected in the Fiscal Risks Report for 2020, the estimated tra-

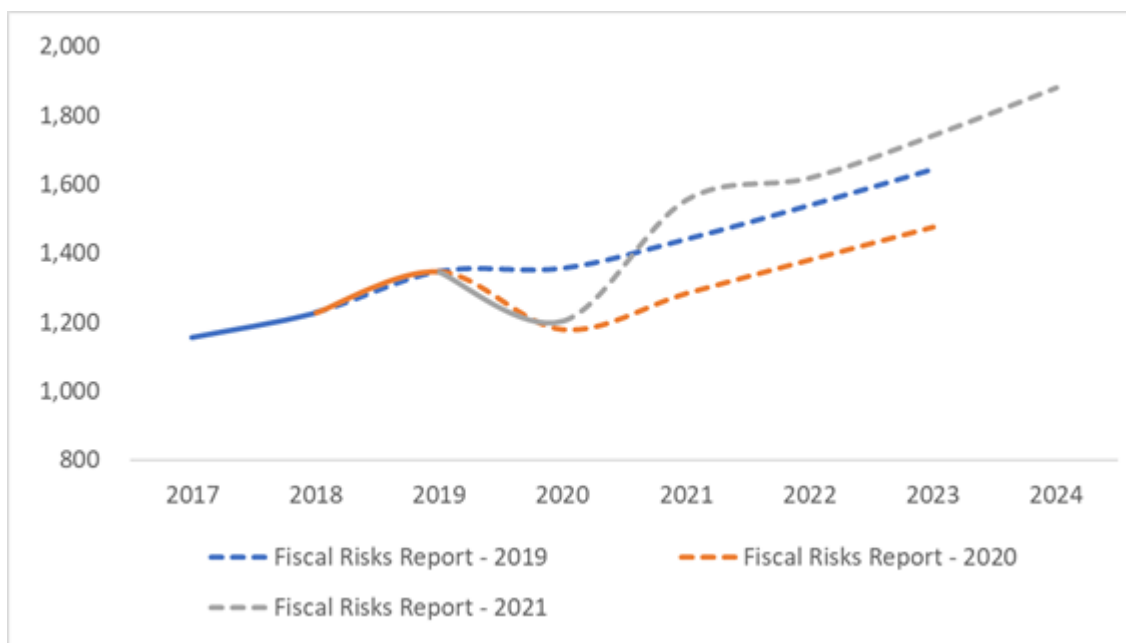
jectory of the primary outcome according to Chart 5 indicates that positive outcomes will not be achieved again until 2024. This trend means, in terms of public debt, that government gross debt will be 80% of GDP by 2024 and public sector net debt will rise, reaching 64.7% of GDP in 2024.

This chapter analyzes the fiscal risks arising from the variability of the macroeconomic parameters used to forecast the revenues administered by the Brazilian Federal Revenue Service (RFB), primary expenditures and the government's primary outcome, and public debt. Later, exercises on stress scenarios and their impact on fiscal variables will be presented.

Chart 5 - Central Government Net Revenue

Data in: R\$ billion

Source: RTN and 5th Bimonthly Report 2021. Preparation: STN/ME



2.1 Sensitivity of the Revenues Managed by the Brazilian Revenue Service - RFB

The assessment of revenue sensitivity involves first identifying the lines associated with the business cycle. Within the budget, revenues are presented in three broad groups: Revenues managed by the RFB⁵; Net Revenues for the RGPS; and Revenues not managed by the RFB. Table 1 displays the share of each group in 2020 total primary revenue.

Revenues managed by RFB are the most important group within revenues (61%) and include the main taxes and contributions of the national tax system. The nature of their tax base makes it easy to verify that the collection of these revenues is highly correlated with the economic cycle. Similarly, the tax base of social security revenues is the wage bill, which is also linked to the economic cycle, with an increase in wages and employment levels during economic upswings and the opposite behavior during recessions.

Table 1 - Central Government Primary Revenues Indexed to Macroeconomic Parameters

Source: Result of the National Treasury and RFB/ME

Revenue items related to macroeconomic parameters	Revenue in 2020 R\$ billion	Share in Total Primary Revenue	Indexers
Revenue Managed by the RFB	899,523	61.29%	GDP, Inflation, Exchange Rate, Wage Bill, Interest (Over)
Social Security Revenue	404,773	27.58%	GDP, Inflation, Wage Bill
Revenue Not Managed by the RFB			
Education Salary Contribution	21,261	1.45%	GDP, Inflation
Exploitation of Natural Resources	56,489	3.85%	Oil Prices, Iron Ore, Exchange Rate
Total of items	1,382,045	94.16%	
Concessions and permits	8,179	0.56%	Revenues Not Related to Macro Parameters.
Contr. Public Servant Social Security Plan	17,397	1.19%	
Dividends and Shares	6,577	0.45%	
Others	53,561	3.65%	
Total of items	1,467,759	100.00%	

⁵ Net of refunds.

Revenues not managed by RFB, on the other hand, represent a very heterogeneous group that includes, among others, 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 Contribution to the Education Salary and the Exploitation of Natural Resources were significant, and for the latter, the explanatory variables are the prices of certain commodities (oil, iron ore) and the exchange rate.

Table 2 shows the estimated impact of a 1 percentage point (p.p.) change in key parameters on tax collections that account for revenues managed by RFB, based on parameters estimated by the Secretariat of Economic Policy (SPE/ME). A sensitivity analysis shows that economic growth and the inflation rate are the parameters that have the greatest impact on total revenues managed by RFB. It can be seen that taxes are affected by more than one parameter at the same time. The impact of the variation of these parameters on revenues is the result of the combination of two factors: price and volume effects.

As can be seen, the revenues managed by RFB, with the exception of social security, are more influenced by the real growth rate of GDP and inflation, which affect the main taxes collected, such as the Contribution for the Financing of Social Security (COFINS), Contribution to the Social Integration Program (PIS), Contribution to the Program for the Formation of Public Servants' Equity (PASEP), and Tax on Income and Earnings of Any Nature (IR). Social Security revenues are closely related to wage bill, which is the largest portion of the tax base for this contribution.

Table 2 - Revenue Managed by RFB - Impact % of the Variation of 1 p.p. in Each Parameter

Source: RFB/ME/ Update ARF2022

Parameter	Impact on Revenue Managed by RFB	
	Except Social Security	Social Security
GDP	0.64%	0.14%
Inflation (IER) ⁽¹⁾	0.59%	0.14%
Exchange rate	0.12%	-
Wage Bill	0.07%	0.80%
Interest (Over)	0.02%	-

¹ The Revenue Estimate Index (IER) is composed of a weighted average that assigns 55% to the average IPCA rate and 45% to the average IGP-DI rate.

Table 3 - Revenues - Impact of a 1 p.p. Variation in Macroeconomic Variables

Data in: R\$ million

Source: Update ARF2022

Revenue Items	Variables				
	% GDP	Inflation (IER) ⁽¹⁾	Exchange rate	Wage Bill	Interest (Over)
Revenue Managed by the RFB	7,968	7,345	1,494	871	249
Social Security Revenue	676	676	0	3,864	0
Total	8,644	8,022	1,494	4,736	249

¹ The Revenue Estimate Index (IER) is composed of a weighted average that assigns 55% to the average IPCA rate and 45% to the average IGP-DI rate.

In nominal terms, GDP is the variable that has the greatest impact on primary revenues. As shown in Table 3, ceteris paribus, a 1 percentage point increase in GDP leads to an increase in tax revenues of R\$8.6 billion, most of which is accounted for by revenues managed by RFB (R\$8.0 billion). Similarly, a 1 percentage point increase in inflation,

ceteris paribus, leads to an increase in total revenues of R\$8.0 billion. In the aggregate, considering a joint increase of all variables by 1 p.p., there would be an increase in revenue of approximately R\$ 23,1 billion.

It should be remembered that macroeconomic variables are correlated with each other, so the assumption that only one variable moves while the others remain static is a necessary simplification for this hypothetical exercise. In addition, it is worth noting that RFB also develops projections for its managed revenues, using a methodology that takes into account a larger number of explanatory variables. Therefore, there may be discrepancies between the values estimated for this report and the official figures calculated by the Federal Revenue Service.

2.2 Primary Expenditure Sensitivity

Primary expenditures are composed of several items, highlighting payroll expenses, social security benefits, assistance benefits linked to the minimum wage, Salary Allowance and unemployment insurance, etc. Forecast risks⁶ generally arise from fluctuations in macroeconomic parameters and estimated amounts. Thus, this subsection presents the sensitivity analysis of central government primary spending to the macroeconomic parameters used to construct LOA.

The sensitivity analysis in this section was conducted on the basis of expenditure aggregates whose fluctuations are directly related to two main pa-

Table 4 - Central Government Primary Expenditure Indexed to Macroeconomic Parameters

Data in: R\$ million

Source and Preparation: STN/ME

Primary Expenditures	Expenditure in 2020	Share in Primary Expenditure	Indexer
Expenses indexed to Macroeconomic parameters	1,107,492	56.88%	
Personnel and Social Charges	321,349	16.50%	Agreed Adjustments and INPC ⁽¹⁾
Social Security Benefits	663,904	34.10%	Minimum wage and INPC
Social Assistance Benefits (LOAS and RMV)	62,668	3.22%	Minimum Wage
Unemployment Insurance	39,991	2.05%	Minimum wage and INPC
Salary Allowance	19,580	1.01%	Minimum Wage
Other Mandatory Expenses	731,533	37.57%	
Discretionary Expenses of the Executive Branch	108,191	5.56%	
Total	1,947,216	100.00%	

¹ For the expenses with Personnel and Social Charges, the impact of the risk related to the price index is low, since this index is a parameter for correcting only the retirements and pensions of the public servants who migrated to inactivity without the right to parity.

⁶ Deviations from the projections may also result from the outcome of the assessment of ongoing litigation, a topic covered in Section 3.1 of this document, which presents an analysis of contingent liability risks.

rameters: the National Consumer Price Index (INPC) and the minimum wage (SM). The expenditures directly affected by these parameters are social security and assistance benefits, Salary Allowance and Unemployment Insurance, which together account for 40.4% of central government primary expenditures in 2020⁷, as can be seen in Table 4. In 2019, the share was 51.4%.

Social security expenditures and revenues are directly affected by the INPC and the SM, the latter being the floor for social security benefits and remuneration in the formal labor market. On the other hand, the INPC variation is the adjustment factor of the social security benefits above the minimum wage and of the contribution ranges. The assistance benefits (the former Lifelong Monthly Income - RMV and the Continuous Cash Benefit - BPC) and the Salary Allowance are directly affected by the SM and indirectly by the INPC, since this index currently makes up the minimum wage adjustment index. Unemployment insurance is directly affected by both indices because the wage level for benefit payment is defined by the value of a minimum wage and the cap is readjusted by the INPC variation.

Table 5 presents the impacts on the selected primary expenditures due to the INPC variation. As you can see, with the exception of unemployment insurance, all other expenditures are in equal proportion to the fluctuations in INPC, so that a 1 percentage point increase in INPC leads to an equal increase in the corresponding expenditures.

In Table 6, the sensitivity of expenditures is shown in terms of millions of reais in response to a variation of R\$ 1.00 in the minimum wage or 0.1 p.p. in the INPC⁸. As you can see, each real increase in the minimum wage leads to an increase in government spending of R\$356.9 million per year, which in turn generates a positive effect of R\$15.5 million in tax collection, for a net effect of R\$341.4 million. On the other hand, the 0.1 percentage point change in the INPC results in an increase in expenditures of R\$790.2 million and an increase in tax collection of R\$18.3 million, for a net effect of R\$771.9 million.

Table 5 - Primary Expenditures - % Impact of the 1 p.p. Variation in INPC

Source and Preparation: STN/ME

Primary Expenditures	Impact resulting from the 1 p.p. variation in the INPC
Social Security Benefits	1.00%
RMV	1.00%
BPC/LOAS	1.00%
Salary Allowance	1.00%
Unemployment Insurance	0.59%

⁷ Given the atypicality of 2020 in terms of primary spending behavior, a comparison with data from 2019, a more typical year, is appropriate.

⁸ Equivalent to a R\$1,045 increase in benefits up to one minimum wage.

Table 6 - Selected Primary Expenditures - Effect of the Minimum Wage and the INPC

Data in: R\$ million

Source and Preparation: STN/ME

Primary Expenditures	R\$ 1.00 increase in the Minimum Wage	Increase of 0.1 p.p. in the INPC ⁽¹⁾		
	Benefits of 1 Minimum Wage	Benefits of 1 Minimum Wage	Benefits above 1 Minimum Wage	Total
I. RGPS Collection	15.5	16.7	1.6	18.3
II. Social Security Benefits	262.0	282.9	393.4	676.3
III. Deficit of RGPS (II - I)	246.5	266.2	391.8	658.0
IV. Assistance Benefits	61.7	66.6	-	66.6
IV.1 RMV	0.9	1.0	-	1.0
IV.2 BPC/LOAS	60.8	65.6	-	65.6
V. FAT	33.2	37.4	9.9	47.3
V.1 Salary Allowance	18.4	21.1	-	21.1
V.2 Unemployment Insurance	14.8	16.3	9.9	26.2
Total (III + IV + V)	341.4	370.2	401.7	771.9

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

2.3 Public Debt Sensitivity

2.3.1 Net Public Sector Debt (NPSD) and General Government Gross Debt (GGGD)

The year 2021 was marked by the reversal of most of the effects of the pandemic on debt, with debt returning to a path similar to that projected before the COVID -19 crisis. This result is based on the recovery of GDP, the increase in public revenues, the reduction of the primary fiscal deficit, and also on the expected payments of the Federal Government's loans with public banks, especially BNDES.

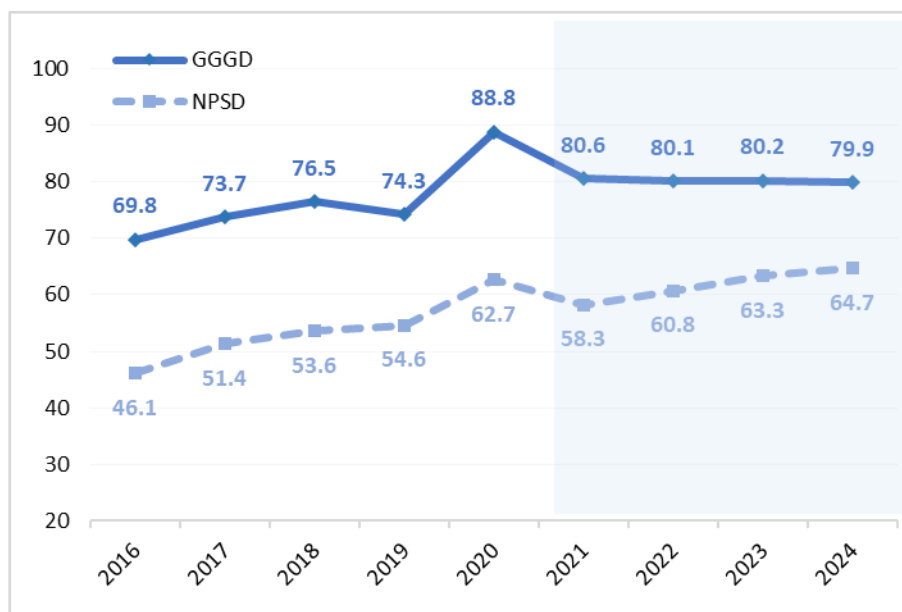
The analyzes show that general government gross debt (GGGD) would account for 80.6% of GDP at the end of 2021-a decrease of 8.2 percentage points from the end-2020 level. GGGD is projected to decline over the next few years, boosted by nominal GDP growth, reaching the 79.9% of GDP mark at the end of 2024, as shown in Chart 6.

The NPSD, in turn, would reach 58.3% of GDP at the end of 2021 - a decline of 4.4 percentage points compared to 2020 - and increase to 64.7% of GDP over the entire projection period to 2024. The fluctuations in nominal GDP and the exchange rate are the main factors explaining the decline in NPSD/GDP in 2021, while the upward trend of this ratio in the following years is related to the difference between the interest rate (included in NPSD) and the GDP growth rate.

Chart 6 - Debt Projections

Data in: % GDP

Source: Done, BCB Projections: STN/Fazenda/ME.

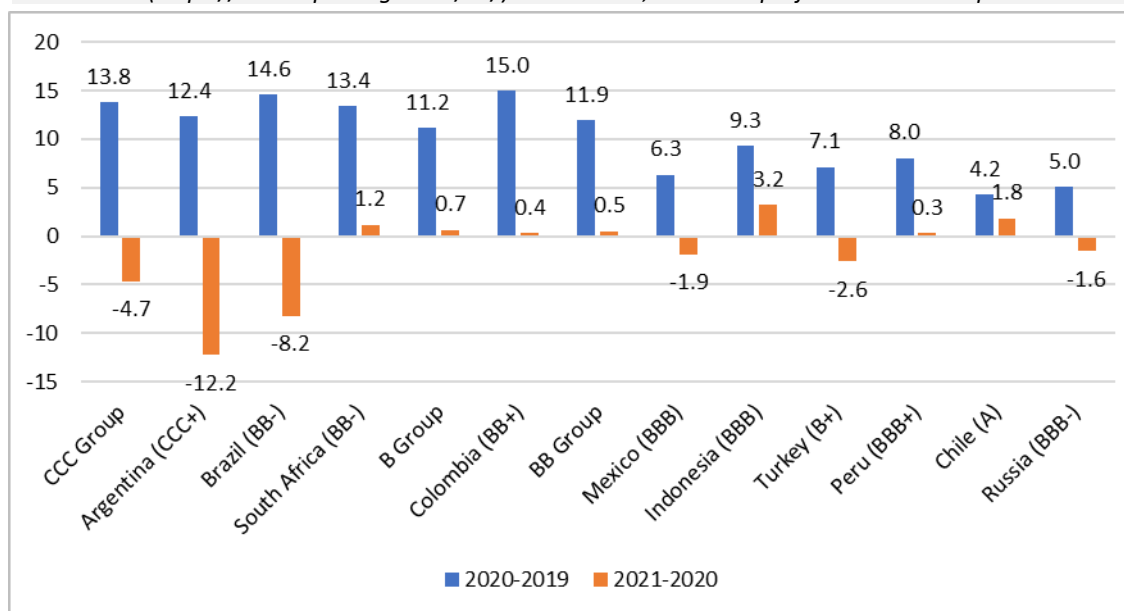


The increase in public debt in 2020, caused by the impact of the pandemic COVID -19, was an international phenomenon due to the widely adopted measures for health care, boosting economic activity and maintaining employment, and finally economic and social support for the most vulnerable population. However, the immediate reduction of the debt-to-GDP stock as a proportion of the GDP, in a significant scale as that observed in Brazil is not being observed as frequently among other peer countries as shown in Chart 7 - Change in the Gross Debt/GDP ratio.

Chart 7 - Change in the Gross Debt/GDP ratio

Data in: % GDP

Source: S&P (<https://www.spratings.com/sri/>). * For Brazil, BCB. STN projections. STN Preparation.



Nevertheless, Brazil's public debt is still very high, both by historical standards in Brazil and by international standards. Chart 8 shows that Brazilian debt is closer to the debt of countries with a high-risk rating (CCC+/CCC/CC, on the rating agencies' scale) than to the average debt of countries with a BB rating (BB, BB +, BB -). In other words, Brazil's debt is different from the debt of the other risk-rated countries.

The need for continuity in the fiscal consolidation process is obvious, as is the importance of its credibility. The credibility of the consolidation process rests on the fiscal rules in place, in particular the spending cap, the country's main fiscal anchor. Postponing the consolidation effort would have the effect of increasing the cost of debt in a context that leads to a greater perception of risk by the market. Furthermore, the longer this process takes, the greater the fiscal effort required in the future to reverse the GGGD trajectory tends to be. The continued rise in debt to even higher levels would also entail the well-known macroeconomic consequences, reducing the outlook for economic growth and, also through this channel, negatively affecting the performance of the GGGD.

The country, therefore, finds itself in a fragile position, even to carry out necessary social policies. After all, with such a high level of debt, shocks that impede the resumption of economic growth, increase the cost of debt, or prolong primary deficits can put government debt on an even higher course, with no stabilization in sight in the medium term. Thus, the decision to take measures with fiscal implications requires extreme caution, and the impact on the country's economic stability must always be considered.

Chart 8 - GGGD in 2020: International Comparison

Data in: % GDP

Source: Source: S&P (<https://www.spratings.com/sri/>). * For Brazil, BCB. STN projections. STN Preparation.

