TesouroNacional

REVISTA

CADERNOS DE FINANÇAS PÚBLICAS

02 | 2022

Apoio:

BID
Banco Interamericano de Desenvolvimento

Financing Federal Expenditures - lessons from COVID-19 in Brazil

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Abstract

This article describes the current Brazilian legal framework (fiscal rules) regarding the financing of federal public spending and analyzes what were the main sources of financing for the Central Government in 2020, highlighting the lessons and challenges that the COVID-19 pandemic brought to Brazil. At the federal level, the main traditional sources of public financing reside in cash availability from previous years, taxation and other government own revenues, the placement of securities in the market, and transfers from the Central Bank to the Treasury. In normal situations, fiscal rules limit financing from traditional sources and prohibit the issue of money to finance fiscal expenditures. However, in exceptional situations, such as those generated by COVID-19, where traditional sources may be insufficient, the need is created to make fiscal rules more flexible in order to meet the temporary and emergency needs of the country.

Key words: fiscal policy, fiscal rules, public financing, emergency spending.

JEL Classification: E62, H62 and H63

Summary

1. Introduction

In December 2019, the world learned of the first cases of a new strain of coronavirus causing the disease COVID-19 in humans. In a short period of time, the virus spread across the planet, and on 11/03/2020, the World Health Organization - WHO characterized the situation as a pandemic[1].

Considering the need to combat the spread of the virus, sanitary measures have been taken by governments in several countries, including Brazil, increasing public spending to finance the fight against the disease. Among the main sanitary measures taken in the country, we can mention a:

- construction of field hospitals;
- expansion of the number of hospital beds;
- purchase of hospital equipment;
- hiring health professionals;
- purchase of tests to detect COVID-19; and
- other emergency expenses.

Besides this, with the social detachment, many activities were paralyzed, which reduced the revenue of governments, companies, and families, and led the federal government to implement a series of emergency programs that also impacted public spending. Among them:

- the Emergency Program for the Maintenance of Employment and Income - Pemer[2];
- o Emergency Assistance[3] for families;
- the National Program of Support to Micro and Small Enterprises - Pronampe[4];
- the Emergency Job Support Program[5];

1 According to Fiocruz (2021), the WHO considers a pandemic to be the "worldwide spread of a new disease and the term comes into use when an epidemic, an outbreak affecting one region, spreads to different continents with sustained person-to-person transmission."

2 The Pemer was created by PM No. 936/2020 with the objective of preserving the jobs and income of formal workers. The Program granted monthly financial assistance to employees whose work hours were reduced or suspended due to the pandemic.

3 The Emergency Aid was created by law nº 13.982/2020 with the objective of mitigating the economic effects of the pandemic on informal and low-income workers, individual microentrepreneurs, and individual contributors to the INSS. The program granted monthly payments of R$600 during 2020 and was extended in 2021 with amounts between R$150 and R$375.

4 Pronampe was created by law nº13.999/2020 with the objective of serving micro and small companies with gross revenues of up to R$4.8 million per year and that needed liquidity. The Program granted credit lines with low interest rates (SELIC+1.25%) and with a payment term of 36 months and 85% guarantee from the Operations Guarantee Fund (FGO).