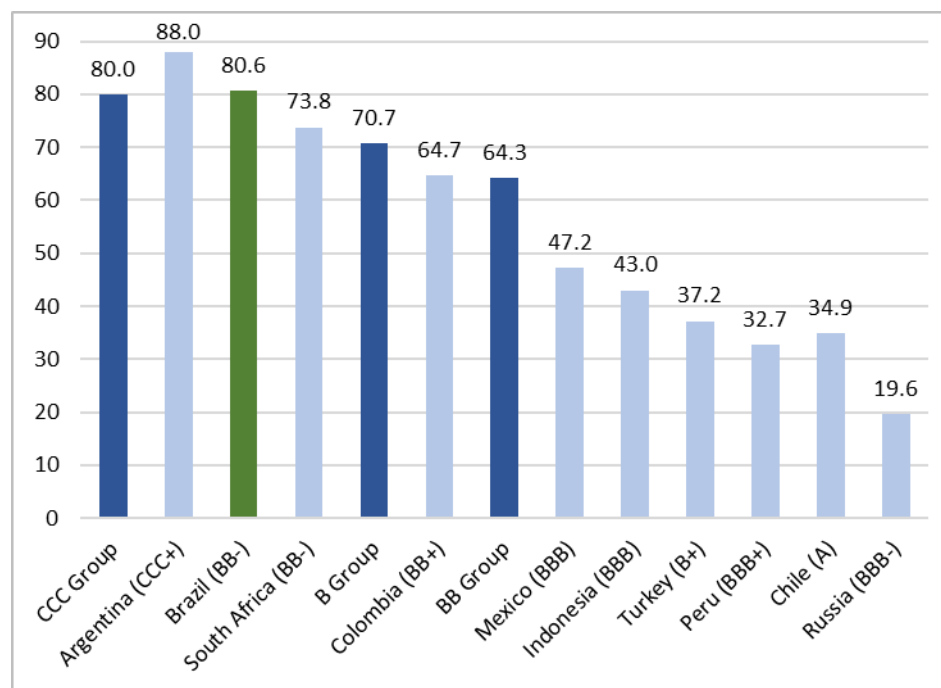


Chart 9 shows the results of simulations of adverse shocks starting in 2021 to three variables that are fundamental to the dynamics of public debt, namely: i) GDP growth 1 percentage point per year lower than the baseline scenario; ii) interest rates 1 percentage point per year higher than the baseline scenario until the end of the projection horizon; iii) primary outcome 1% of GDP per year lower than the baseline scenario; iv) the three shocks together. The shocks are stylized here to allow an analysis of the sensitivity of debt to standardized changes in the variables. Stress shocks will be explored later in this document.

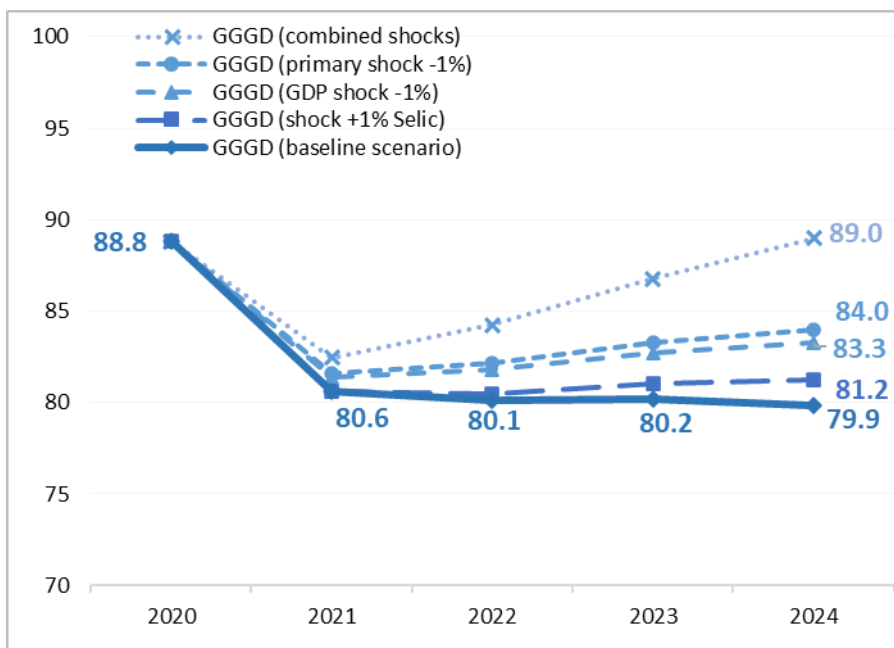
The increase in the interest rate would raise the GGGD to 81.2% of GDP, a 1.3% increase in GDP from the baseline at the end of the 3 years. The GDP and primary shocks would lead to very similar effects in isolation. At the end of 2024, the primary shock would result in debt of 84.0% of GDP, an effect of 4.1 percentage points of GDP relative to the baseline. The combination of the three shocks, in turn, would bring the GGGD to 89.0% of GDP in 2024, equivalent to a 9.1 percentage point increase in debt relative to the baseline scenario.

It is reasonable to assume that an adverse shock to one of these variables is accompanied by negative effects on the other variables. That is, a scenario with a higher primary deficit tends to be associated with higher real interest rates and lower GDP growth, even if the shocks do not occur to the extent shown in the sensitivity analysis in Chart 9. A lower debt-to-GDP ratio in the medium term therefore requires the continuation of reforms that favor the business environment and higher GDP growth, especially those that promote fiscal consolidation.

Chart 9 - Public Debt Sensitivity Analysis - GGGD

Data in: % of GDP

Source: Done, BCB Projections: STN/SETO/ME

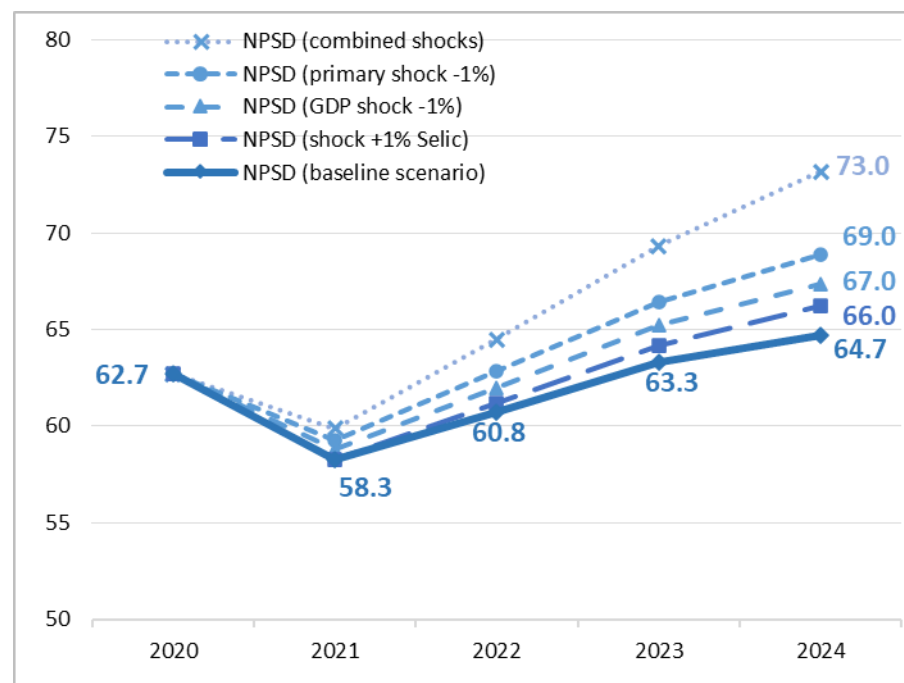


The analysis and conclusion related to the net debt indicator are similar, as shown in Chart 10. For example, note that the impact of a combined shock would reach 8.5 percentage points of GDP by the end of 2023, in a scenario where the NPSD would reach 73.2% of GDP, compared to 64.7% in the baseline scenario (without shocks).

Chart 10 - Public Debt Sensitivity Analysis - NPSD

Data in: % of GDP

Source: Done, BCB Projections: STN/SETO/ME



2.3.2 Federal Public Debt (FPD)

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 divided into securities and contractual debt. FPD's financing strategy is designed to reduce long-term costs while maintaining a prudent level of risk. In this sense, risk management is a fundamental tool of FPD management.

The recovery in domestic activity that led to a reduction in the level of indebtedness throughout 2021, as presented in the previous section. This movement has also made it possible to reverse the tendency to increase refinancing risk (rollover) presented in the last edition of this report, with a significant reduction in the concentration of short-term debt maturities in relation to what was registered in 2020.

The change in the maturity profile is accompanied by changes in the composition of debt. In contrast to the previous year, in 2021 the FPD has been registering an increase in the share of floating interest rate securities, the LFT, which generally have a longer issuance period than instruments with short-term fixed interest rates. The latter were more heavily used in 2020.

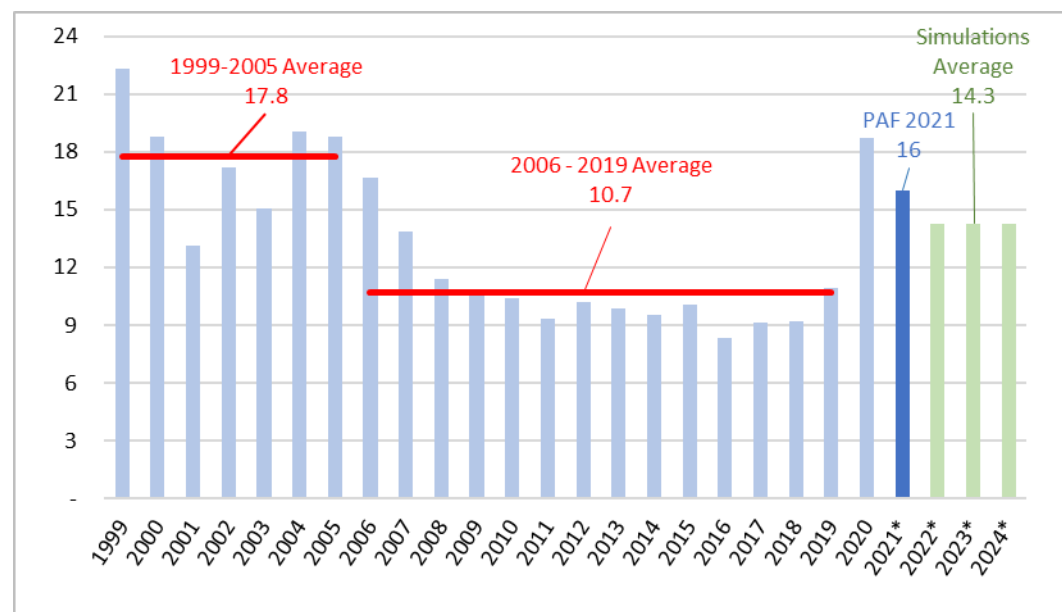
Measuring the share of FPD maturing in up to 12 months is a useful indicator for assessing refinancing risk, as shown in Chart 11. This indicator of the concentration of debt maturing in the short-term reached 18.7% of GDP at

Chart 11 - Federal Public Debt Outstanding in 12 Months

Data in: % of GDP

Source: STN/SETO/ME

* 2021: Projection based on PAF 2020 midpoint; 2022-2024: STN simulations.



the end of 2020, well above the historical average of 10.7% of GDP recorded between 2006 and 2019. On trend, this ratio will start to decline as early as 2021 and will continue to decline in the following years to reach an average of 14.3% of GDP between 2022 and 2024⁹. Although this average is still above the pre-pandemic level, it is a positive development for debt risk reduction.

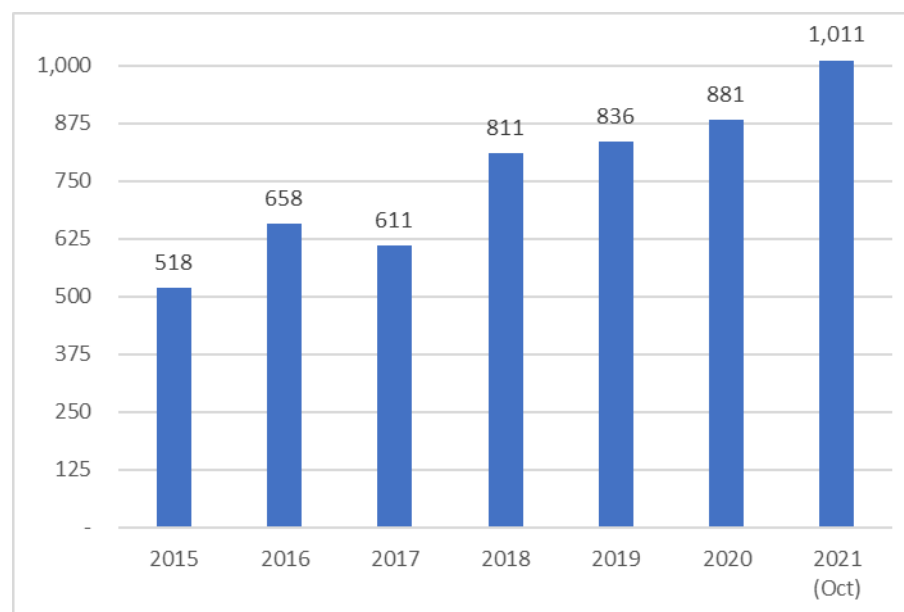
The implementation of more favorable scenarios for the primary outcome is a key variable in reinforcing this trend and reducing the pressure on debt refinancing risk.

In addition to reducing short-term debt, an important aspect of mitigating refinancing risk is maintaining the liquidity reserve (cushion) of debt, which the National Treasury manages to keep within prudential parameters. This is a critical need that helps manage the FPD in moments of greater volatility and gives management flexibility in executing its funding strategy. In 2021, the institution began disclosing the liquidity reserve balance in the monthly debt report, and the annual series up to the last disclosed position can be seen in Chart 12. The current values of the indicator show that the National Treasury has a good margin to mitigate the FPD risks mentioned above.

Chart 12 – Liquidity Reserve

Data in: R\$ billion

Source: STN/SETO/ME



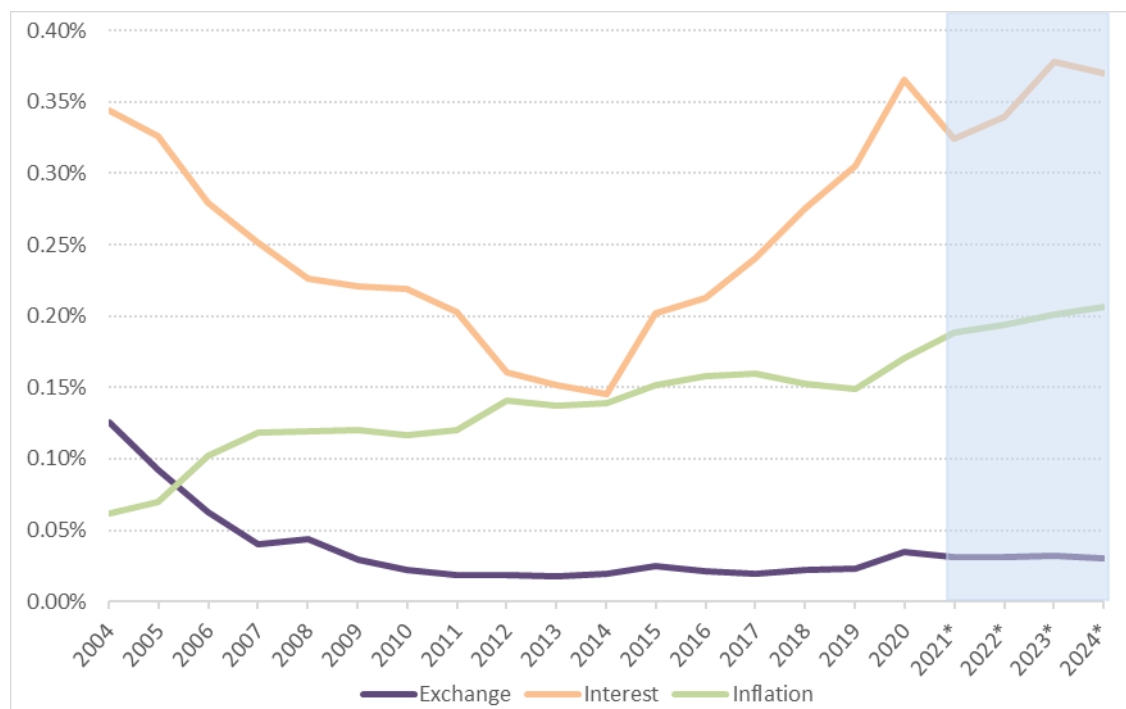
⁹In the November 2020 Fiscal Risk Report, projections for the share of FPD maturing in up to 12 months pointed to an average of 20.1% of GDP for the period 2021-2023. This comparison allows us to see the extent of the reduction in this risk that occurred during 2021.

In addition to the maturity profile, FPD is also exposed to the risk of increases in its cost and stock due to oscillations in the indexes that remunerate public securities, i.e., market risk. One way to assess this risk is to estimate the sensitivity of the stock's value to marginal changes in macroeconomic variables¹⁰. In this case, for a better analysis, the FPD/GDP ratio is taken as a parameter. The effects of a 1% shock on the exchange rate (real/dollar), inflation and the interest rate (Selic) can be seen in Chart 13.

Chart 13 - Sensitivity of the FPD Stock to 1% Shocks to Macroeconomic Variables

Data in: % of GDP * Projections based on the medium-term strategy prepared in November/2021

Source: STN/SETO/ME



From a historical perspective, the highlight is the increased sensitivity of the FPD to changes in short-term interest rates and the greater stability of its sensitivity to changes in the exchange rate. This panorama reflects the increasing participation of floating-rate bonds in FPD and the continuity of a scenario of short- and medium-term fiscal challenges.

¹⁰This is a static analysis in which the isolated effect of the change in only one variable (exchange rate, interest rate or inflation) on debt stock is analyzed. Thus, the effects of a change in one variable on the other variables are not considered. Nor does it consider the impact of changing one variable on other factors in the economy that might also affect the desired indicators, such as the fiscal outcome, GDP, and public sector net borrowing.

Regarding the sensitivity of the FPD to inflation fluctuations, it is important to note the existence of a natural hedge on the part of debt indexed to this variable (mainly to the IPCA), resulting from the fact that government revenues are positively correlated with shocks in the inflation rate, which helps to reduce the relevance of this risk factor. Moreover, nominal GDP (the denominator of the analysis) would also change with inflation.

The risk due to exchange rate fluctuations is again consistent with the debt structure suggested by FPD's benchmark portfolio (i.e., the portfolio with the composition considered ideal in the long run, suggesting a share of foreign exchange debt of about 5% of FPD). Moreover, the spillover effects of a currency crisis are strongly protected by the current volume of international reserves managed by the Central Bank of Brazil (BCB)¹¹.

2.4 Simulations of Macroeconomic Parameters Stress Scenarios

In the stress assessments of the macroeconomic indicators, the values from the parameter grid provided by SPE/ME¹² were used as the mean of the distribution, which served as the median (base case) for all indicators. Five hundred stochastic realizations were simulated for the macroeconomic parameters, assuming a multivariate normal distribution with a mean given by the parameter grid and a variance-covariance matrix estimated from historical data. From these, taking into account the relevant variables, the stochastic trajectories of revenue, expenditure, primary outcome and government debt were estimated for each item. For the analysis of the graphs presented below, the central line corresponds to the median of all trajectories. The other lines represent the 10th to 90th percentiles. Thus, values at the extreme points are in the first and tenth deciles.

2.4.1 Revenues

The macroeconomic scenarios generated were applied to four of the largest revenue categories: the Revenue Managed by the RFB (except for social security), the Social Security Revenue; and, within the Revenue not Administered by the RFB, the Revenue from Education Salary Contribution and the Revenue from Exploitation of Natural Resources (as per Table 1). These four categories accounted for approximately 94% of the federal collection in 2020. The results, presented in Chart 14, show a cloud of possibilities of alternative realizations to the central scenario.

¹¹ The level of reserves in October 2021 is in the order of US\$367.93 billion.

¹² Parameters updated on November 11, 2021.

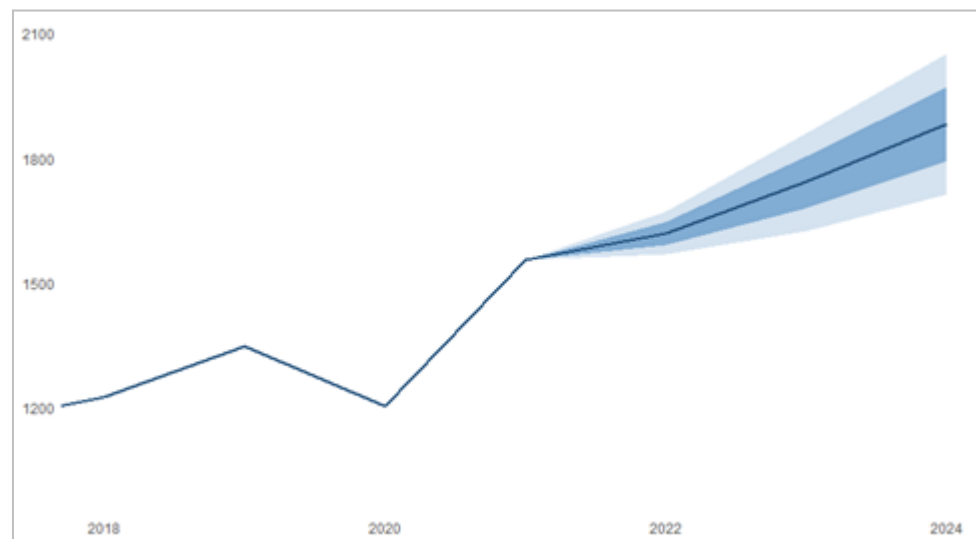
The simulations performed show that net revenues can vary significantly over time, reflecting the high variance associated with macroeconomic variables and their impact on revenues. Indeed, tax collection is the component in the budget that is most sensitive to changes in the economic and/or price cycle, as it depends not only on inflation but also on the evolution of GDP. As might be expected, the probability clouds become larger in periods further away from the original projection point due to the growing uncertainty inherent in longer projections.

¹³For 2022, the estimate indicates net revenues of R\$1,619 billion, a figure that can be increased (decreased) by up to R\$52 billion if the upper (lower) extreme case is reached. For subsequent years, a similar analysis yields a margin over the base scenario and extreme limits of R\$117 billion in 2023 and R\$168 billion in 2024.

Chart 14- Spectrum of Alternative Scenarios for Net Revenues

Data in: R\$ billion

Source and Preparation: STN/ME



2.4.1.1 Revenues Managed by RFB

In disaggregated terms, revenues managed by RFB (excluding Social Security revenues) account for the largest share of total net revenues and are also the group of revenues most sensitive to fluctuations in the macroeconomic sce-

¹³The extreme cases of the distribution shown in the graph would be related to the 10th (lower) and 90th (upper) percentiles. It is important to note that realizations below or above the presented figures are possible, but the probability of their occurrence is low.