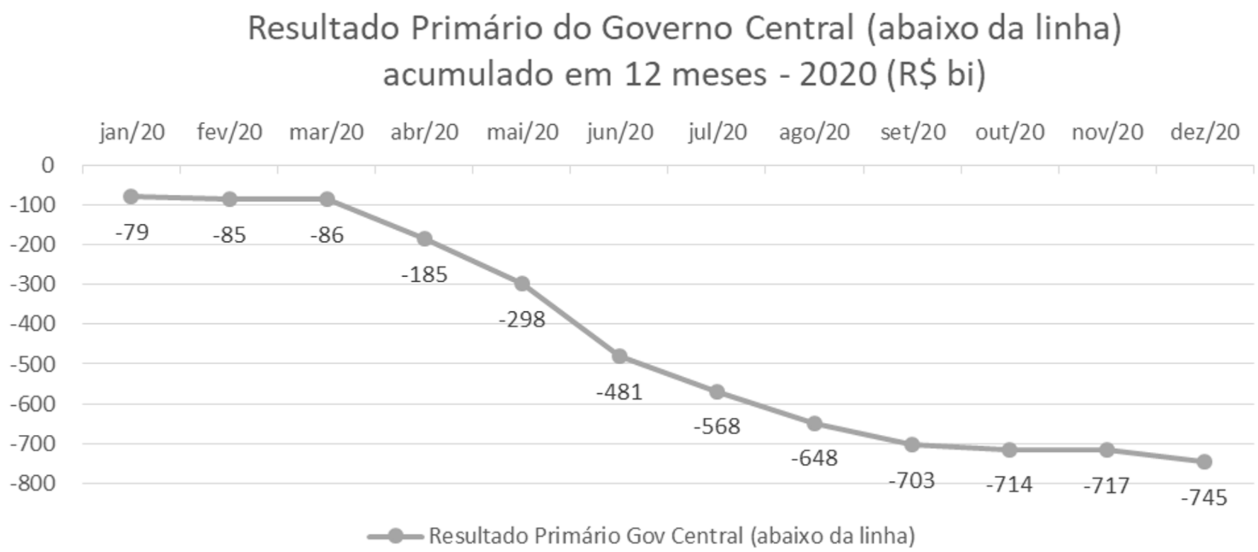
5 The Emergency Job Support Program was created by MP No. 944/2020 with the objective of financing for 2 months the payroll of companies that had gross revenue between R$ 360 thousand and R$ 10 million in 2019. The Program granted credit lines with low interest rates (3.75% p.a.) and a payment term of 36 months for companies that did not lay off their employees since the contracting of the credit and up to 60 days after receiving the last installment.

- the Emergency Credit Access Program[6];
- the aid to States and Municipalities[7]; and
- other measures.

The result of the combination of reduced tax collection and increased spending has strongly increased the public deficit, as shown in graph 1.

Graph 1 – Central Government Primary Result[8] (below the line) ac 12 months – 2020

Central Government Primary Result (below the line)
accumulated in 12 months - 2020 (R$ bi)



Central Gov Primary Result (below the line)

Source: National Treasury Result - RTN (STN, 2021a)

According to data from the National Treasury Secretariat - STN (STN, 2021a), when comparing the 2020 data with that of 2019 (table 1), there is a 10.6% drop in net Central Government revenue (a R$ 142.8 billion drop) while total spending rises 35.1% (a R$ 505.4 billion increase). Considering both effects, the above-the-line primary deficit increases by R$ 648.2 billion, reaching R$ 743.3 billion (above-the-line) or R$ 745.3 billion (below-the-line) in 2020. According to the STN (2021e), a

6 The Emergency Credit Access Program was created by MP No. 975/2020 with the goal of facilitating access to credit for small and medium-sized companies that had gross revenues between R$ 360 thousand and R$ 300 million in 2019. The Investment Guarantee Fund - FGI assumed up to 80% of the risk in the operations.

7 The Complementary Law 173/2020 established the direct transfer of R$ 60 billion to the subnational entities, besides restructuring the entities' debts with the Union, which reduced the Central Government's revenue.

8 Central Government comprises the National Treasury (including all the powers), Social Security, and the Central Bank. It is the equivalent of the Union without considering the state-owned companies.

large part of this primary value (R$ 520.9 billion[9]) was used to finance the expenditures derived from COVID-19.

Table 1 – Central Government Result (2019 and 2020)

Central Government - current values RS billion	2019	2020	Var %	Var R$ bi
Net Revenue	1.346.8	1.204,0	-10.6%	-142.8
Total Expenditure	1.441.8	1.947.2	35.1%	505.4
General Government Primary Result (above the line)	-95,1	-743.3	681.8%	-648.2
Adjustments below the line	6.3	-2.0		
General Gov. Primary Result (below the line)	-88.9	-745.3	738.3%	-656.4

Source: National Treasury Result - RTN (STN, 2021a)

Considering also the other amounts payable during 2020 related to financial expenses, the amount financed during the year was even higher.