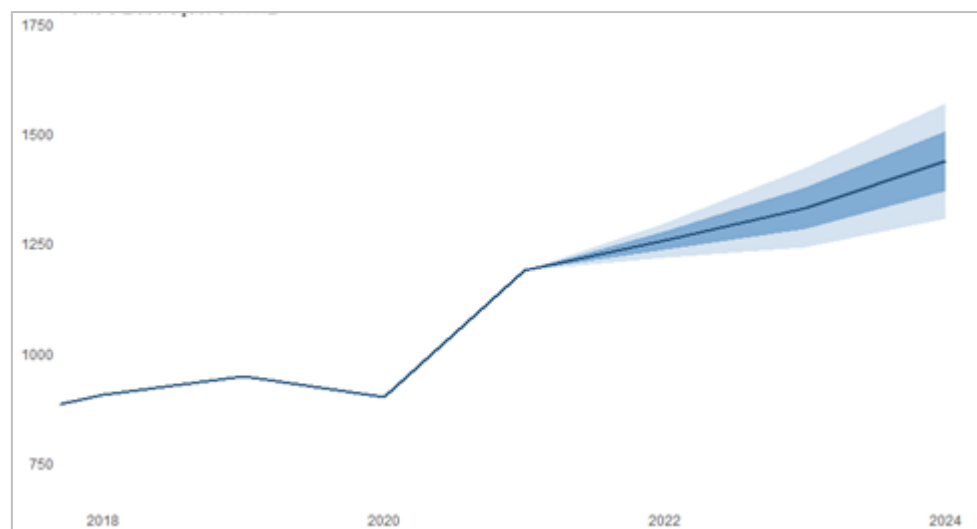
nario. As a result, revenues managed by RFB are the group that exhibits the greatest variability in the collection of total revenues.

Taking the lower extreme scenario¹⁴ as a reference, the revenues managed by RFB vary by about 3.1% or R\$39 billion in 2022 and reach 9.1% or R\$131 billion in 2024. As mentioned above, GDP and inflation are the main variables that explain the divergence between the possible scenarios.

Chart 15 - Spectrum of Alternative Scenarios for Revenues Managed by RFB, Exclusive of Social Security

Data in: R\$ billion

Source and Preparation: STN/ME



¹⁴ We took the difference between the center of the first decile and the central scenario and divided by them to determine the divergence of the extreme values.

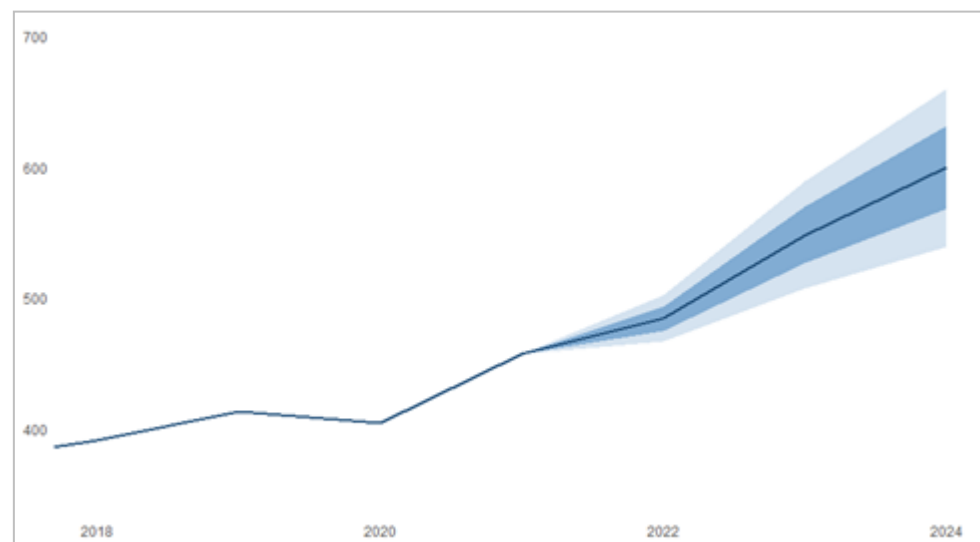
As noted earlier, Social Security revenues show a growth path due to the projected increase in GDP and wage bill. Thus, the cloud of scenarios for this variable is the result of various combinations of economic growth and labor market performance.

Similar to the revenues managed by RFB, Social Security revenues show large fluctuations depending on the macro-economic scenarios, with a difference of 3.6%, or R\$17 billion, between the central scenario and the extreme scenarios in 2022, and up to 10.1%, about R\$60 billion, in 2024.

Chart 16- Spectrum of Alternative Scenarios for Social Security Revenue

Data in: R\$ billion

Source and Preparation: STN/ME



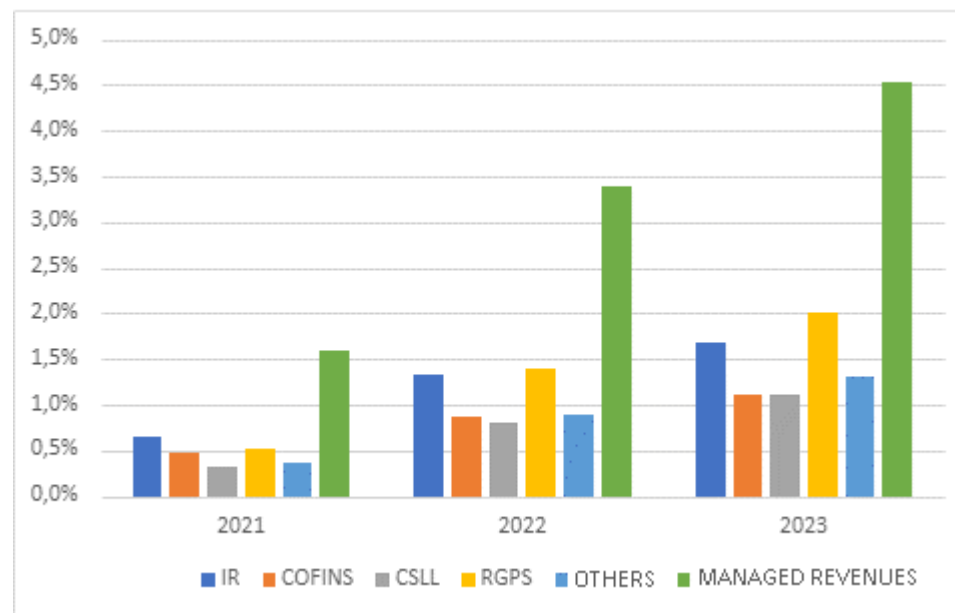
Overall, the variance in revenues managed by RFB, including social security revenues, over the analyzed period is mainly explained by the variation in income tax, RGPS revenues, COFINS and CSLL. Chart 17 below shows the standard deviation of each of these taxes and illustrates the importance of these volatility components for total collection analysis.

Note that the increase in the standard deviations of all taxes over the years reflects the increasing uncertainty expressed by the increase in the variance.

Chart 17- Standard Deviation of Revenues Managed by RFB

Data in: R\$ million

Source and Preparation: STN/ME



2.4.1.2 Exploitation of Natural Resources

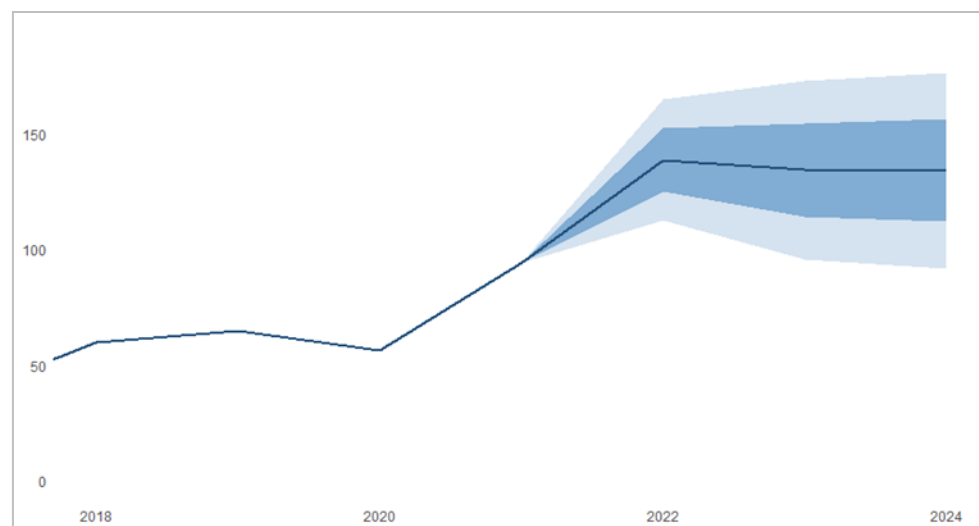
Among the revenues not managed by RFB, the largest deviation corresponds to the one related to the item Exploitation of Natural Resources. This item aggregates several revenues related to mineral production, the use of water resources, and especially oil and gas exploration. In this sense, changes in both *commodity* prices, such as iron and oil, and the exchange rate have a significant impact on collection from Exploitation of Natural Resources, even in the short-term. For the present exercise, the estimated cloud of possibilities considers only the variations arising from the exchange rate, holding the other variables constant.

The difference between the lower end and the central scenario amounts to a deviation of 18.8% for the central case for 2021, about R\$26 billion, and reaches over 31% for 2024, or about R\$42 billion, the case with the highest percentage deviation.

Chart 18 - Spectrum of Alternative Scenarios for Revenues from Exploitation of Natural Resources

Data in: R\$ billion

Source and Preparation: STN/ME



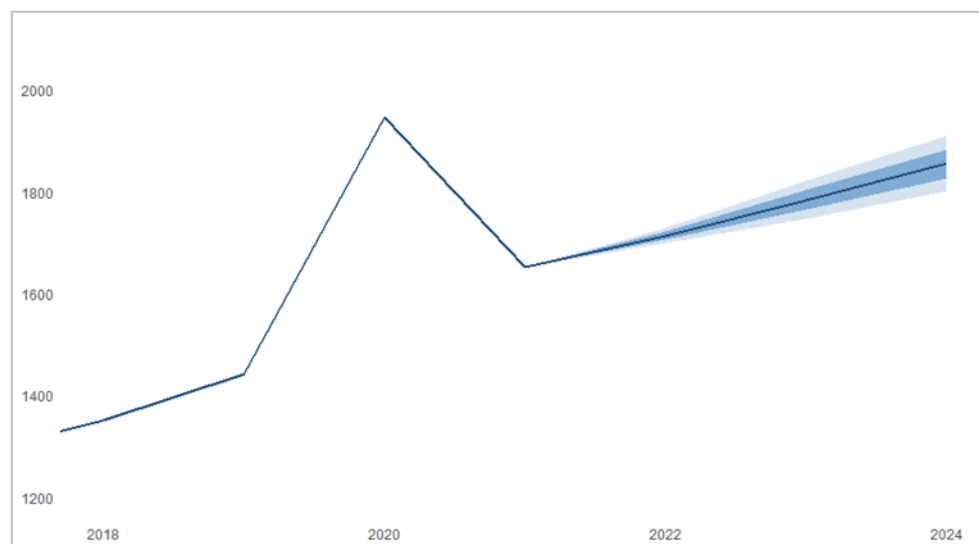
2.4.2 Expenditures

The expenditure curves were constructed by applying the various macroeconomic scenarios to the expenditure rules, in particular spending on Social Security benefits, assistance benefits (LOAS and RMV), unemployment insurance, and Salary Allowance. For this specific year, the impacts in Personnel and Charges were not considered, since this variable is under government control¹⁵. On the other hand, the expenditures with flow control of the Executive Branch vary according to inflation. The assumptions used for this exercise take into account the correction of the minimum wage to maintain its purchasing power, the absence of a readjustment for staff, and the passing of PEC 23/2021 in the form of the report approved by the Chamber of Deputies.

Chart 19 - Spectrum of Alternative Scenarios for Total Spend

Data in: R\$ billion

Source and Preparation: STN/ME



The results presented in Chart 19 show that the fluctuations in expenditures, i.e., the amplitude of the ranges of variation around the central path, are relatively small compared with revenues. In general, this effect is due to the fact that the number of Social Security or welfare recipients is more closely related to demographic factors and less to the macroeconomic situation, the factor measured in this section. Moreover, Social Security and Social Assis-

¹⁵ Although there is some indexation to the INPC of social security benefits for civil servants who have transferred to inactivity without entitlement to parity, this amount is not very significant in the context of spending on personnel and social charges.

tance benefits are indexed to inflation but not to GDP, as is generally the case with revenues, which reduces their potential volatility.

The results shown in Chart 19 show that the variation in expenditures is relatively smaller in relation to revenues over the period. In general, this effect occurs because the number of recipients of welfare or Social Security benefits is related to demographic factors that vary little in the short run, and because the value of these benefits is affected by two variables—minimum wage and INPC.

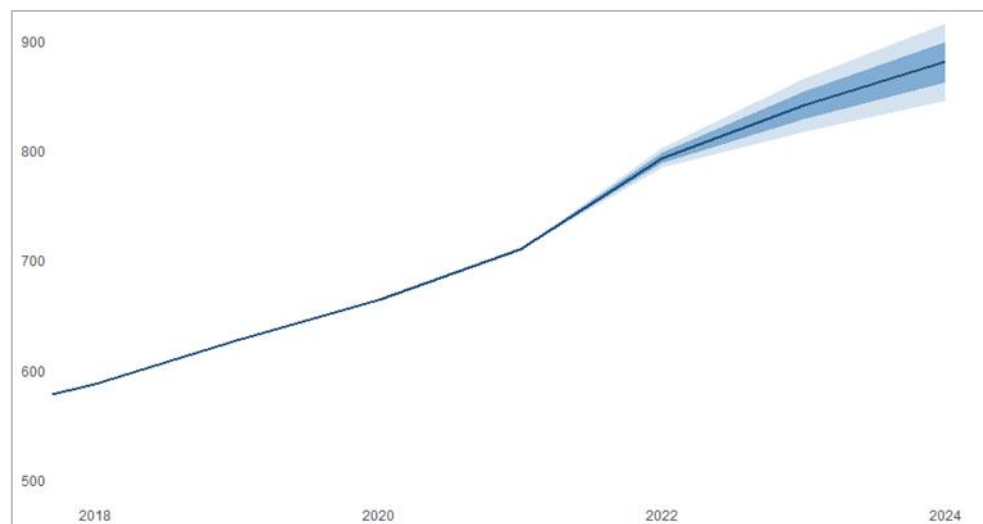
Thus, it is expected that in extreme cases, whose probability is low, there will be a deviation in spending of R\$15 billion in 2022 and R\$54 billion in 2024. These figures do not include possible reductions or increases in discretionary spending that may expand or reduce the figures presented. Since these are decisions that are under the control of the government, they are not included in this analysis.

2.4.2.1 Social Security and Welfare Expenditures

The analysis shows that most of the expected deviations in the total expenditures listed above are due to the high spending on social security benefits. In addition to its high share in primary spending (approx. 43%), social security and welfare spending is directly influenced by the minimum wage, which in turn is a function of past inflation. There is also a dependence of this item on GDP, albeit to a lesser extent. The latter correlation is due to the fact that higher economic activity is accompanied by greater formalization of the labor market, which in turn leads to higher spending on the social security system. Therefore, scenarios with higher inflation or more significant economic growth are reflected in higher social security benefits.

The deviation from the central scenario to the extremes, as shown in Chart 20, reaches about R\$9 billion in 2022, a deviation of about 1.1%, and in-

Chart 20 - Spectrum of Alternative Scenarios for Social Security and Welfare Benefits
Data in: R\$ billion Source and Preparation: STN/ME



creases to about R\$35 billion by 2024, a deviation of about 4.0%.

2.4.2.2 Salary Allowance and Unemployment Insurance

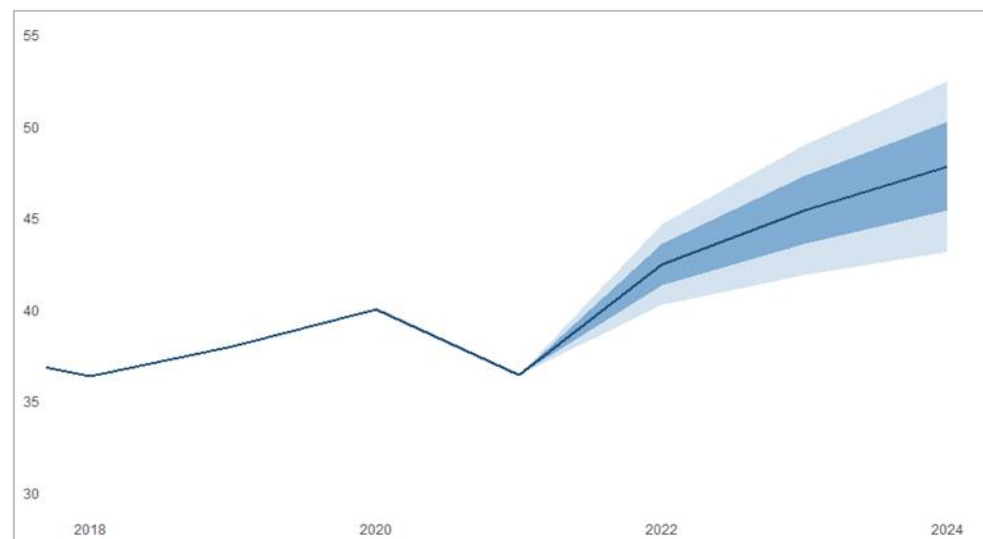
Salary allowances and unemployment insurance are two other expenses that vary depending on macroeconomic parameters, especially due to movements in the labor market. For example, changes in the level of unemployment affect unemployment insurance payments. In the Brazilian case, however, this relationship is procyclical: the increase in the share of formal jobs during periods of expanding economic activity implies an increase in these expenditures due to the stability of the labor turnover rate. The Salary Allowance, in turn, includes the payment of a minimum wage to formal employees whose income is equal to or less than two minimum wages. Therefore, these expenditures are closely related to formal employment and the relationship between the minimum wage and the average nominal income in the labor market.

The variation from the medium scenario to the extreme scenarios is about R\$2.2 billion in 2022 and increases to R\$4.6 billion in 2024. Expressed as a percentage, these values represent a change of 5.1% of this item in 2022, a value that reaches 9.7% in 2024. Therefore, in relative terms, this is the expenditure with the greatest variation both in the short and medium term. It should be noted, however, that this item represents only a small portion of total public spending.

Chart 21 - Spectrum of Alternative Scenarios for Unemployment Insurance

Data in: R\$ billion

Source and Preparation: STN/ME

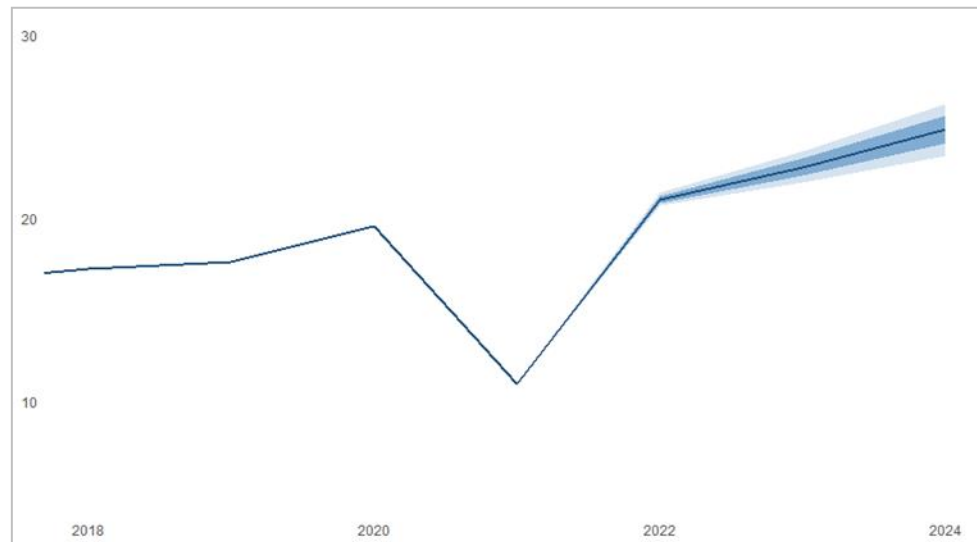


The fluctuations of the Salary Allowance are also significant in relative terms, with a difference of about R\$1.4 billion or about 5.7% of the extreme values with respect to the central value in 2024. Nonetheless, this expenditure also constitutes a small portion of the total expenditure.

Chart 22 - Spectrum of Alternative Scenarios for Salary Allowance

Data in: R\$ billion

Source and Preparation: STN/ME



2.4.3 Primary Result

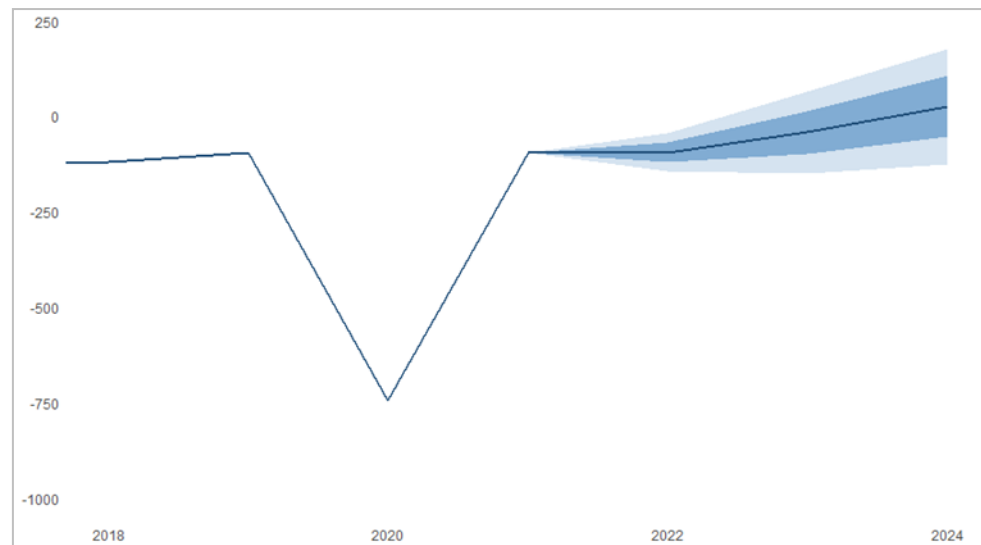
The primary result is derived from the combination of the revenue and expenditure curves generated in each distinct economic scenario. Note that macroeconomic parameters that lead to an increase in revenues may also lead to a simultaneous increase in expenditures, so the order of the primary outcome scenarios differs from those of revenues and expenditures considered separately.