To arrive at the total amount to be financed by the Central Government we should use the cash basis rather than the competence basis, since appropriate interest (competence basis) does not always generate immediate financing needs. The primary result is already calculated on a cash basis, but the nominal interest is calculated on an accrual basis. For this reason, instead of considering the nominal result of the Central Government (which considers the interest appropriated in the period) as its financing need, we will put together an adjusted estimate using payment data referring to the financial accounts. For the sake of simplification, we will use the actual payment of honors and guarantees and the Federal Public Debt - DPF maturities (interest and amortization) as a good proxy for the payment of financial expenditures[10].

According to the 2020 Annual Debt Report - DAR (STN, 2021b), Federal Public Debt - DPF maturities in 2020 were R$ 1,032.4 billion while honors and guarantees ended the year at R$ 13.3 billion.

Thus, considering the primary deficit, the payment of honors and guarantees, and DPF maturities (interest payments and amortizations), the amount to be financed rose from R$ 907.9 billion to R$ 1,791.0 billion between 2019 and 2020, an increase of R$ 883.1 billion in the amount the Central

9 The total amount was R$ 524.0 billion, being divided between primary expenses (R$ 520.9 billion) and financial expenses (R$ 3.1 billion) per the cash flow criterion informed in the presentation of the Dec/20 National Treasury Result (STN, 2021a) and in the Transparent Treasury - Monitoring of Federal Expenditure against COVID-19 (STN, 2021e).

10 The intention of this adjustment in the calculation is not to find the exact figures of the funding requirement, but to get closer to the big numbers and identify the most important items.

Government needed to finance itself[11], as shown in Table 2:

Table 2 – Central Government Borrowing Requirements

Central Government Borrowing Requirements (RS bi)	**2019**	**2020**	**Var R$ bi**
Primary Deficit	88.9	745.3	656.4
DPMFi Maturing	792.4	1.017.7	225.3
DPFe Maturities	18.2	14.7	-3.5
Honors and Guarantees	8.4	13.3	4.9
Total Borrowing Requirements	**907.9**	**1.791.0**	**883.1**

Source: RTN and RAD 2020 (STN, 2021a and STN, 2021b)

This introductory data seeks to show the challenging picture that the pandemic of COVID-19 has brought to public debt management and to the financing of the federal government, in addition to the other health, economic, and social challenges.

It is worth noting that the purpose of this article is not to evaluate if/what public spending should or should not occur, but rather, assuming the spending decision has already been made, what instruments can be used for the government to finance it. In the case of the COVID-19 pandemic, the federal government, despite its current fiscal rules, made the decision to make exceptional expenditures to combat the pandemic and its economic, social, and public health consequences. However, it was up to the federal government itself, together with the National Congress, to find solutions within the legal framework to finance the deficit generated.

Thus, in order to understand how the federal government financed itself during the COVID-19 pandemic and how it will be able to finance itself when there is a new need for relevant emergency spending, this article will briefly describe the current Brazilian legal framework regarding the financing of central government expenditures and then analyze which instruments were effectively used to finance the deficits originated, in large part, by the fight against COVID-19 in 2020. Finally, it identifies the lessons that the pandemic brought so that we know what to do in similar cases in the future.

11 I believe that it is more appropriate for the purposes of this article to consider this estimate of the Central Government's borrowing requirement, since the traditional term "Public Sector Borrowing Requirement - NFSP", besides being more comprehensive (the entire public sector and not just the Central Government) considers nominal interest on an accrual basis and not on a cash basis.

2. Brazilian Legal Framework: Fiscal Rules and Federal Government Financing

Before we analyze how the Central Government's expenses were financed in 2020 during the COVID-19 pandemic, it is important to understand the limitations and possibilities that the current Brazilian legal framework brings to the financing of federal public expenses.