The primary outcome paths presented in Chart 23 show that the upper and lower extreme scenarios are about R\$49 billion above or below the central government scenario (- R\$94.6 billion) in 2022. For 2023 and 2024, the same analysis shows a margin for the extreme scenarios of R\$107 billion and R\$151 billion, respectively. Due to the significant recovery in collection in 2021, the stochastic curves now estimate a 30% probability of achieving the primary surplus in 2023 and a 55% probability in 2024.

Chart 23- Spectrum of Alternative Scenarios for Primary Results

Data in: R\$ billion

Source and Preparation: STN/ME



2.4.4 Expenditure Caps

Instituted by Constitutional Amendment 95 (art. 106 to 114 of the Transitory Constitutional Dispositions Act - ADCT), the expenditure cap constitutes a limit for twenty fiscal years for a set of primary expenditures of each power or autonomous body. Under the current regime, this limit is adjusted annually for inflation variation as measured by the broad national consumer price index (IPCA). Thus, in order to determine the different possible trajectories of

the expenditure cap, inflation variation is the only explanatory variable. As noted in Section 2.4.2, the assumptions for total spending subject to the cap for this fiscal year take into account the adjustment to the minimum wage to maintain its purchasing power, no adjustment for personnel, and the approval of PEC 23/2021 in accordance with the report approved by the Chamber of Deputies.

Expenditures subject to the cap account for the bulk of primary spending and are influenced by both economic (inflation, GDP, minimum wage) and demographic variables (aging population). Since more than 90% of spending is constitutionally or statutorily mandated, unless measures are taken to control its increase, the spending cap will lead to a continuous flattening of discretionary spending.

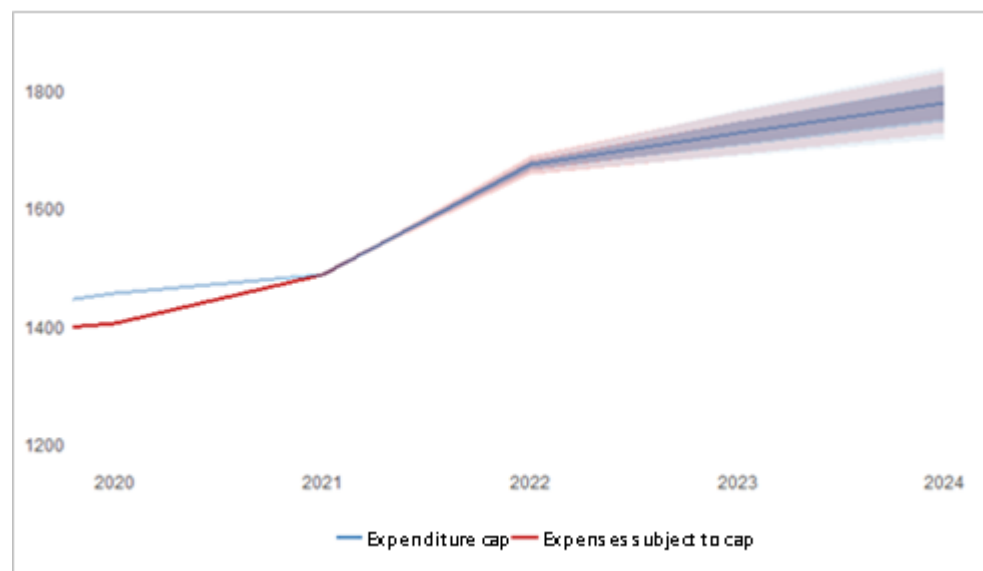
In Chart 24, the blue and red solid lines represent, respectively, the baseline projections of the expenditure cap and of the sum of expenditures subject to the cap. The blue shaded area represents the uncertainty regarding the IPCA, which corrects the expenditure cap, while the red shaded area represents the uncertainty regarding the expenditure indexing parameters (SM, INPC, labor market, etc.). The more overlapping the two shaded areas are, the smaller the gap between the expenses subject to the cap and the limit imposed by this constitutional rule. This projection takes into account the tight control of spending in the years under consideration, including spending classified as discretionary, and the application of the assumptions for total spending set forth in this report.

In this way, the possibility of respecting the spending cap rule until the end of the analyzed period (2024) is verified, even in the presence of possible macroeconomic shocks. However, if control over the creation of new spending is not maintained, there is a risk that the spending cap will not be met.

Chart 24 - Spectrum of Alternative Scenarios for Expenditure cap

Data in: R\$ billion

Source and Preparation: STN/ME



2.4.5 Public Debt

Chart 25 and Chart 26 show the stochastic results of the GGGD and NPSD simulations. The base case trajectories of these indicators are very close to the medians of the distributions and consist of the solid line in the respective graphs.

In the base scenario it is expected that the GGGD will reach 80.6% in 2021, reaching 79.9% of GDP in 2024. Chart 25 shows the confidence interval for the possible trajectories of the GDG/GDP in the face of stochastic shocks to GDP and the primary fiscal result over time, holding all other variables constant, including interest rates. The upper boundary of the chart indicates less favorable scenarios, which would be reached, for example, if reforms that

Chart 26 - Stochastic Scenarios - NPSD

Data in: % of GDP

Source and Preparation: Done, BCB Projections, STN/ME

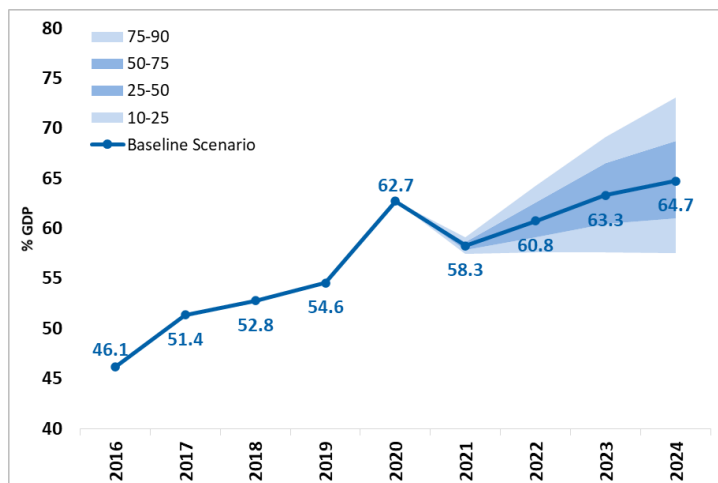
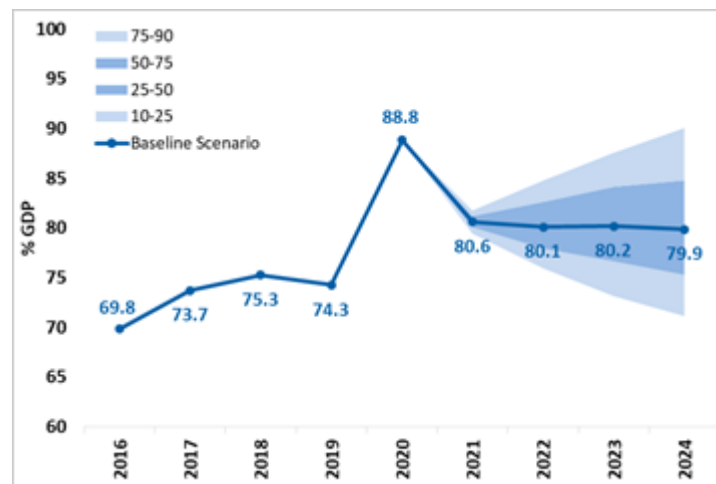


Chart 25 - Stochastic Scenarios - GGGD

Data in: % of GDP

Source and Preparation: Done, BCB Projections, STN/ME



contribute to fiscal consolidation and the resumption of sustainable economic growth failed to materialize. On the other hand, the chart shows scenarios in which government debt would decline primarily as a result of better budgetary outcomes and greater dynamism in economic activity. A similar behavior is observed in Chart 26 for the NPSD.

3. Specific Fiscal Risks

Specific risks refer to events that occur irregularly and have various causes. They are usually related to government programs, contingent liabilities, and the public sector balance sheet (assets or liabilities). The analysis includes the qualitative assessment of the specifics of each issue, trying to determine the short-term occurrence of the risk and measure its cost.

Table 7 - Factors of Tax Risks Related to Liabilities and Assets

Data in: R\$ million

Preparation: STN/ME

Fiscal Risks	Primary (P) Financial (F) Impact	Stock		Percentage of the Grand Total	Estimated Flow	
		2020	2021 ¹		2021	2022
Liability Related Risks ²		2,712,945.8	2,904,762.6	68.5%	89,979.0	119.322,8
Contingent Liabilities under Adjustment	F	113,613.5	115,600.0	2.7%	23.590,7	18.012,5
Federal Government Guarantees	F	295,997.4	290,278.6	6.8%	8.391,6	9.651,1
Liabilities of Federative Entities ³	F	115,100.0	113,400.0	2.7%	n.d.	n.d.
Export Credit Insurance	P	37,725.1	37,207.4	0.9%	1.544,1	1.504,4
Judicial Claims - Probable Risk	P	707,160.0	937,760.0	22.1%	55.443,7	89.115,8
Judicial Claims - Possible Risk	P	1,316,100.0	1,282,250.0	30.2%		
Liabilities of Constitutional Funds	P	15,461.6	15,461.6	0.4%	1.009,0	1.039,0
FIES	P	111,788.2	112,805.0	2.7%	n.d.	n.d.
Assets Related Risks ⁴		1,397,871.4	1,335,704.2	31.6%	182,075.6	150.778,0
Assets Related to the Federative Entities	F	647,551.4	630,986.3	14.9%	5.431,4	29.357,6
Assets Not Related to the Federative Entities	F	265,355.8	203,233.6	4.8%	126.695,6	70.050,5
Dividends and JCP	P	n/a	n/a	n/a	25.056,1	25.311,3
Active Debt	P	484,964.2	501,484.3	11.9%	24.892,5	26.058,6
Total Exposure of the Federal Government"		4,110,817.2	4,240,466.9	100.00%		

¹ Stocks with position on 6/30/2021, except: Federal Guarantees, Liabilities of Federative Entities and Assets Unrelated to Federative Entities, with position on 8/31/2021.

² Fiscal Risks Related to Federal Government Liabilities, potential impact: increase in expenditures.

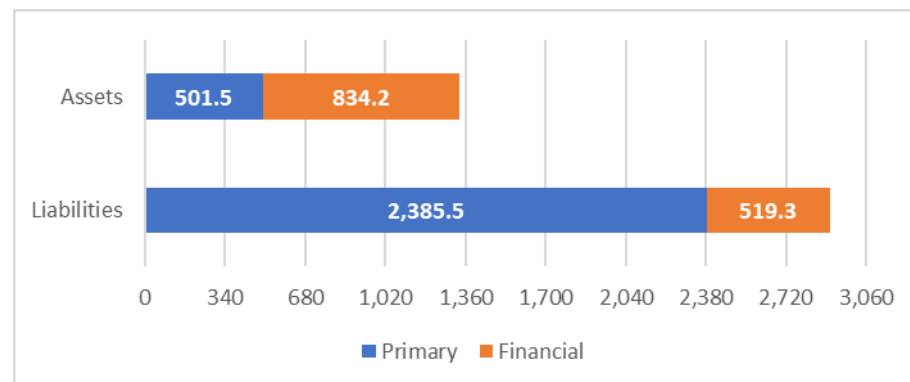
³ Precatórios Stock of States and Municipalities.

⁴ Fiscal Risks Related to Federal Government Assets, potential impact: decrease in revenues.

Chart 27 - Composition of Specific Fiscal Risks

Data in: R\$ billion

Preparation: STN/ME



and degrees of impact and, moreover, have probabilities of occurrence ranging from unlikely to possible to probable. The analyzes resulting from the summary presented in Table 7 should therefore take these factors into account so that the overall view of the Federal Government's Fiscal Risks is not compromised.

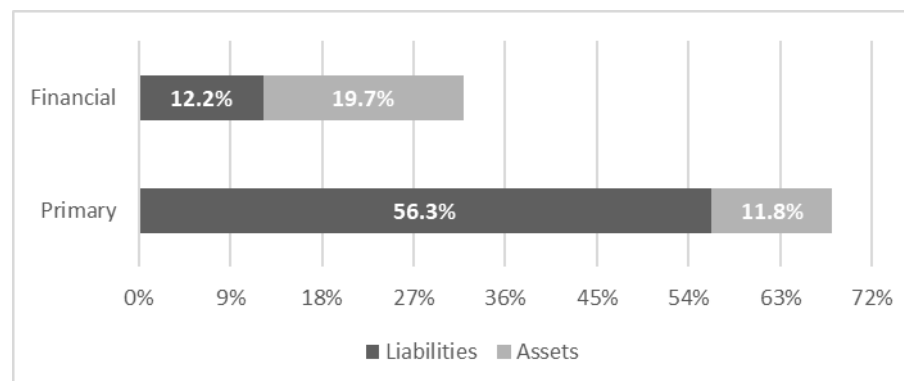
In 2020, the fiscal risk of the Federal Government amounts to R\$4.2 trillion, distributed among risks that may arise either from the default of revenues related to assets or from the increase of unforeseen expenditures related to the liabilities of the Federal Government, with primary and financial implications, as shown in Table 7. Chart 27 and Chart 28 show, respectively, the composition and impacts of the specific risks.

It is important to emphasize, however, that the listed fiscal risks have different thematic manifestations with a wide variety of types

Chart 28 - Impact of Specific Fiscal Risks

Data in: Percentage

Preparation: STN/ME



3.1 Contingent Liabilities

Contingent liabilities relate to possible new obligations whose confirmation depends on the occurrence of one or more future events or whose probability and extent depend on unforeseeable exogenous conditions. Contingent liabilities are also those obligations that arise from past events but are not yet recognized in the financial statements because the need to settle is unlikely or because the amount cannot yet be determined with sufficient certainty.

3.1.1 Judicial Claims

Judicial claims against the Federal Government are defined as fiscal risk because they can lead to judicial decisions against the Treasury.

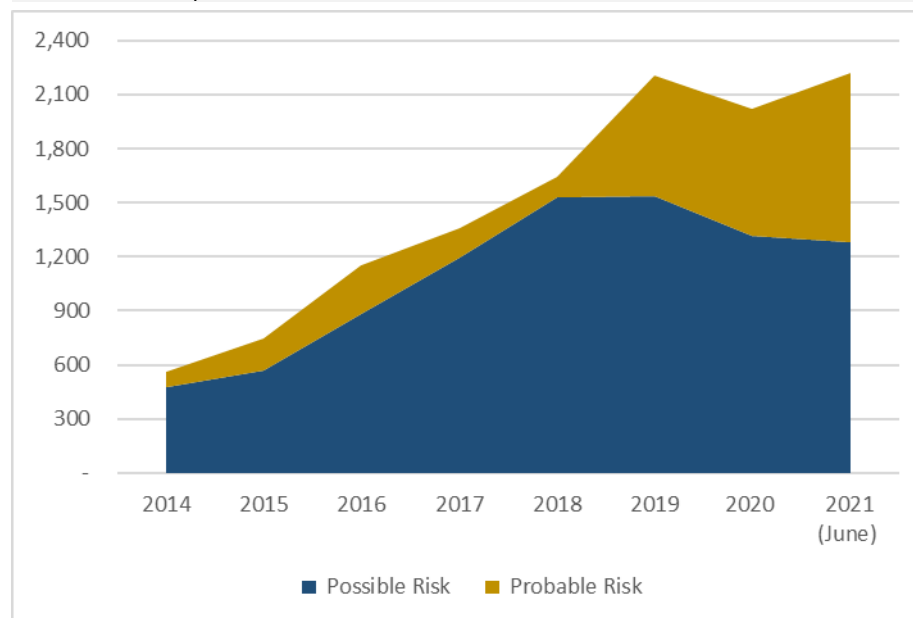
Risky litigation in which the Federal Government is a direct defendant is recorded by the National Treasury in reserve accounts for legal losses, making the Federal Government's balance sheet sensitive because it is likely that there will be a cash outflow in the future and it is possible to estimate its amount with reasonable certainty. The measures that pose a potential risk are considered contingent liabilities, i.e., they are not accrued and therefore do not affect the Federal Government's balance sheet. However, they are listed and disclosed in the "Fiscal Risks" annex to the Budget Guidelines Law and are also included in the notes to the Federal Government Financial Statements.

From 2014 to 2021 (position through June),

Chart 29 - Evolution of the stock of judicial claims against the Federal Government

Data in: R\$ billion

Source: AGU Preparation: STN/ME



claims against the Union have increased substantially in value, with probable risk claims showing a larger rate of increase, particularly from 2018 onward. As of June 2021, probable and possible risk claims totaled R\$2,220.3 billion, as shown in Chart 29, with 58% (R\$1,282.3 billion) related to possible risk claims and 42% (R\$938.0 billion) related to claims classified as probable risk of loss, as shown in data from the Office of the General Counsel for the Federal Government (AGU)¹⁶, the Secretariat for Coordination and Governance of State-Owned Enterprises (SEST), and the Central Bank (BCB). In 2018, the probable risk acts represented about 7% (R\$117.7 billion) of the total acts that pose a fiscal risk to the government (R\$1,645.6 billion).

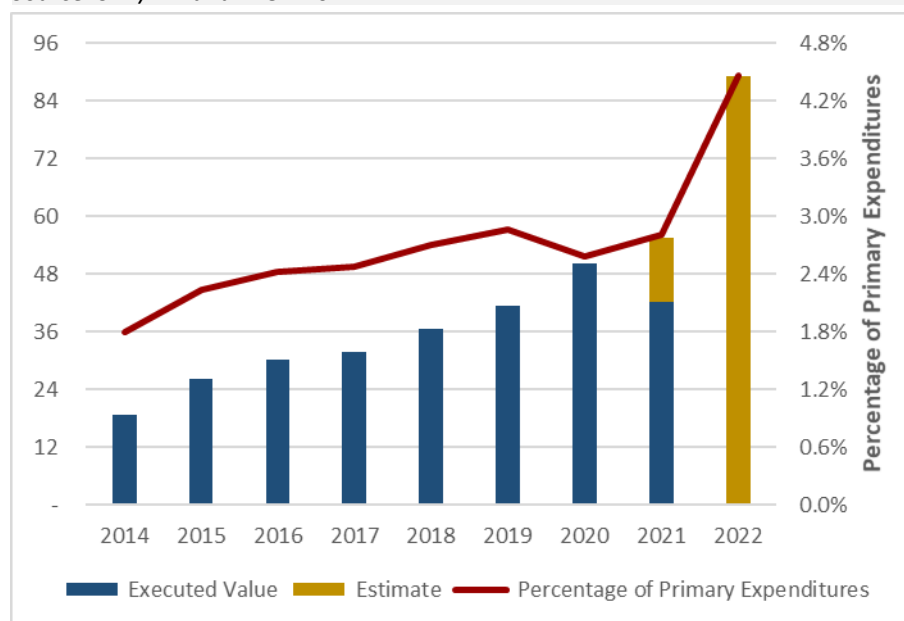
In general, it is considered that the changes made in AGU Ordinance No. 40/2015 regarding the criteria for risk classification have contributed to the evolution of the classification of measures from 2018, with a significant increase in the number of measures classified as probable risk under the responsibility of AGU. However, in addition to this factor, it should also be taken into account that (1) the number of main proceedings before the STF has increased in recent years, mainly due to the conduct of virtual plenary proceedings (increase in probable risks), (2) the tendency for representative issues of controversy to be held back in the STJ in 2018 and 2019, leading to a possible stabilization or decrease in possible risks, and (3) the continued improvement of the fiscal risk assessment, classification, and review process within AGU.

In addition to the increase in the stock of lawsuits that poses a fiscal risk to the Federal Government, there has also been an

Chart 30 - Evolution of Expenditures with Lawsuits

Data in: R\$ billion

Source: STN/ME and PLOA 2022



¹⁶Update of lawsuits with position as of 06/30/2021, based on Technical Note n. 00021/2021/CGPG-DGE/DGE/AGU, of 07/2021, and the Technical Note n. 00022/2021/CGPG-DGE/DGE/AGU, of 08/13/2021.

increase in the realization of this type of risk, as shown in Chart 30. While litigation spending amounted to R\$19.8 billion in nominal terms in 2014, it reached R\$50.3 billion in 2020 (a growth of more than 150%), representing 2.6% of all primary expenditures. In 2021, they reached R\$42.1 billion by June and are expected to end the fiscal year with R\$55.4 billion. For 2022, according to the estimate presented in the Draft 2022 Annual Budget Law (PLOA 2022), this expenditure could amount to R\$89.1 billion. It should be emphasized that this value does not take into account the possible effects resulting from the approval of PEC No. 23/2021 - Precatórios. The decrease in the percentage of this spending relative to primary spending in 2020 is due to extraordinary spending by the Federal Government to combat the effects of the COVID-19 pandemic.