Contrary to what some people think, the government cannot simply "fire up the machine" and start printing money to finance itself. There are a series of self-imposed rules and legal impediments[12] that have been built up over time to reduce the autonomy of the government and limit its ability to spend indefinitely. These are called fiscal rules.

Fiscal Rules

According to the IMF (2017), fiscal rules are long-term impositions of restrictions on fiscal policy through quantitative limits on budget aggregates. Put another way, they are legal instruments that regulate some part of public finances (government spending, revenues, debt, or output) by increasing their predictability in order to seek long-term fiscal sustainability.

It is important to note that the rules act in the formation of agents' expectations regarding the future of fiscal policy in a given country. In this sense, the creation or exclusion of a fiscal rule ends up changing the agents' evaluation of the future of fiscal policy, and, consequently, impacts the markets (exchange, interest, stocks, etc.).

In general, we can classify tax rules as follows (BROCHADO et al., 2019):

- Spending rules: these set maximum limits for the growth of government spending over time.
- Revenue rules: they set ceilings on tax revenue or define treatment for extraordinary revenues (e.g. Sovereign Wealth Funds).
- Result rules: they set targets for the government's results.
- Public debt rules: they establish ceilings for public debt.

Each one of them exerts influence on a variable of the public accounts, depending on the objective to be pursued. For example, if one seeks to reduce the role of the State in the economy, the most appropriate would be to create expenditure rules. If one wants to reduce the tax burden, revenue rules might be the most recommended. If one wants to seek fiscal sustainability, outcome or public debt rules would be the most pertinent.

It is worth noting that the specific design of each rule will determine its results. It would be useless to have an outcome rule so flexible that it would allow for the possibility of annual primary deficits of 10% of GDP. On the other hand, very rigid rules would end up being difficult to implement

12 Self-imposed because they were decisions taken by the Executive Branch in conjunction with the National Congress.

or to maintain over time, both due to their technical and political difficulty[13], and would end up generating pressure for subterfuge to circumvent the limitations imposed.

According to the IMF (2018), fiscal rules can also be classified between 1st generation (pre-2008 crisis) and 2nd generation (post-2008 crisis)[14]. Roughly speaking, 2nd generation ones are more flexible[15], more relevant for budget management and with better instruments for monitoring (independent fiscal institutions), correction (better defined escape clauses[16]) and compliance (triggers[17] in case of non-compliance).

But one may ask: why is there a need to have fiscal rules instead of leaving the decision of how much to spend to the elected government? According to Gobetti (2014), the more classical economic line understands that, without rules, there would be persistent fiscal deficits, because society does not understand the government's budget constraint and always presses for more spending.

Without entering into the discussion, and based on the fact that they are present in the legal framework of several countries[18], what should these tax rules be like to be more efficient from an economic point of view? According to Kopits and Symansky (1998) and Kell (2001), there are eight criteria for an ideal fiscal rule. They are:

1. be well defined;
2. transparent;
3. simple;
4. appropriate to certain objectives;
5. consistent with other macroeconomic policies;
6. flexible to accommodate cyclical fluctuations or exogenous shocks;
7. effective; and
8. supported by efficient policies.

13 For example, imagine if an expenditure rule predicted a 30% reduction in public spending in a given year in a country that had 90% of mandatory expenditures. Although possible, we could say that its compliance would be technically unfeasible, since it would require drastic legal changes in the way the State operates.

14 There is not exactly a definition for each of the generations of rules, but the IMF chose the 2008 financial crisis as a parameter because it required changes to existing fiscal rules to suit more extreme events (such as better defined escape clauses - when not to comply with the rule and what path to get back into compliance).

15 It is worth noting that they are more flexible, because after the 2008 crisis, countries could no longer comply with the existing primary and nominal result rules.

16 Define in which situations not to comply with the rule.

17 In case of non-compliance or its approximation, what measures to take to avoid non-compliance. For example, if there is a personnel expenditure rule of 50% of expenses, prohibit salary increases when it reaches 45% or when it exceeds 50%.