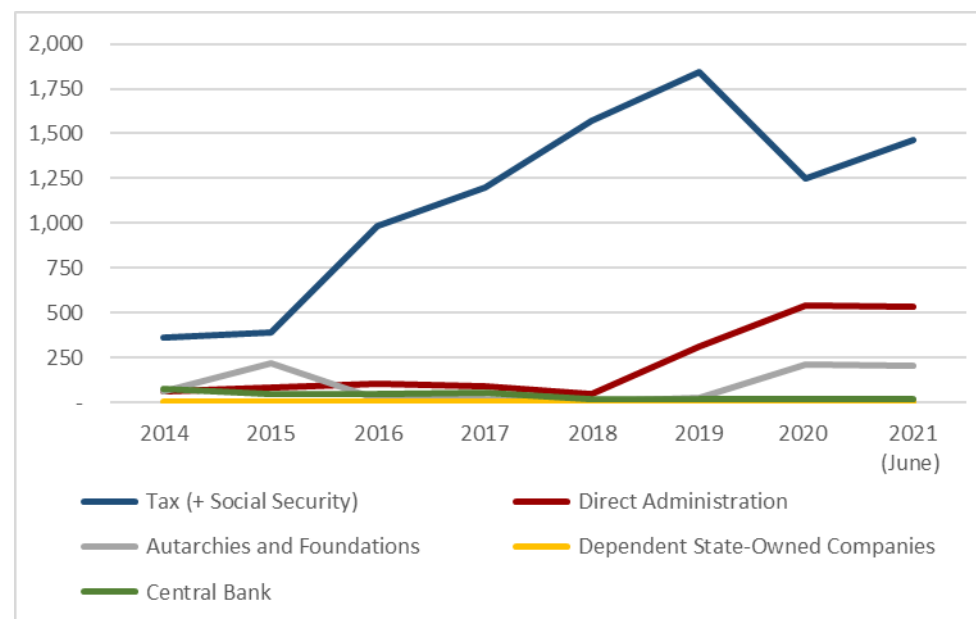
As shown in Chart 31, which includes probable and possible risk lawsuits, the most meaningful amounts of lawsuits against the Union are fiscal (including social security), which have shown strong growth since 2015, reaching R\$1,842 billion in 2019. The estimated amount of fiscal risk from such actions, as of June 2021, is R\$1,464.9 billion. Of this amount, more than 90% is attributable to PIS /COFINS lawsuits, among those with probable and possible risk.

Considering that the impact of court rulings directly affects the primary outcome, either through an increase in expenditures or through the loss of revenues, their upward trend proves to be an important element threatening the Brazilian budget balance and directly affecting the main fiscal rules, such as the expenditure cap and the primary outcome target itself.

Chart 31 - Legal Demands Against the Federal Government per Type of Action

Data in: R\$ billion

Source: AGU



Box 1 - Lawsuits Against the Federal Government

The lawsuits against the Federal Government, its independent agencies or foundations are classified according to the probability of loss and may be classified as probable risk, possible risk or remote risk, according to the criteria established by the Office of the General Counsel for the Federal Government (AGU) through Ordinance AGU No. 40/2015, as amended by Ordinances AGU No. 318/2018 and AGU No. 514/2019, as follows:

Probable Risk when it covers:

- a cognizance lawsuit, a lawsuit for concentrated control of constitutionality or an extraordinary appeal with recognized general repercussion on a group of lawsuits based on an identical question of law with a decision by a collegiate body of the STF unfavorable to the Public Treasury; and
- a cognizance lawsuit or representative appeal of controversy with decision of a collegiate body of the Superior Court of Justice - STJ or of the Superior Labor Court - TST unfavorable to the Public Treasury, which does not have a matter subject to examination by the STF.

Possible Risk when it covers:

- a cognizance lawsuit, extraordinary appeal on individual proceedings or extraordinary appeal from the recognition of the general repercussion on a group of judicial actions based on an identical question of law until the decision of a collegiate body of the STF unfavorable to the Public Treasury; and
- a cognizance lawsuit or representative appeal of controversy with decision of a collegiate body of the Superior Court of Justice - STJ or of the Superior Labor Court - TST unfavorable to the Public Treasury, which does not have a matter subject to examination by the STF.

Remote Risk when they do not fit into the above classifications.

The composition of the financial impact of the risks of law-suits will be:

"I - in convictions of the Public Treasury for payment, the result of the sum of the estimated amounts: (a) judicial payments consisting of the overdue installments included in the final judicial decision as an obligation to pay, and (b) administrative payments consisting of the installments due, if included in the final judicial decision as an obligation to pay.

II - in the case of the Public Treasury convictions resulting in loss of tax collection, the result of the sum of the estimated amounts of reduction in tax collection due to compliance with the court decision, which is thus considered equivalent to the estimated tax collection of 1 year for the future and 5 years of past installments.

Despite the provision for the amount of probable risk lawsuits in the Federal Government Financial Statements (BGU), it is important to emphasize that the deadlines and amounts are uncertain and do not necessarily involve an immediate impact on the National Treasury's cash flow. Only after the final conviction and taking into account any modulation decisions of the effects of the judgment, the judiciary will determine the payment of the amounts in question or even measures that will lead to a reduction in collection, such as compensation or tax rebates.

Table 9 - Judicial Claims of Probable and Possible Risk

Data in: R\$ billion

Source: AGU, SEST e BCB. Preparation: STN/ME

Risks	2014	2015	2016	2017	2018	2019	2020	2021 ¹
Probable Risk	81.2	181.7	269.7	162.6	117.6	659.7	707.2	937.8
Tax (+ Social Security)	17.7	65.8	152.5	56.3	60.3	500.0	384.7	604.4
Others	63.5	116.0	117.2	106.3	57.3	159.8	322.5	333.3
Direct Administration	56.5	84.5	98.9	87.9	42.7	136.9	306.3	321.2
Autarchies and Foundations	-	22.0	8.5	7.0	2.5	8.2	1.0	1.0
Dependent SOEs	2.6	3.5	2.9	2.7	3.1	5.4	5.4	2.9
Central Bank	4.4	6.0	6.9	8.7	9.0	9.3	9.8	8.2
Possible Risk	478.7	565.1	884.0	1,195.1	1,528.0	1,540.1	1,316.1	1,282.3
Tax (+ Social Security)	345.1	327.0	828.3	1,139.5	1,512.8	1,342.1	862.9	860.5
Others	133.7	238.1	55.6	55.6	15.2	198.0	453.2	421.8
Direct Administration	2.1	1.0	4.0	3.1	3.7	171.6	230.6	209.5
Autarchies and Foundations	60.8	194.7	8.3	8.3	3.5	16.0	211.6	203.1
Dependent SOEs	2.1	2.0	2.0	2.1	2.0	4.0	4.9	2.9
Central Bank	68.7	40.4	41.3	42.1	6.0	6.4	6.1	6.3
Total	559.9	746.8	1,153.7	1,357.7	1,645.6	2,199.8	2,023.3	2,220.0

¹ Position on 6/30/2021.**Table 8 - Judicial Expenditure as a percentage of Primary Expenditure**

Data in: R\$ billion

Source: AGU, SIAFI, PLOA 2022. Preparation: STN/ME

Expenditures	2014	2015	2016	2017	2018	2019	2020	2021 ²	2022 ³
Judicial Actions (Amounts Paid) ¹	18.8	26.1	30.3	31.7	36.5	41.3	50.3	55.4	89.1
Total Primary Expenditure	1,046.5	1,164.5	1,249.4	1,279.0	1,351.8	1,441.8	1,947.0	1,971.7	1,998.7
Percent of Total Primary Expenditure ⁴	1.8%	2.2%	2.4%	2.6%	2.8%	2.9%	2.6%	2.8%	4.5%

¹ Amounts paid refer to the total payments of the judicial sentences (Fiscal Year and RAP).² Estimated Amount Paid: Updated Allocation (June 2021). Primary Expenditure Estimate: Primary Revenue and Expenditure Assessment Report - 3rd Bimester 2021.³ Estimated Amount Paid and Primary Expenditure: PLOA 2022.⁴ Percentage of expenditure on legal actions in relation to total primary expenditure.

For more detailed information about the fiscal risk of legal claims against the Federal Government can be obtained in the Fiscal Risk Annex and its updates, at the following electronic address: <https://www.gov.br/tesouronacional/pt-br/estatisticas-fiscais-e-planejamento/planejamento-fiscal/riscos-fiscais>

3.1.2 Contingent Liabilities being recognized by the STN

The Federal Government's contingent liabilities that are in the process of regularization under the STN, also referred to as debt in the recognition process, can be classified as follows: Debt resulting from the Extinction/Dissolution of Federal Administrative Entities, Direct Debt of the Federal Government, and debt resulting from the Salary Variations Compensation Fund (FCVS). With some exceptions, payments of the aforementioned liabilities to creditors are made through Federal Public Debt securities, a modality known as securitization, with financial implications.

Chart 32 shows the evolution of settled liabilities from 2015 to 2020 and the estimate from 2021 to 2024. The settlement of direct debt estimated in 2021 (R\$5.4 billion) refers primarily to contingent liabilities of the Federal Government with CAIXA pending full recognition that enables the progress of the respective administrative proceedings for settlement.

The high estimate of FCVS settlement in 2021 and 2024 is explained by the STN's strategy of anticipating novation to avoid concentration of processes at the end of the period, as the legislation requires that the entire stock be regularized by December 2026.

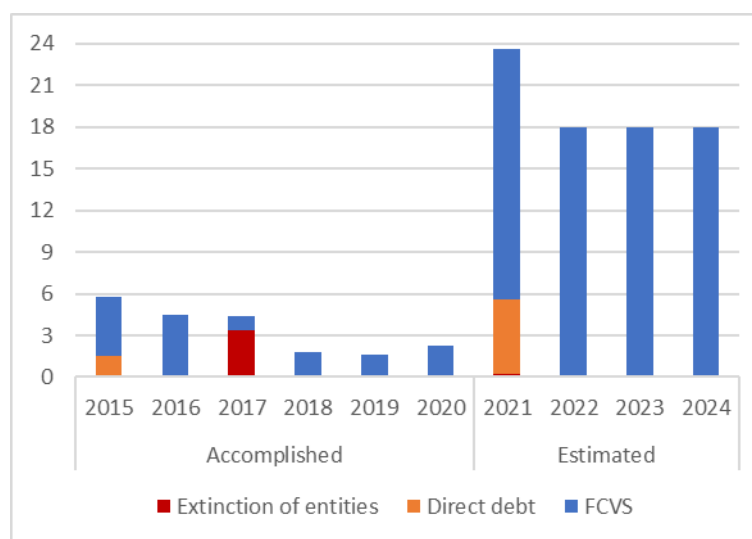
The Federal Government's liabilities arising from the FCVS were gradually settled by the conclusion of successive contracts between the Federal Government and the financial agents (or their agents or the FGTS). Since 1998, 481 novation or assumption agreements have been signed with a total volume of R\$193.1 billion (value December 2021). The agreements provide for payment through long-term securities designated CVS, which mature on January 1, 2027, but which have been paying monthly interest installments since January 1, 2005, and monthly installments of principal since January, 2009.

The stock of contingent liabilities in the recognition phase accrued in the Federal Government Financial Statements (BGU) as of 6/30/2021 is R\$115.6 billion, of which FCVS accounts for approximately 95%.

Chart 32 - Settlement of Contingent Liabilities

Data in: R\$ billion

Source and Preparation: STN/ME



Debts Resulting from Extinction/Dissolution of Entities: Commitments assumed by the Federal Government due to the extinguishment/dissolution of autarchies/companies.

Direct Debts of the Federal Government: These have their origin in a variety of events. Two of them stand out: (i) attribution to the federal government of commitments arising from investments made in the defunct territories; and (ii) legal provisions that authorized federal financial institutions to provide financial aid or to participate in a particular public policy, with the promise of subsequent repayment by the government.

FCVS: Public Fund of an accounting and financial nature, whose objective is to guarantee the term limit for amortizing the debt of borrowers resulting from housing financing, through the assumption of the rights and obligations of the extinct

3.1.3 Guarantees

3.1.3.1 Federal Government Guarantees and Counter-guarantees - Credit Operations

Within the STN, the guarantee system includes the granting, control and enforcement of guarantees and counter-guarantees. For example, the STN monitors any delays in payments on guaranteed contracts, sets deadlines for settling outstanding payments, and makes debtors aware of the sanctions, penalties, and consequences provided for in the contracts and relevant legislation.

If the borrower fails to make payment within the established deadlines, the Federal Government, as guarantor, settles the debt with the creditor and then activates the counter-guarantees provided for in the contract to recover the amounts disbursed, including, in addition to the amount originally due, default interest, fines and other fees that may be provided for in the financing contracts.

Chart 33 presents the evolution of the Federal Government

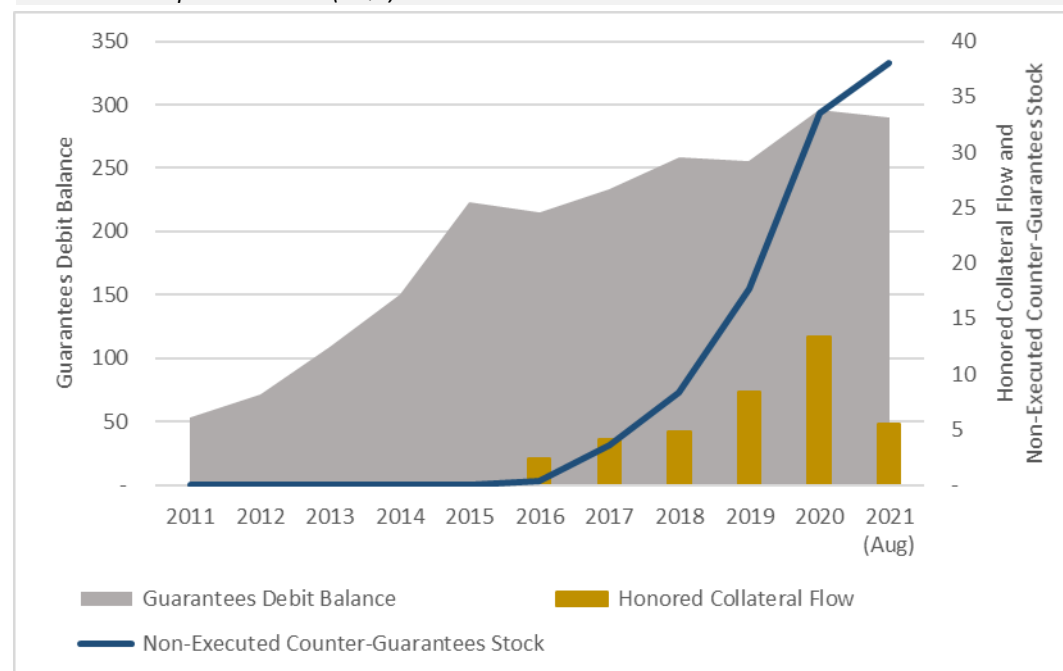
guarantees for credit operations, from 2011 to 2021 (Aug). The debit balance, which represents the stock of all existing guarantee contracts, shows an increasing trend, with a growth of 446% from 2011 to August 2021, when it reached the R\$290 billion mark. It is important to note that the increase in the stock observed from 2019 to August 2021 is mainly due to the depreciation of the exchange rate.

The flow of honored guarantees shows the Federal Government's annual spending on un-

Chart 33 - Evolution of Guarantees for Credit Operations

Data in: R\$ billion

Source and Preparation: STN (RQG)



As stated in item IV of Article 29 and in Article 40 of Complementary Law 101/2000 (Fiscal Responsibility Law - LRF), the federal government may provide guarantees in internal or external credit operations, defining this mechanism as the commitment to fulfill a financial or contractual obligation of a federal entity or an entity related to it.

paid debts of federal entities, with financial implications. After a period of 11 years (2005 to 2015) without the need to honor guarantees granted, the STN started paying honors again in 2016, accumulating an amount of R\$38.5 billion from May/16 to August/20. In 2020, honors were R\$ 13.3 billion. In 2021, by August, the honored amount was R\$5.5 billion. The STN forecast assumes that this amount will be R\$8.4 billion at the end of the year.

Another feature of Chart 33 is the growing stock of counter-guarantees that are not assumed by the Federal Government. This shows that the fiscal risk in guarantee transactions increases from a value of R\$3.6 million in 2017 to R\$38.1 billion in mid-2021 (958% growth). The non-execution of counter-guarantees is linked to two factors:

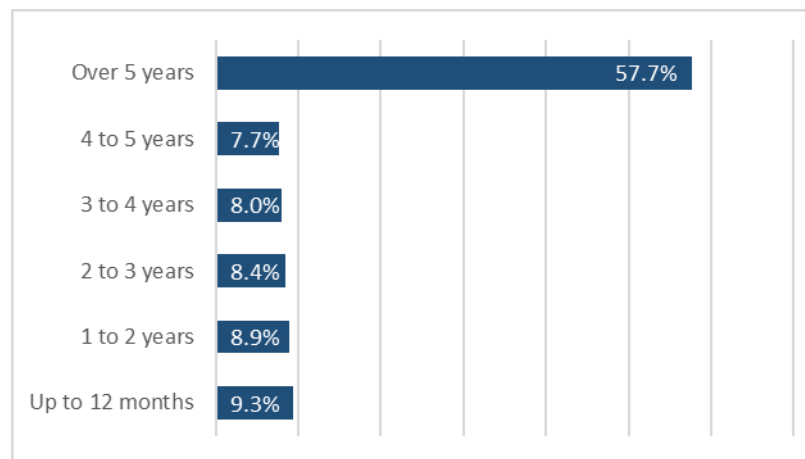
1. Injunctions in lawsuits filed by borrowers against the Federal Government. There are currently 12 court cases with a financial impact of R\$17.5 billion (as of 6/30/2021); and
2. Adhesion of States to the Fiscal Recovery Regime - LC No. 159/2017 (RRF). To date, only the State of Rio de Janeiro has complied with the terms of LC No. 159/2017, which corresponds to a suspension of R\$26.4 billion (as of June 30, 2021), noting that the dynamics of the RRF were modified by LC No. 178/2021. It is considered likely that the states of Rio Grande do Sul and Minas Gerais will join the aforementioned regime, and it should be noted that the state of Goiás has received a positive decision from the STF to join the RRF.

Regarding provisions and reserves, the amounts guaranteed by the Federal Government to states that have joined the RRF are accounted for by the STN as provision, since the adhesion of the entity creates the expectation of default on its maturing obligations. In addition, each year the STN requests specific and sufficient budget allocation for the payment of the honors estimated for the following year.

Finally, Chart 34 shows the percentage of maturing guarantees by time period, totaling R\$347 billion (outstanding balance plus accrued interest), illustrating the extent of the Federal Government's commitment to the outstanding balance of its guarantees.

Chart 34 - Maturing Percentage of Guarantees for Credit Operations

Source: STN (RQG)



The outstanding balance of guarantees increases due to new disbursements in existing contracts, contracting of new credit transactions with disbursements, indexation of the outstanding balance (for domestic guaranteed debt), and increases in exchange rates (for foreign guaranteed debt). On the other hand, the amortizations and the appreciation of the real against foreign currencies reduce the outstanding balance.

Every four months, the STN publishes the Guaranteed Credit Operations Report (RQG). Editions of this report can be accessed at the following electronic address: <https://www.tesourotransparente.gov.br/publicacoes/relatorio-quadrimestral-de-operacoes-de-credito-garantidas-rqg/2020/28>

3.1.3.2 Private Guarantee Funds with Federal Government Participation

The Federal Government's participation in the Guarantee Funds must be authorized by a law that also defines the limits of its participation, taking into account the fund's objectives, which in turn are based on the public policies it seeks to enforce or undermine. The Federal Government can be a sole shareholder or participate together with other shareholders. These funds are usually administered by a federal financial institution or public corporation, which represents them in and out-of-court and receives compensation for services rendered, as provided in their regulations or bylaws. The Federal Government's liability in these Guarantee Funds is limited to the value of its quotas because these funds are private in nature and have their own obligations, which are different from those of the quota holders.

The main private Guarantee Funds involving the Federal Government as quota holder are:

- a) Guarantee Fund for Shipbuilding - FGCN: Its objective is to hedge the credit risk of financing for the construction or manufacture of vessels and the risk arising from the performance of Brazilian shipyards. Law 11.786, of September 25, 2008 authorized the Federal Government's participation in this fund;
- b) Guarantee Fund for Popular Housing - FGHab: The objective is to provide guarantees for housing financing contracts signed under the Minha Casa Minha Vida Program (PMCMV), when the events of Death and Permanent Disability (MIP), Physical Damage to the Property (DFI) and Temporary Reduction of Payment Capacity (RTCP)/unemployment occur. The Federal Government's participation in this was authorized by Law No. 11,977, of July 7, 2009;
- c) Infrastructure Guarantee Fund - FGIE: The objective is to provide risk coverage for infrastructure operations related to strategic programs or actions of the Growth Acceleration Program - PAC - established by the Executive Branch, financing projects for shipbuilding or transposition, credit operations for the civil aviation sector, public-private partnerships - PPPs or other strategic programs related to infrastructure operations. Law 12,712 of August 30, 2012, authorized the Federal Government's participation in this fund. Law No. 14,227 of October 20, 2021, amended Law No. 12,712 of 2012, including with respect to the purposes of the Fund, but without changing the ceiling of the Union's participation.
- d) Guarantee Fund for Educational Credit Operations - FGEDUC: its purpose is to guarantee the risk in educational credit operations, within the scope of the Higher Education Student Financing Fund (FIES) until the

The guarantee funds with the participation of the Federal Government are private associations that do not distribute any amounts to the quota holders. These funds have their own equity, formed by the contribution of assets and rights by the quota holders, by the payment of quotas, by the income generated by the management of their assets and by the results from the management of guarantees. The rights and obligations of funds are defined in their own normative instruments, and their governance model is based on collegial participation bodies established by an act of the executive branch, with the purpose of supporting the voice of the federal government in the assemblies of quota holders.

end of 2017. Law 12.087, of September 11, 2009 authorized the Federal Government's participation in this fund;

- e) Guarantee Fund of the Student Financing Fund - FG-FIES: its purpose is to guarantee the financing credit to students under FIES as of the first semester of 2018. The Federal Government's participation in this was authorized by Law No. 13,530, of December 7, 2017.
- f) Guarantee Fund for Investments - FGI: Its objective is to guarantee, directly or indirectly, the risk of financing and loans granted to micro, small and medium-sized enterprises, individual microentrepreneurs and self-employed road hauliers for the acquisition of capital goods within the scope of their activity. Law 12.087, of September 11, 2009 authorized the Federal Government's participation in this fund.
- g) Guarantee Fund for Operations - FGO: Like the FGI, its purpose is to guarantee the risk of financing and loans granted to micro, small and medium-sized enterprises, individual microentrepreneurs and independent road haulage companies for the acquisition of capital goods related to their activities. Federal Government's participation in this fund was authorized by the Law 12.087, of September 11, 2009

In addition to the above-mentioned Funds, the Federal Government participated as a shareholder of the Guarantee Fund for Public-Private Partnerships - FGP, focused on providing guarantees to PPPs. However, the fund was closed in 2017 and replaced by the FGIE, which had a similar purpose.

Table 10 shows the main private Guarantee Funds with Federal Government participation. The column "Federal government participation" shows the updated value of the quotas owned by the government. The "Shareholder Equity" column shows the value of the total fund net equity, including the participation of other shareholders besides the Federal Government. The Federal Government holds the majority stake in all the funds listed, with the totality of its quotas valued at approximately R\$64 billion (as of June 2021), an amount that represents more than 91% of the total net equity value of the Guarantee Funds.

Compared to the last report on the fiscal risks of the Federal Government, the values corresponding to the quotas of the private guarantee funds with the participation of the Federal

Table 10 - Guarantee Funds with Federal Participation

Data in: R\$ million Position: 06/2021

Source: Fund Managers

Guarantor Fund	Federal Participation	Shareholders' Equity
FGI	19,549.1	19,809.4
Traditional FGI	1,004.3	1,264.6
FGI Peac	18,544.8	18,544.8
FGO	33,441.6	37,050.1
Original FGO	912.9	4,521.4
Pronampe FGO	32,528.7	32,528.7
FGEDUC	6,826.4	6,826.4
FG-Fies	2,144.6	2,956.2
FGCN	58.0	59.0
FGIE	758.2	761.0
FGHab	1,699.5	2,830.2
Total	64,477.5	70,292.3

For the federal government, the main purpose of establishing a fund is to hedge credit risk for operations involving the financing of certain sectors of the Brazilian economy, such as navy and housing. By promoting guarantees for credit operations, the Guarantee Funds have acted as a tool for risk mitigation and feasibility of programs and public policies since 2009. The guarantees offered complement the requirements of the lending financial agent and are intended to promote the participation of the private sector and, consequently, the economic revitalization of certain sectors.

Government showed an appreciation of more than R\$10 billion. In addition to the payment of quotas, the increase in equity may result from income from the asset portfolio, generally consolidated in Investment Funds, and from income from money commissions. On the other hand, there are events that have a negative impact, such as honor guarantees and the payment of administrative expenses, which generally have a certain predictability due to the contracts in force, actuarial calculations and risk management.

Fiscal Risk

The resources of the Federal Government deposited in the Guarantee Funds are the backing for the concession of guarantees in the scope of public programs and policies. Although the fiscal risk is not characterized according to the definition of this report, since the expenditure is made whenever the contribution is made, it is considered important to present the data in relation to the private guarantee funds, since the guarantees are honored through payment with resources of the Fund, consisting, among others, of public assets. Thus, even if there is the recovery of part of the honored values, it is a relevant risk for assets owned by the Federal Government.

The risk of devaluation of the Federal Government's assets is related to the fulfillment of the guarantees given by the Funds. If the Fund is called upon, it will make a payment of honor that has its assets as a source, resulting in a reduction of its assets, which will reduce the value of its quotas, affecting proportionally all quota holders. With respect to funds in which the Federal Government participates as a quota holder, some have already paid or are expected to pay honors in large amounts. In some of them, as in the case of FGHab, the fixed or variable cash fees are higher and responsible for the positive results of the fund, despite the routine payment of honors.

Chart 35 - Participation of the Federal Government in the Shareholder Equity of the Guarantee Funds

Position: 06/2021

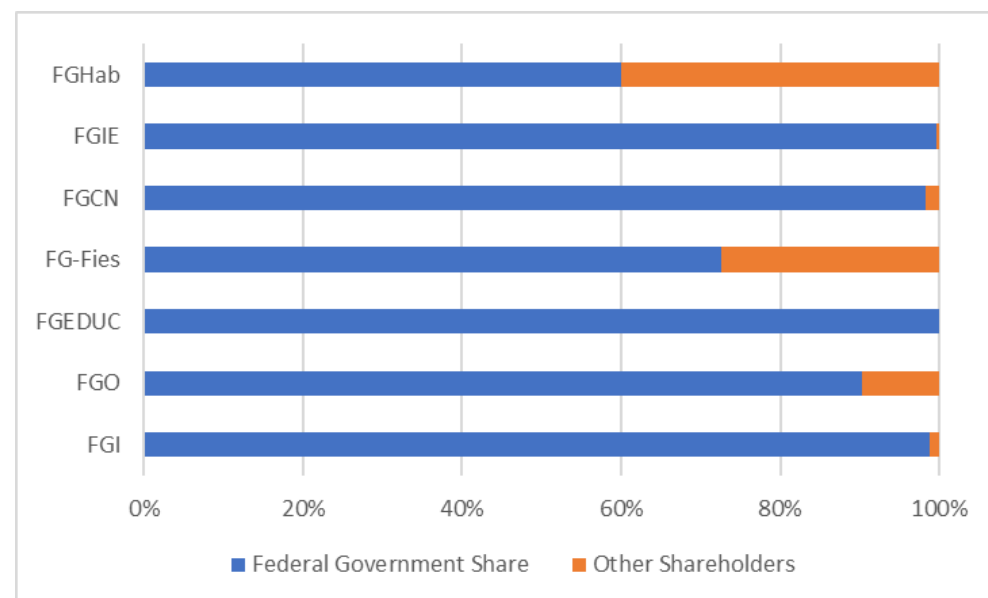


Chart 35 shows the Federal Government's participation as a percentage

of the funds' shareholder equity and, consequently, its risk in the event of a devaluation of equity.

As an example of the magnitude of the risks involved, we can cite those related to shipbuilding operations, in which FGCN honored guarantees worth R\$ 4.7 billion between 2015 and 2016. Under the student financing contracts guaranteed by the FGEDUC, the Fund has made payments of R\$1.247 billion through June 2021, covering 92,958 contracts. In both examples, the Fund's equity is insufficient to honor the guarantees due, and in the case of the FGEDUC there is the mechanism of the *stop-loss*, which determines the fee limit to be paid by the Fund in proportion to its net equity.

In addition to the risk arising from the honor of guarantees, the following fiscal risks are added: i) the possibility of the Federal Government to make additional contributions to the funds to support the implementation of public actions when an actuarial imbalance is identified; ii) inefficient work due to the emptying of resources that could be useful in other areas, a situation that exposes the resources of the Federal Government to a low quality of allocation.

In this sense, the structuring of Funds of this nature must be analyzed and justified, given the risks intrinsic to them. The performance of public policy in relation to each fund and their respective sustainability must be monitored and evaluated by the relevant bodies to confirm the efficiency of the use of resources.

The negative impact of the Covid 19 pandemic on Brazilian companies - decrease in marketed sales/services and problems in meeting salary and financial obligations - has made it difficult for small and medium-sized SMEs to obtain new financing or loans. Considering this scenario, the Federal Government has launched the programs in 2020 to support SMEs during this period: National Program to Support Micro and Small Enterprises (PRONAMPE) and the Emergency Program for Access to Credit (PEAC), with support from the FGO and the FGI.

In 2020, PRONAMPE served 468,000 companies and acted by offering guarantees of up to 85% of credit losses in the financing portfolios of micro and small entrepreneurs. This coverage allowed that every R\$ 1 that the Federal Government contributed to the program's guarantee was converted into R\$ 1.17 in credits. The program ended in 2020 with more than R\$37 billion in credits. Act 14,161 of June 2, 2021 converted PRONAMPE into a permanent credit program and authorized the Federal Government to increase its participation in the FGO until December 31, 2021.

The PEAC, in turn, allowed smaller companies to contract financing through December 31, 2020, guaranteed by future revenues from sales generated by the credit card machine, without the need for collateral or real guarantees. In this way, the program served 114,355 companies last year, with 135,720 operations completed and granting of guarantees in the amount of R\$92.1 billion.

Box 2 - The Regional Development Fund

The Infrastructure Guarantee Fund - FGIE - was established on November 28, 2014 by Agência Brasileira Gestora de Fundos Garantidores e Garantias S.A. - ABGF - in accordance with Article 33 of Law 12.712/2012, in its original version. Of the total R\$11 billion granted in Law 12.712/2012, the federal government contributed R\$1 million on August 10, 2015. Subsequently, the Federal Government received most of the quotas of the ABGF and currently holds 99.6% of the quotas. In addition to the Federal Government, the Municipality of Salto in the state of São Paulo and the ABGF, the administrator of the Fund, are also shareholders of the FGIE. Throughout the operating period, FGIE provided only one guarantee to the municipality of Salto/ SP, which began in January 2019.

On May 19, 2021, Provisional Measure No. 1.052/2021 was published amending Law No. 12.712/2012, expanding, among other provisions, the purpose of the Fund, whose main objective is now the structuring and development of concession projects and public-private partnerships of the Federal Government, the States, the Federal District and municipalities, ranging from the financing of technical services for project modeling to the provision of guarantees and the necessary sources of funds through partnerships with the private sector.

The amendments aim to make the allocation of FGIE funds for infrastructure more efficient by participating in investment funds, structuring and developing projects, and granting of guarantees to cover risks related to the non-fulfillment of financial obligations by public partners. In this way, an attempt is made to increase the *funding* for the North, Northeast, and Central-West regions to spur development by attracting private capital and promoting the reduction of regional disparities.

On October 21, 2021, Law No. 14,227/2021 was passed, which goes back to Provisional Measure No. 1,052/2021 and establishes the **Regional Development Fund**. This is a private fund operating under a quota system, managed and represented in and out of court by a financial institution selected through a call for proposals, and the establishment of the Fund Council, composed of representatives of the Ministry of Economy, the Office of the Chief of Staff and the Ministry of Regional Development. Both the Fund and its governance model are structured through the transition from the current FGIE.

3.1.3.3 Export Guarantee Fund (FGE)

FGE resources are used to provide Export Credit Insurance (SCE), which the Federal Government uses to insure exports of national goods or services against commercial, political, and extraordinary risks that may affect economic and financial transactions related to Export Credit Operations.

The Fund's exposure, in terms of resources, has decreased in recent years. While in 2014 the exposure was about US\$31.1 billion for approved and completed operations, in 2021 (as of June) it decreased to US\$7.4 billion, equivalent to R\$37.2 billion for both types of operations at the exchange rate of June 30, 2021, as shown in Table 11.

Table 11 - FGE Exposure by Residual Term and Operation Phase

Data in: US\$ million Position: 06/30/2021

Source and Preparation: CAMEX/ME

Residual Term (In years)	Approved				Accomplished				Total			
	Exposure (US\$)	%	Qty	%	Exposure (US\$)	%	Qty	%	Exposure (US\$)	%	Qty	%
00 - 05	-	-	0	0.0	3,135.4	45.8	856	97.2	3,135.5	42.2	856	96.9
05 - 10	-	-	0	0.0	1,954.3	28.5	16	1.8	1,954.3	26.3	16	1.8
10 - 15	585.3	100.0	2	100.0	976.8	14.3	5	0.6	1,562.0	21.0	7	0.8
15 - 20	-	-	0	-	786.4	11.5	4	0.5	786.4	10.6	4	0.5
20 - 25	-	-	0	-	-	-	0	0.0	-	-	0	0.0
Total	585.3	100.0	2	100.0	6,852.9	100.0	881	100.0	7,438.2	100.0	883	100.0

This decrease in risk is mainly explained by the budgetary restrictions to which the Fund was subject from 2018, when the volume of claims in operations covered by the SCE increased significantly since 2017 due to the sovereign *defaults* of Mozambique, Venezuela, and Cuba; by the emergence of claims in 2020 on three large operations in the aviation sector due to the Covid 19 pandemic, which further exacerbated the FGE's budgetary restrictions; and by the large volume of export transactions with SCE coverage that were concluded and whose balances were removed from the Fund's exposure.

At a general level, the development of premiums and compensation collected is shown in Chart 36. It can be observed that in the last 3 years, the total indemnified values correspond to more than 90% of the compensation history of the FGE. These values are mainly related to the default of operations guaranteed by Mozambique, Cuba and Venezuela, since the latter two countries remained in default in 2020.

The FGE, established by Provisional Measure 1.583-1/97, converted into Law 9.818/99, is a public fund of the Federal Government of an accounting nature, linked to the Ministry of Economy and financially managed by the BNDES. It is used to cover the guarantees provided by the Federal Government in operations related to export credits.

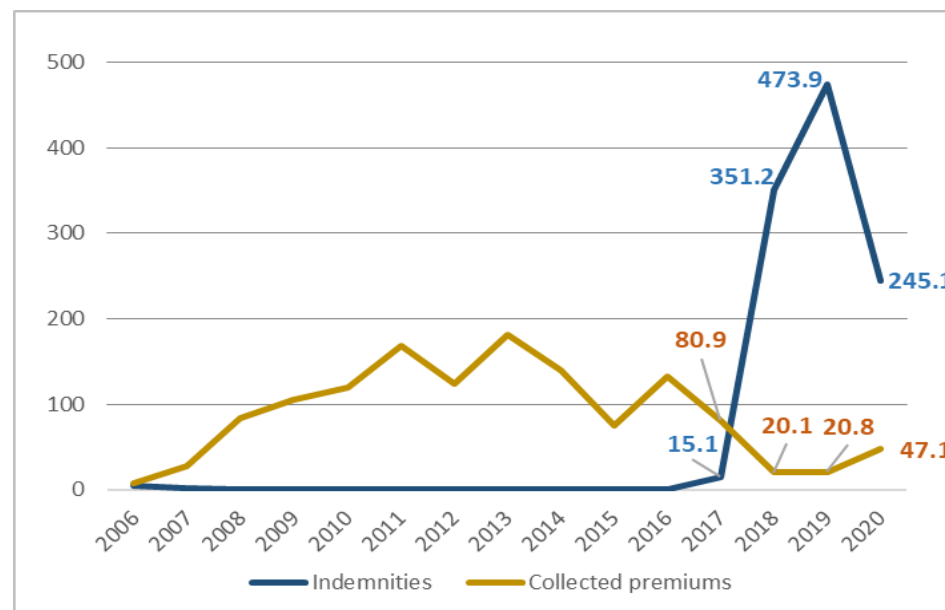
The SCE operations may be in an "approved" or "materialized" situation. The approved transactions are those that were processed in the decision-making instances with the issuance of a coverage offer by the FGE, but without a policy being issued. The transactions concretized are those for which the issuance of an export credit insurance policy has already taken place.

With the expansion of claim operations in recent years, the sustainability of the model presents relevant risks for the Federal Government. In order not to exacerbate this scenario, based on the authorization granted by GECEX/CAMEX Resolution 12/2020, a new model for granting Export Credit Insurance is being developed that takes into account the following premises: (1) Regulatory review of administrative and normative, legal, and infra-legal acts affecting SCE, the Export Financing Program (PROEX), and FGE; (2) Promote technical and normative alignment of the Federal Government with international best practices; (3) Improve mechanisms of governance, transparency, control, risk management, compliance, and integrity; and (4) increasing efficiency in the use of public funds with the goal of reducing the budget dependence of the system and increasing the private sector participation, taking into account the principles of financial sustainability, long-term actuarial balance, quality of public spending, and accountability. We are also working on the reformulation of the Export Credit Insurance System, whose main objectives are to untie of resources from the Federal Government budget and improve the management of the system in order to increase Brazilian exports.

Chart 36 - FGE: Collected Premiums X Indemnities (Flow)

Data in: US\$ million

Source: ABGF, BNDES



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

In realized operations, on the other hand, the residual term is defined as:

- in case there is no balance to be disbursed on the valuation base date, the remaining term for re-payment;
- for operations with a balance to be disbursed, the maximum theoretical disbursement period determined as of the base date of the survey (without taking into account disbursements made up to that date), plus the disbursement term.

Table 12 - Estimated Impact of SCE Maintenance

Data in: million (US\$ and R\$)

Source: CAMEX/ME

Impact Category	2022		2023		2024		2025	
	US\$	R\$	US\$	R\$	US\$	R\$	US\$	R\$
Outstanding covered amounts ¹	925.4	4,765.9	748.5	3,772.4	545.0	2,725.0	411.8	2,058.8
Estimated FGE payments (R\$) ²		1,504.4		1,071.1		607.9		329.3

¹ Exchange rates used: 5.15 for 2022, 5.04 for 2023, and 5.00 for 2024 and 2025, obtained from the Macroeconomic Parameters Grid 2022 - 2024 of the Draft Budget Guidelines Law of 2022.

² The payment estimates were calculated by applying the long-term reference default rates used in the EU Credit Rating Agency Regulation (CRAR).

Since it is a primary expenditure, the materialization of the FGE's (Export Guarantee Fund) fiscal risk impacts the Federal Government's primary result and the expenditure cap. The estimated impact of maintaining the SCE from 2022 to 2025 is US\$ 2.6

billion (R\$ 13 billion, quoted on 6/30/21).

3.1.4 Constitutional Financing Funds

Constitutional financing funds are the main financing instruments of the National Policy for Regional Development (PNDR). They contribute to the economic and social development of the Midwest (FCO), Northeast (FNE), and North (FNO) by providing benefits to productive actors of all sizes and sectors.

Since the funds are public in nature and are part of the assets of the Federal Government, the fiscal risks are associated with a default of funding. In this way, provisions are set up for bad debts referring to the installments of principal and charges overdue for more than 180 days. In turn, the installments overdue for more than 360 days are recorded as losses in memorandum accounts until all procedures for their recovery are exhausted.

The balance of funds as of December 31, 2020 for the FCO, the FNE, and the FNO shows that expenditures for bad debt provisions in 2020 amounted to R\$19.2 million, R\$752.4 million, and R\$315.2 million, respectively, for a total of R\$1,086.8 million. These amounts are reported in the earnings accounts of the balance sheets of the respective funds. In addition, the managing banks of these funds forecast expected provision amounts for future years, as shown in Table 13.

The credits written off as losses and recorded in the memorandum accounts may be recovered in the future, albeit only to a small fraction. These credits, which had a negative fiscal impact at the time of the provision, may have a

positive impact on primary earnings if recovered. Table 14 details the credit recovery by Fund, while Chart 37 shows the recovery since 2016.

Table 14 - Recovery of Credits and Stock of Credits Written Off as Losses

Data in: R\$ million Position: Dec/2020

Source: Balance Sheets of the Constitutional Funds and information sent by Managing Banks

Funds	Recovery of credits written off as loss (A)	Stock of credits written off as loss (B)	Recovery Quotient (A/B)
FCO	1.3	691.6	0.19%
FNE	122.5	10,806.6	1.13%
FNO	81.0	3.963.4	2.04%
Total	204.8	15,461.6	1.32%

Table 13 Constitutional Funds Allowance for Doubtful Debtors

Data in: R\$ million

Source: Managing Banks Preparation by:STN/ME

Funds	Accomplished	Estimate			
	2020	2021	2022	2023	2024
FCO	19.2	17.8	17.9	18.0	18.1
FNE	752.4	685.3	691.7	691.7	691.7
FNO	315.2	305.9	329.4	360.9	430.6
Total	1,086.8	1,009.0	1,039.0	1,070.6	1,140.4

The resources that make up the Constitutional Funds correspond to 3% of the proceeds of the IPI and IR (besides the returns and results of their investments), distributed as follows:

FNO - 0,6%

FCO - 0,6%

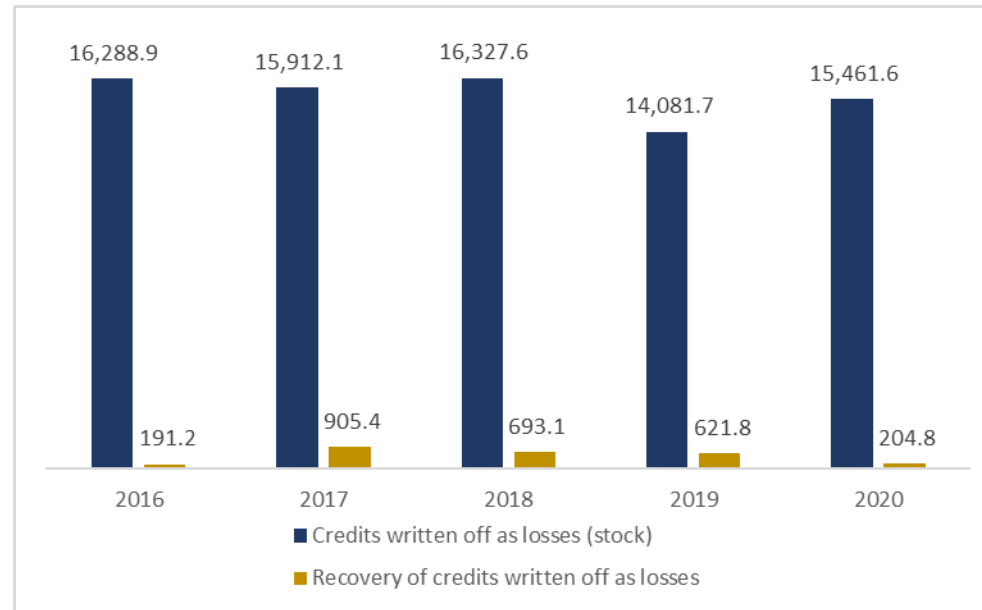
FNE - 1.8%

The impact of these operations on the fiscal statistics, either the provision for bad debts or the recovery of credits written off as losses, occurs under the heading of result of the constitutional funds and affects the primary result of the Central Government.

Chart 37 - Evolution: Stock of Losses and Recoveries (Constitutional Funds)

Data in: R\$ million

Source: Managing banks



3.2 Assets

3.2.1 Federal Active Debt

The Federal Active Debt (DAU) refers to amounts in favor of the Federal Government that have not been paid by debtors when due, and the government has the authority to collect interest, penalties, and monetary refunds on the amounts due. The fiscal risk involved consists in the Federal Government not receiving the amounts to which it is entitled or receiving them after the previously scheduled deadlines.

Chart 38 presents the DAU, with June 2021 position, by type of credit and rating, totaling an inventory of R\$ 2.639 billion. Of this amount, R\$1,381 billion (52%) relates to credits classified as irrecoverable while only R\$271 billion (10%) concerns credits with high prospects of recovery. The other credits are classified as having low and medium recovery prospects.

Chart 38 - Distribution of DAU by Type of Credit and Rating

Data in: R\$ billions Position: 06/30/2021

Source: PGFN



The Attorney General of the National Treasury (PGFN) is the authority responsible for managing active debt. It must register the credit balances claimed by the various government agencies and make the corresponding amicable or judicial collections.

The classification methodology for the credits registered in the Active debt has the following rating structure:

- a) Class "A": credits with high recovery perspective;*
- b) Class "B": credits with medium recovery perspective;*
- c) Class "C": credits with low recovery perspective;*
- d) Class "D": irrecoverable credits.*

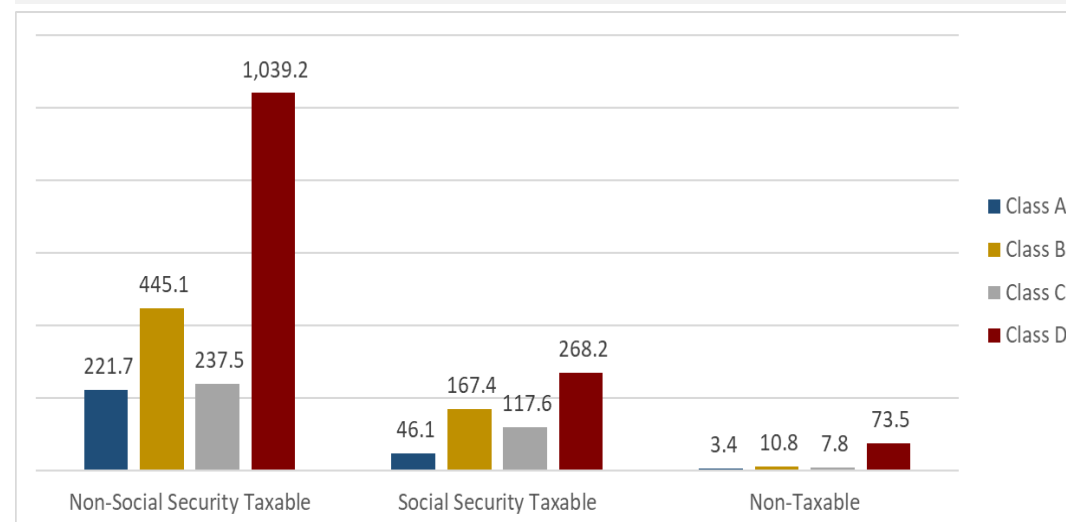
Based on the DAU compliance history, Class "A" and "B" credits are expected to be recovered at 70% and 50%, respectively, over the next 15 years, with corresponding adjustments for losses of 30% and 50%, respectively, as shown in Chart 39. The balance of R\$2,639 billion, about R\$2,137 billion (81%) are therefore considered losses. It is expected that R\$501 billion will be recovered in this way, with most of it impacting the primary result.

For the years 2021 and 2024, the reestimation of DAU collection has been made taking into account the flows for the current and the next fiscal year, as shown in Table 15 - DAU Collection Reestimation. For 2021, a 15% cut was made due to the impact of the economic crisis caused by the pandemic. The estimate for the years 2022 onwards has been updated to take into account the return to the collection levels of previous years.

Chart 39- Federal Active Debt - Expected Recovery per Rating

Data in: R\$ billions Position: 06/30/2021

Source: PGFN



The Public Treasury's credits originated from non-tax fines, rents, fees, leases or occupation taxes, procedural costs, prices for services rendered by public establishments, indemnities, restitutions, refunds, as well as credits resulting from obligations in foreign currency, subrogation of mortgage, guarantee, surety, aval guarantee or other collateral, contracts in general or other legal obligations (according to Law 4.320/1964) are classified as non-tax active debt.

Table 15 - DAU Collection Reestimation

Data in: R\$ billion

Source: PGFN

Estimate	2021	2022	2023	2024
Collection Flows	24.89	26.06	28.22	30.12

3.2.2 Credits of the Central Bank of Brazil

This section presented the credits of the Central Bank of Brazil (BCB) in institutions in liquidation, derived from financial assistance operations (Program of Stimulus to Restructuring and Strengthening of the National Financial System - PROER) and balances from overdrafts on the Bank Reserve Account, information that was also presented in the Fiscal Risks Annex (ARF) until 2020.

Considering that the expected losses on loans with institutions in out of court liquidation previously presented in this section are included by BCB in its financial statements to comply with International Financial Reporting Standards (IFRS) and are consolidated in the BGU, the information in this section has not been included in this year's ARF.

For this reason, such information will also not be presented in this Fiscal Risks Report.

3.2.3 Financial Assets Not Related to Subnational Entities

The financial assets of the Federal Government that are not related to subnational entities and are managed by the STN are currently divided into five categories, depending on the regulation or law that created them, as follows: Originating from Loans granted to Financial Institutions; Originating from Rural Credit Operations; Originating from Credit Assignment Operations; Originating from Export Credit Operations, Originating from Loans to Non-Financial Entities and Emergency Employment Support Program - PESE/FOPAG.

The fiscal risk associated with these financial assets relates to the possibility that the estimated flows will not occur, thereby jeopardizing federal financial revenues. Based on the information provided by the financial institutions contracted by the Federal Government to manage the loans, an amount of R\$4.41 billion is reported in the SIAFI for adjustments for losses on long-term loans (as of June 30, 2021).

Table 16 - Financial Assets Not Related to Subnational Entities

Data in: R\$ million

Source: STN/ME

Financial Asset	Stock ¹	Estimated Flow			
		2021	2022	2023	2024
Loans to Financial Institutions ²	178,640.4	118,242.1	63,712.2	4,905.9	4,390.1
Rural credit	5,988.1	2,624.3	661.8	593.2	549.0
Credit Cession (or structured)	7,355.9	2,645.6	1,954.1	853.9	633.3
Export Credit	5,514.5	793.2	813.0	833.3	854.2
Loans to Non-Financial Entities	39.0	30.6	30.7	11.0	-
Emergency Employment Support Program - PESE/FOPAG ³	5,695.8	2,359.9	2,878.7	1,568.5	-
Total	203,233.6	126,695.6	70,050.5	8,765.8	6,426.6

¹ Position 8/31/2021.

² The estimated values already take into account the loan repayment schedule submitted by the financial institutions as a result of the Judgment 56 - TCU, which the financial institutions intend to pursue to the best of their ability.

³ Program created in 2020 to provide payroll funding under the Special Jobs Support Program due to the COVID-19 pandemic. Therefore, revenues from the Program started a few months ago, which does not allow an accurate analysis on the level of default and the fiscal risk on its revenue estimate.

3.3 Subnational Entities

In the context of relations between the Federal Government and subnational entities, fiscal risks occur in various configurations with financial implications. It is well-known that the Federal Government acts, directly or indirectly (through the federal public banks), as creditor or guarantor for a large part of the debts of the subnational entities. Therefore, cases of subnational insolvency may affect the finances of the Federal Government.

One risk that is particularly likely to materialize is court approval of new suspensions of payments to the Federal Government by state and local governments. Currently, the states of Minas Gerais, Rio Grande do Sul, and Goiás enjoy these benefits obtained through court orders.

A second potential source of fiscal risk for the Federal Government arises from government-guaranteed credit transactions entered into by subnational entities. In 2020, the STN had to honor R\$13,331.43 million in defaulted payments for the services of these debts contracted by the states and municipalities, and by August 2021, another R\$5,506.26 million had already been honored.¹⁷

Considering these factors, Table 17 presents the expected flow of payments of debts with the Federal Government, already considering the default of Rio de Janeiro State due to its adhesion to the

Table 17 - Fiscal Risks Arising from Assets and Guarantees with States and Municipalities

Data in: R\$ billion

Source and Preparation: STN

Assets/Liabilities	Stock ¹	Receipts / Payments Flow			
		2021 ²	2022	2023	2024
Assets	630.99	5.43	29.36	33.06	40.91
Law 9,496 ³	552.16	4.46	19.29	21.29	23.33
Law 8,727 ⁴	7.46	0.02	0.06	0.08	0.13
Sanitation Portfolio	0.32	0.01	0.06	0.05	0.05
DMLP	4.50	0.08	0.16	0.16	4.44
Bacen-Banerj	34.34	0.00	0.00	0.00	0.00
Brazil-France Agreement	0.00	0.00	0.00	0.00	0.00
Provisional Measure 2,185 ⁴	28.59	0.80	3.70	3.80	3.88
Complementary law No. 178/21 - Art. 23	3.62	0.05	0.19	0.06	0.06
Complementary law No. 159/17 - Art. 9 A	0.00	0.00	5.90	7.62	9.01
Liabilities	263.60	10.22	30.74	29.93	28.62
Guarantees to States - Internal	96.41	4.66	14.16	13.60	12.95
Guarantees to States - External	138.10	4.39	12.79	12.18	11.51
Guarantees to Municipalities - Internal	7.49	0.53	1.94	1.86	1.66
Guarantees to Municipalities - External	21.60	0.64	1.85	2.29	2.51
Total	894.59	15.65	60.10	62.98	69.53

¹ The values of the stocks of assets refer to 9/30/2021, while the values of guarantees refer to 8/31/2021.

² Flows from 2021 consider only the months of October, November and December.

³ Law No. 9,496 considering the Complementary law No. 173, Goiás State has already started adherence to the New RRF (Complementary law No. 178/2021) and Rio de Janeiro, Minas Gerais and Rio Grande do Sul (as of January 2022) enter the new RRF.

⁴ The numbers of Provisional Measure no. 2,185 considered Complementary law no. 173.

¹⁷ More details about the risk of guarantees are presented in Section 3.1.3 of this Report, which deals specifically with Federal Guarantees for Credit Operations.

regime, and the defaults of Minas Gerais, Rio Grande do Sul and Goiás for the period provided in the regime, as if they were part of it. In addition, at the end of the table, we present the expected payment flow for credit operations of subnational entities guaranteed by the Federal Government, which could potentially require discharge by the Federal Government with judicial restrictions on the execution of counter-guarantees.

Recently, the provision of Constitutional Amendment 99/2019 that required the Federal Government to finance, directly or through the financial institutions it controls, the payment of the residual balances of overdue and unpaid precatórios of states and municipalities until the end of 2024 was repealed. However, a lawsuit is underway in court to reverse this repeal. The current stock of state and municipal bond debts (precatórios) is R\$113.4 billion (as of 08/31/2021). An estimate of the potential financial impact of this amendment if the Federal Government were required to immediately provide a line of credit equal to the balance of the consolidated debt would be equal to this amount. Table 18 consolidates the fiscal risks arising from intergovernmental relations.

Table 18 - Fiscal Risks Resulting from Intergovernmental Relations

Data in: R\$ billion

Source: STN

Fiscal Risks	Value
Arising from Assets	630.99
Arising from Guarantees	263.60
Injunctions in Constitutional Amendment No. 99/2019	115.10
Total	1,009.69

Although not a fiscal risk because the Federal Government participates in the legislative process, it is important to note that another source of uncertainty for the Federal Government in its interfederal relations results from the passage of legislation that favors subnational entities while burdening the Federal Government. Among the projects in Congress is PLS 561/2015, which provides for a further reduction in the interest rates charged by the Federal Government on operations in which it refinances the debt of states and municipalities. The interest rates would be

Table 19 - Uncertainties Arising from Legislative Proposals

Data in: R\$ billion

Source and Preparation: STN

Analyzed Proposal	Impact on the federal government's cash flow	
	2021	next 10 years
PEC 51/2019 (FPE)	-	223.3
PLS 561/2015 (Extensão da LC nº 148)	229.7	420.8
Total	229.7	644.1

limited to inflation compensation and the change in the index is to be retroactive to the signing of the original contracts.

The federal legislature is also working on a draft amendment to the Federal Constitution to increase the rate of the State Participation Fund from 21.5% to 26%. Table 19 presents the estimated immediate and ten-year impacts of these legislative proposals with financial impact for the Federal Government.

For more detailed information on subnational entities, see the *Municipalities and State Governments* section of the STN website at the following electronic address: <https://www.gov.br/tesouronacional/pt-br/estados-e-municipios>

3.4 State-Owned Companies

The fiscal risks of non-dependent state-owned enterprises directly controlled by the Federal Government (scope of this section) relate to the expectation of revenues and the realization of unforeseen expenses. This is a group of 27 SOEs, of which 21 are public enterprises and 6 are mixed capital enterprises.¹⁸

The assessment of fiscal risks of SOEs requires, for most of the risk elements covered, the separation of the category of federal financial institutions from other SOEs that explore economic activities or provide public services, due to the specificity of the financial sector, which has its own rules, especially regarding compliance with capitalization indicators.

Fiscal risks related to non-dependent state-owned enterprises refer to the possibility of occurrence of the events listed below, depending on their nature:

- Revenue frustration - revenue from dividends and/or interest on equity (JCP) less than the revenue estimated in the composition of the Central Government's fiscal result;
- Emergency contribution - capital contribution or economic subsidy on an emergency basis to meet the need for resources or capital of a particular governmental enterprise; and
- Additional fiscal effort (primary compensation) - the need for the National Treasury to compensate for any eventual primary result that is lower than the estimated for the overall primary results of the federal state enterprises.

¹⁸ With regard to the dependent state-owned enterprises, the main fiscal risks relate to contingent liabilities from legal claims, which are discussed in section 3.1.1 of this report.

Table 20 presents the estimated flows that constitute the basis for the calculation of the fiscal risks mentioned above.

The fiscal risk associated to the Federal Financial Institutions (FFIs), in general, is not related to the shortage of cash (liquidity), but to the insufficiency of regulatory capital to comply with the capital requirement indexes (Basel, Tier I Capital and Core Capital). Any cap-

italization or reduction in dividends and interest on equity required for compliance is a direct fiscal impact because it represents an increase in spending or a reduction in primary revenue. Table 21 presents the most current FFI indexes.

It can be seen that FFIs all have capital ratios that are at least 1.4 percentage points above the minimum statutory requirements. It is worth highlighting the Basel ratio of Banco da Amazônia, which has been around 12% in recent quarters, lower than that of its peers. Although this situation does not pose a significant risk to the Federal Government in terms of loss of dividend collection, as it is the smallest institution, the development of this indicator should draw the attention of the institution's management to the adoption of mitigating measures to avoid non-compliance with the regulation.

Table 20 - Estimated Flows - Non-Dependent SOEs

Data in: R\$ million

Source: STN, SEST, LDO 2021

Nature	Estimated Flow				Financial (F) Primary (P) Impact
	2021	2022	2023	2024	
Revenue dividends and JCP ¹	25,056.1	25,311.3	18,225.6	17,913.3	F e P
Transfers for Capital Increase ²	2,433.3	n.d.	n.d.	n.d.	F e P
Primary Results of State-Owned Enterprises ³	-2,565.8	-4,417.5	-4,747.9	-5,075.2	P

¹ Dividends: STN forecast based on estimates for the 3rd bimester of 2021.

² Transfers for capital increase from LOA 2021 - Appendix III + registered payables

³ 2021: SEST forecast for 05/2021; in the other years Primary Result forecast for PLDO 2022 - Annex IV - Fiscal Targets

Table 21 - Required vs. Observed Capital Ratios

Sources: Quarterly Information (ITR); CMN Resolution No. 4,193 and regulations.

Preparation: STN/ME

Indicators	IFF with Systemic Relevance			IFF without Systemic Relevance			
	Min. Required ¹	BB 1º t. * 2021	CEF 1º t. 2021	Min. Required ²	BNDES 1º t. 2021	BASA 1º t. 2021	BNB 1º t. 2021
Main Capital	8.00%	12.89%	12.74%	7.00%	31.36%	11.90%	9.29%
Tier I Capital	9.50%	16.60%	13.04%	8.50%	31.36%	11.90%	10.47%
Basel	11.50%	19.56%	17.57%	10.50%	40.30%	11.90%	13.17%

¹ Includes conservation ACP and systemic ACP.

² Includes conservation ACP.

It is important to highlight the special situation of the BNB due to TCU Decision No. 1325-Plenário of 05.27.2020, which classifies the bank's accounts as irregular and determines the substitution of

amounts to the Constitutional Financing Fund of the Northeast - FNE. This is an amount related to the non-recording of provisions for loans operated by the Federal Bank with FNE funds between the years 2000 and 2005. According to the BNB, if the amount is recognized by the bank, the Tier I Capital Index will decrease and could fall below the minimum percentage of 8.5% set by the monetary authority. Although the risk of nonpayment of dividends by the BNB is a potential risk, alternatives within the bank's management to address the impact cannot be ruled out, and the BNB's dividends are not relevant to the National Treasury's total revenue.

The evaluation performed by the STN for the coming years considers as remote the risk of frustration of revenue from dividends and interest on equity, in view of the absence of more concrete data or non-existence of unanticipated restrictive events that may cast doubt on the current estimates. The risk of an additional fiscal effort to offset primary is also considered remote, as in the past three years, there is the prospect of a lower primary deficit than expected for 2021.

However, with respect to the need for emergency contribution, the assessment indicates a possible or low risk for some SOEs that have been experiencing cash flow difficulties for several years. Among these state-owned companies, Infraero, Emgea, Correios, Casa da Moeda and Companhias Docas are worth mentioning. These companies have been adopting measures to reorganize their supplementary pension plans, restructuring of health plans, voluntary dismissal programs, and corporate restructuring, among others. The 2020 financial statements showed an improvement in the financial situation of some enterprises and a possible aggravation in others, raising expectations for performance in 2021 and 2022, which depend on economic, market and legislative factors, among others.

A possible exacerbating factor in this picture was the occurrence of the COVID -19 pandemic, which triggered a sharp decline in economic activity, the effects of which will continue into 2021. The enterprises have been monitoring these risks and no relevant or quantifiable impacts have been reported to date in their financial statements to be included in this report.

The economic impact of the COVID -19 pandemic focuses on the company's ability to maintain its level of operations, the market valuation of its assets and the creditworthiness of its customers, and the potential provision for losses. In addition, FFIs have participated in several programs to expand credit to the public and private sectors as part of the Federal Government's efforts to reduce the impact of the decline in economic activity on the economy.

3.5 Public Service Concessions and Public-Private Partnerships

3.5.1 Public Service Concessions

3.5.1.1 Expenditure Viewpoint

The modeling of infrastructure concession contracts follows the principle of transferring the most important risks to the concessionaire, as is the case with construction and demand risks. The Federal Government is responsible for extraordinary events that may be recognized, such as act of God, force majeure e factum principis, when there is a unilateral change in the contract.

There are contracts that provide for the possibility of an economic-financial realignment that could ultimately lead to a burden to the Federal Government. It happens that even in cases where the economic and financial balance of the contract is required, the granting authority has some compensatory mechanisms that do not have a fiscal impact, such as a tariff revision or an extension of the contract period.

In addition, there is the possibility of extinction, anticipated or not, of the contracts. In these cases, investments may have been made in reversible assets that have not yet been fully amortized or depreciated, and the Federal Government may have to make a contingent payment to the concessionaire, depending on how the form of compensation is defined.

However, even in these cases, the risk of the Federal Government having to make any payment to the concessionaire can be mitigated by the possibility that the asset will be relicensed and the compensation will be borne by future contractors, as in Article 15, § 1, of Law No. 13,448 of June 5, 2017, which regulates the relicensing of partnership contracts in the highway, railroad and airport sectors.

3.5.1.2 Revenue Viewpoint

As for the projections of concession revenues, the amounts collected result from the obligation of payment of the grant on the part of the concessionaire, defined in the contract. Part of the revenue comes from existing contracts and part from the conclusion of new contracts. In this context, the main fiscal risks arise, first, from the possibility of insolvency of concessionaires with current contracts and, second, from the failure to sign new contracts planned for this period. In addition, there is the risk of demand, which may affect the receipt of variable grants, that is, grants proportional to the revenue of the concession.

Concessions are regulated by Law No. 8987/1995, which defines a concession for public service as "the delegation of its provision, made by the granting authority, through bidding, in the form of competition, to the legal entity or consortium of companies that demonstrate ability to perform it, at their own risk and for a specified period of time. The infrastructure concession auctions can be of two types:

- *by lowest tariff (highways, for example); and*
- *for a larger grant (airports, for example).*

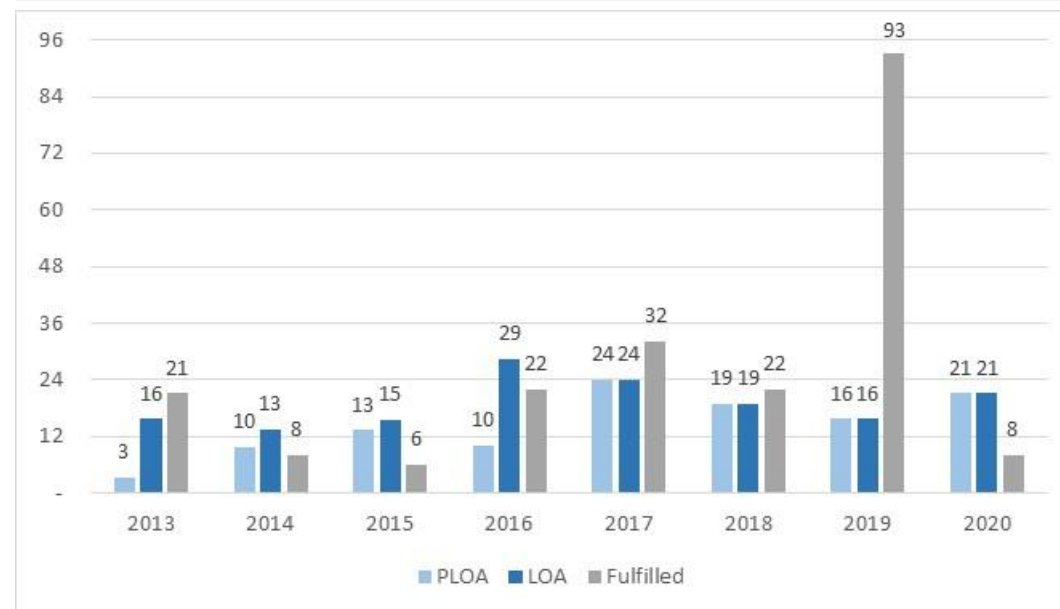
As for the possibility of nonpayment of ongoing concession grants, the risk factors are related to litigation, requests for economic-financial compensation or even insolvency of the concessionaire. Regarding the possibility of not entering into new contracts, the main risk factors to be taken into account when drafting the annual budget law are the feasibility of the auction schedule preceding these contracts and the absence of proposals from interested parties ("deserted auction").

To mitigate the risk of revenue frustration of the concessions throughout the year, the processes are monitored and any change in estimates is reflected in the bimonthly evaluation reports of primary revenues and expenditures. To mitigate the risk of a deserted auction, the granting authority must ensure that the proposed economic model is consistent with market expectations and that the bidding process is conducted in a manner that minimizes uncertainty and promotes predictability and transparency.

Chart 40 - Concession Revenues

Data in: R\$ billion

Source and Preparation: STN



In Chart 40, it is possible to see the evolution of concession revenues and the dynamics between the PLOA, the LOA and the actual revenues generated. Since the projections for the PLOA are from June/July of the previous year to which the budget year refers, discrepancies between the estimated values in the budget pieces and the realized values actually carried out, since new bidding processes are often announced during this period. In addition, possible premiums from auctions not yet held are not included in the projections made.

It is worth noting that in 2017 the difference between the amount realized in the year and the amount foreseen in the LOA was mainly due to the retroactive payment of overdue grants and the rescheduling of grants in contracts in the airport sector. In 2019, this difference was mainly due to the auction of the excess volumes of the onerous ces-

sion contract in the oil and gas sector, which was not foreseen in this year's LOA. In 2020, the difference occurred mainly due to the non-realization of revenues from the decommissioning of Eletrobras' hydropower plants, which were originally envisaged in the LOA.

3.5.2 Public-Private Partnerships

Public-Private Partnerships (PPPs) within the powers of the Federal Government, the States, the Federal District and the Municipalities are regulated by Act No. 11.079 of December 30, 2004. Article 4 of the aforementioned law states that "among the guidelines to be followed when concluding public-private partnerships is an objective sharing of risks between the parties.

In this sense, it is worth noting that the Federal Government, taking into account its direct and indirect management, currently has only one PPP contract, namely the data center complex commissioned by a consortium of Banco do Brasil and Caixa Econômica Federal with GBT S/A. However, since the state-owned companies involved are not interdependent and the contracts do not provide any guarantees from the granting authority to the concessionaire, no risks are assigned to the Federal Government.

3.6 Student Financing Fund (FIES)

FIES is an accounting fund managed by the Ministry of Education (MEC). It is used to finance the graduation of students enrolled in non-free college courses who have received a positive evaluation in the evaluation processes conducted by the MEC. The program currently (as of June 2021) has 2.88 million active financing contracts in Brazil.

Granting credit to students exposes the Federal Government to FIES credit risk in the form of delays and defaults. In June 2021, the exposure value of FIES operations granted until 2017 (including operations until 2009) reached R\$112.8 billion, as shown in Chart 41, which presents the composition by financing concession period, in addition to the stock evolution from 2018 to June 2021. Taking into account the additional exposure of R\$0.6 billion related to the funds not yet released, FIES' total exposure for these contract cycles reaches R\$113.4 billion.

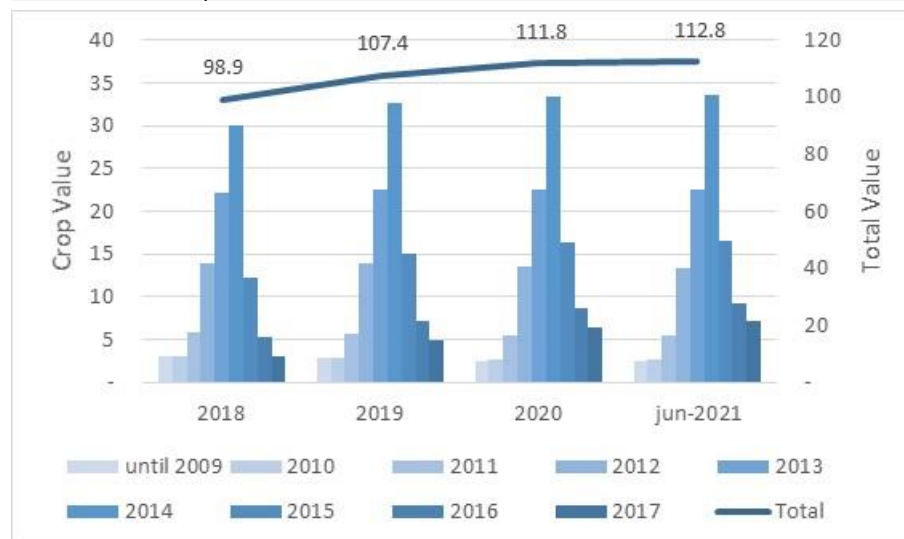
Late payments for financing granted until 2009 and between 2010 and 2017 were observed from one day late in 64.8% of total contracts (1,713,134). The total debt of the contracts in default amounts to R\$66.3 billion, representing 59% of the total portfolio (see Chart 42).

The adjustment for estimated losses on FIES contracts reached R\$30.7 billion, split between long-term (R\$30.4 billion) and short-term (R\$0.2 billion). As of June 2021, 1.99 million contracts have been amortized with a total debt of R\$71.9 billion, an increase of 2% and 3%, respectively, compared to the quantity and debt balance observed at the end of 2020. The amount of adjustment for losses remained stable due to the removal of contracts honored by the FGEDUC during this period (approximately 63 thousand).

Chart 41- Fies Exposure by Year of Granting

Data in: R\$ billions Position: 06/30/2021

Source: FNDE. Preparation: STN/ME



The portfolio of financing granted under Fies is divided into three phases in accordance with the development provided for in the contract:

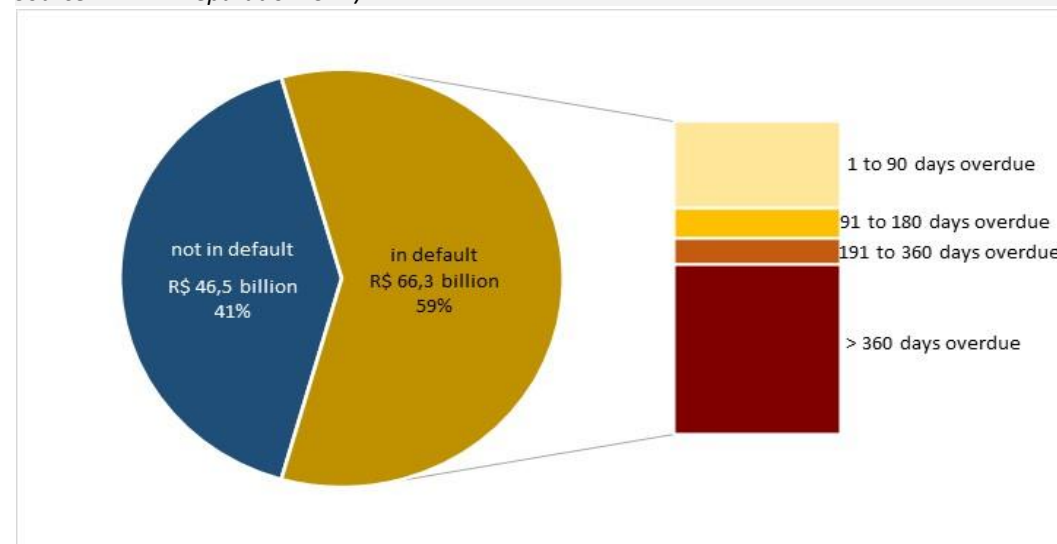
- *Use phase* - the period during which the student is in higher education, limited to the regular duration of studies, with quarterly interest payments;
- *Grace period* - an 18-month period beginning immediately after completion of the course, with quarterly interest payments;
- *Amortization phase* - the period beginning in the month immediately following the end of the grace period, during which the monthly installment amount is determined.

However, through 2017, FIES contracts have risk mitigation tools such as the conventional guarantee, solidary guarantee, and the Guarantee Fund for Operations (FGEDUC), and 68% of the contract portfolio is guaranteed solely by the FGEDUC. If we take into account the simultaneous coverage provided by the FGEDUC and the guarantee, this percentage rises to 78.4% of the portfolio. It should be noted that contracts formalized until 2009 are not covered by a Guarantee fund and are only guaranteed by a conventional guarantee or solidary guarantee.

Chart 42 - Status of Fies Contracts Granted Until 2017

Position: 06/30/2021

Source: FNDE. Preparation: STN/ME



CG -Fies Resolution No. 27 of 2018 defined the criteria for characterizing defaults, credit risks, and adjustments for accounting losses.

Overdue contracts are those with unpaid installments from the first day after the due date. Delinquent contracts are those with unpaid installments from the ninetieth day after maturity.

When calculating the adjustment value for accounting losses, only the defaults verified during the amortization phase of the contract are taken into account, i.e., not the installments due during the periods of use and grace. In addition, contracts are classified by days in arrears and then a provision factor is applied that is scaled according to this classification.

More detailed information about Fies can be found at the following website:

- <https://www.fnde.gov.br/index.php/financiamento/fies-graduacao/o-fies/sobre-o-fies>

3.7 Disasters

Disasters can cause major losses and significantly affect public finances, depending on the geographic location, magnitude, and time interval at which such events occur. This is because, in the case of certain disasters, governments are usually expected to take measures to mitigate possible effects, whether material or not.

Contingent liabilities related to disasters may be explicit, i.e., based on contracts or laws that include a legal provision for payments related to the occurrence of their risks, or implicit, where the expenditure is incurred because of society's moral expectation of the government, because of political pressure, or in an attempt to accelerate the economic recovery of the affected locality.

In Brazil, the events associated with disasters are mainly regional droughts or excessive rainfall, mainly in the north-east and south. Historically, the occurrence of most such events has been characterized by their seasonality and their low potential to have unfavorable fiscal effects. Between 2012 and 2020, according to Chart 43, between 0.01% and 0.06% of GDP was spent annually on measures aimed at these events, including planning for and controlling the associated risks. It has been observed that spending on disasters as a percentage of GDP has been declining since 2016, although funding for this measure is expected to increase in 2020.

The Risk and Disaster Management Program (Program 2218), found at LOA, focuses on prevention and control measures, as well as disaster response measures. This program is composed of several government actions that aim, among others:

- identify the risks of natural disasters;
- support the reduction of natural disaster risks in critical municipalities;

Chart 43 - Risk and Disaster Management Program - LOA and Share of GDP

Source: Siafi, IBGE

Preparation: STN/ME



Main rules of the legal framework for disaster risk treatment:

- Law No. 8.742/1993 - provides for the competence of the federal government to carry out relief operations of an emergency nature in cooperation with the other federal entities;

- Law No. 12,340/2010 (amended Law No. 12,983/2014) - provides for the transfer of resources from the federal government to the agencies and entities of the federal units for prevention and response activities related to disasters;

- Law No. 12.608/2012 - establishes the National Policy for Protection and Civil Defense - PNPDEC and provides for the National System for Protection and Civil Defense and the National Council for Protection and Civil Defense - CONPDEC;

- Decree No. 10.593/2020 - regulates the organization and operation of the National System for Protection and Civil Defense and the National Council for Protection and Civil Defense, as well as the National Plan for Protection and Civil Defense and the National Disaster Information System.

- improve the coordination and management of preparation, prevention, mitigation, response, and recovery actions for civil protection and defense;
- monitor and issue natural disaster alerts;
- promote actions to care for the affected population and recover from disaster-affected scenarios, especially through financial, material, and logistical resources, complementary to the actions of states and municipalities.

In addition to the budget forecast of resources in the action protection and civil defense under the Risk and Disaster Management Program, it is possible for the government to provide funds through extraordinary credits in certain situations that require rapid and focused action.

Depending on the magnitude of events, the impact on public finances may be significant and require timely actions that require substantial resources, which may temporarily prevent countries from achieving their budgetary targets. In light of this, international organizations such as the International Monetary Fund (IMF) and the Organization for Economic Co-operation and Development (OECD) point to natural disasters as a major source of fiscal risk.

3.8 Demographic Changes

While using vegetative growth in social benefits to estimate spending is reasonably reliable for short-term analysis, there are nonnegligible risks in the medium term from increases in spending related to institutional and structural elements that are not always under government control. In the coming decades, Brazil's age structure will change profoundly. The number of older people in the population will increase, while the number of young people will decrease. Such demographic transformation poses challenges to public policies, as it directly influences the demand for different forms of state action.

The case of the Continuous Cash Benefit (BPC) is illustrative. In this, for example, the potential impact of demographic change on spending is significant, suggesting that more attention needs to be paid to this aspect. The aging of the Brazilian population and the increase in life expectancy, combined with the annual increase in the minimum wage, which is higher than the increase in average income, suggest that spending on BPC is likely to increase substantially in the near future.

Another significant analysis can be made in relation to expenditure on Education and Health. In the education sector, this dynamic has a positive effect, as the pressure on spending has decreased because the number of young people has fallen not only in relative terms but also in absolute terms. In the health sector, on the other hand, there is strong pressure to increase spending due to the aging of the population, as the older population demands proportionally more health care services.

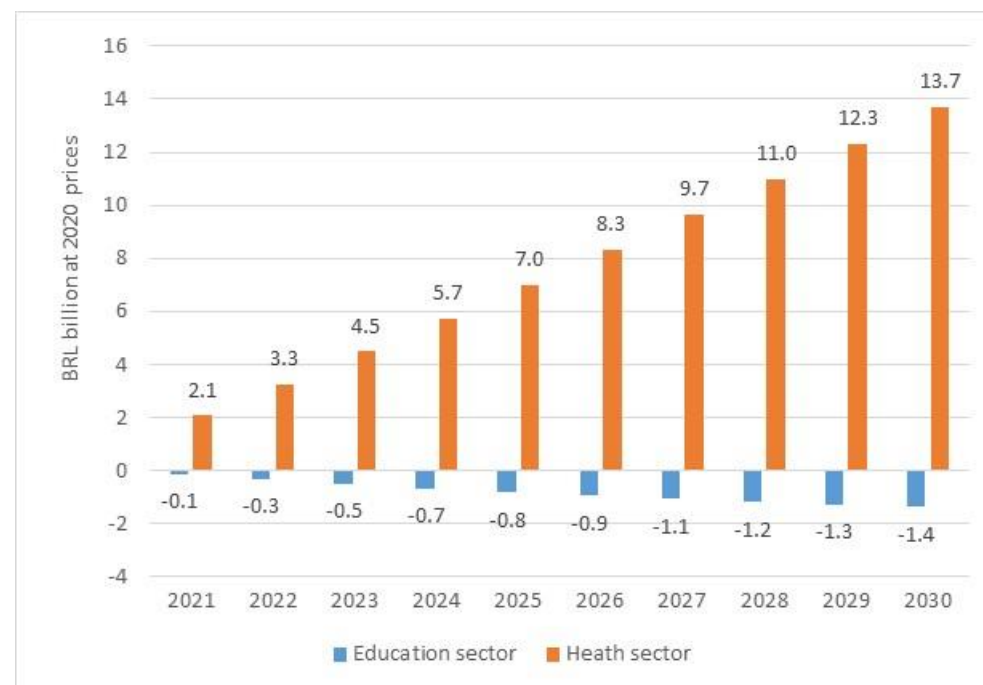
To estimate the impact of demographic evolution on health expenditures, the Pharmaceutical Assistance block was considered, including Popular Pharmacy, and the Medium and High Complexity Care block (hospital and ambulatory care). Education expenditures included so-called flow control expenditures, which are roughly equivalent to all expenditures in this area, except for active and inactive personnel, Fundeb, Education Salary, and the primary impact of the FIES. Altogether, the analyzed expenses reached R\$90.1 billion in 2020, of which R\$62.4 billion related to health and R\$27.7 billion related to education.

Chart 44 presents an estimate of the impact of demographic changes on selected health and education expenditures in the period 2021-2030. This impact was measured as the difference between the expenditure projection taking into account population demographics (growth and change in age composition) as projected by IBGE¹⁹ and a counterfactual scenario in which the size and composition of the population remains constant at 2020 levels. These scenarios also assume that the current volume of services provided and the current efficiency in providing services remain constant.

It can be observed that in the case of healthcare, there is pressure to expand spending (+ R\$13.7 billion in 2030) due to demographic trends (population growth and aging). In turn, the demographic evolution reduces the pressure for spending on education (- R\$ 1.4 billion in 2030). As a consequence, we observe, just for the expenses considered, an additional demand for public expenses that would reach, in 2030, approximately R\$ 12.4 billion at 2020 prices. This figure represents 13.4% of the amount spent on the same programs in 2020.

Chart 44 - Demographic Impact on Selected Health and Education Expenditures

Source and Preparation: STN/ME



¹⁹ IBGE. Population projections: Brazil and Federation Units: 2018 revision, 2. ed. Rio de Janeiro: IBGE, 2018.

3.9 Combating the Effects of the COVID-19 Pandemic

In order to limit the damage caused by the pandemic, the Brazilian government continued to implement a series of measures to stimulate the economy in 2021, with expenditures exceeding R\$109 billion by October, as shown in Table 22. Informal workers, micro and small enterprises (MPEs) and individual micro entrepreneurs (MEIs) have benefited from several initiatives, including the deferral of taxes such as the Simples Nacional, social security contributions and the settlement of debts. The possibility of reducing working hours and suspending contracts, Emergency Aid for informal workers and MEIs, and special credit lines for the segment are further examples of the measures taken by the Federal Government.

Protection of the most vulnerable populations facing the effects of the pandemic continued to be ensured through Emergency Aid, which was introduced as financial support for informal workers, individual microentrepreneurs (MEIs), self-employed, and unemployed, especially in the lowest income groups, to provide emergency protection during the crisis period caused by the coronavirus. The total amount disbursed with the Emergency Aid until October this year has already reached the amount of R\$60.5 billion (93% of the predicted amount).

Table 22 - Federal Government Spending on Combating COVID-19

Data in: R\$ billions Position: 10/2021

Preparation: STN/ME

COVID-19 expenditures	2021		
	Expected	Paid	%
Emergency aid for Vulnerable People	64.9	60.4	93%
Additional Expenses of the Ministry of Health and Other Ministries	26.2	19.4	74%
Purchase of Vaccines and Inputs for the Prevention and Control	26.2	16.2	62%
Emergency Benefit of Employment and Income Maintenance	11.6	7.7	66%
Quotas of Operations and Credit Guarantee Funds	5.0	5.0	100%
Financing of Tourism Infrastructure	2.0	0.5	25%
Total	135.9	109.2	80%

Emergency Employment and Income Preservation Benefit (BEm) is a compensation paid by the government to prevent loss of income by workers due to the temporary suspension of their employment contract or the proportional reduction of their working hours and salary as a result of the pandemic. By October 2021, R\$7.7 billion in salaries have already been paid.

Within the framework of support measures for MPEs, it is worth highlighting the creation of Law No. 14,161 of June 2, 2021, which transformed the National Support Program for Microenterprises and Small Businesses (PRONAMPE) into a permanent credit program and authorized the Federal Government to increase its participation in the Operating Guarantee Fund (FGO) by December 31, 2021. In 2021, R\$5 billion was allocated to the FGO, which allowed for R\$25 billion in loans to micro and small entrepreneurs.

COVID 19 in numbers (Jan-Oct-2021):

Total spending on fighting the pandemic: BRL 109.3 billion;

Emergency aid: R\$ 60.5 billion were paid in benefits;

The Emergency Employment and Income Preservation Benefit (BEm) enabled the payment of R\$ 7.7 billion in salaries;

In health, expenditure of R\$ 16.2 billion with the acquisition of vaccines and supplies;

To enable adequate immunization of the Brazilian population against Covid-19, a total of R\$16.2 billion was spent in the list of direct and effective public health actions for the purchase of vaccines and inputs for the prevention and control of the pandemic.

For more detailed information on the monitoring of the of federal government expenditures for the fight against COVID -19 is available at the following electronic address: <https://www.tesourotransparente.gov.br/visualizacao/painel-de-monitoramentos-dos-gastos-com-covid-19>.