18 The IMF (2018) text "The Emergence of a Second Generation of Fiscal Rules," cites approximately 90 countries that use some fiscal rule. The rules are present in developed, emerging, and poor countries.

Tax rules cannot always meet all these requirements at the same time, but the more criteria that are met, the better the rule.

You can have several tax rules concurrently, as is the case in Brazil, but it is important that their objectives do not conflict, otherwise their efficiency may be reduced.

According to a survey by the Independent Fiscal Institution (IFI) present in the January 2018 Fiscal Monitoring Report, the current tax rules in Brazil are as follows:

Table 3 - Fiscal Rules in Brazil

Rule	Description	Type	Defining standard	Legal Basis	Scope	Situation
Golden Rule	Prohibits the realization of credit operations that exceed the amount of capital expenditures	Result	Federal Constitution	CF (art.167, III); LRF (art.32, §3) Res SF 48/2007	All Entities	Effective
Spending Ceilings	It sets a limit for the amount of primary expenses, which is equivalent to the previous year's limit adjusted for inflation. The limit is individualized by branch and autonomous agency.	Expense	Federal Constitution	CF (art. 107 to 112 and ADCT)	Union[19]	Effective until 2036
Generation of social security expenses[20]	It prohibits the creation, increase or extension of social security benefits or services without the source of funding	Expense	Federal Constitution	CF (art. 195, §5)	All Entities	Effective
Primary Result Target	Establishes annually in the LDO the primary result target to be achieved	Result	Ordinary Law	LRF (art. 4, §1)	All Entities	Effective
Generation of Mandatory Expenditure	It prohibits the creation or increase of mandatory expenses of a continuous nature without the demonstration of the origin of the resources for its funding. Financial effects must be offset by permanent increases in revenue or permanent reductions in expenses.	Expense	Complementary Law	CF (art.113, ADCT) and LRF (art.17)	All Entities	Effective

19 The rule does not prevent subnational entities from creating their own spending caps, as has already occurred in Ceará, Goiás, and Piauí.

20 Social security includes health, social assistance, and social security.

Revenue Waiver	It prohibits the concession of revenue waiver without the demonstration that the benefit will not affect the fiscal goals and without compensation measures for revenue increase.	Recipe	Complementary Law	CF (art.113, ADCT) and LRF (art. 14)	All Entities	Effective
Personnel Expenditure Limit	Sets limits for total personnel expenses as a function of the entity's Gross National Income (RCL). The limits are set by sphere of the federation and, in each one, by power and autonomous body.	Expense	Complementary Law	CF (art.169) and LRF (arts.19 and 20)	All Entities	Effective
Consolidated Debt Limit	It sets overall limits for the consolidated debt of the federal government, states, federal district, and municipalities. The limits are defined by the Federal Senate, upon proposal by the President of the Republic.	Debt	Resolution	CF (art.52, VI), LRF (art.30, I) and Res. SF 40/2001	All entities	Effective for all entities, except the Union
Securities Debt Limit	Sets overall limits for the amount of the federal, state, federal district, and municipal securities debt. The Federal Government's limit is defined by the National Congress, based on a proposal by the President of the Republic. The limits for the other entities are defined by the Federal Senate, upon proposal by the President of the Republic.	Debt	Union: Ordinary law. Other Entities: Resolution	CF (art.48, XIV and art. 52, IX), LRF (art.30, I and II) and SF Res. 40/2001	All entities	Effective for all entities, except the Union
Limit for Credit Operations	It sets global limits for foreign and domestic credit operations of the Federal Government, States, Federal District, and Municipalities. The limits are defined by the Senate, upon proposal by the President of the Republic.	Debt	Resolution	CF (art.52, VII), LRF (art.30, I), SF Res 48/2007, SF Res 43/2001	All entities	Effective
Limits for Granting Collateral in Credit Operations	Sets limits for granting guarantees in foreign and domestic credit operations. The limits are defined by the Senate, upon proposal by the President of the Republic.	Debt	Resolution	CF (art.52, VIII), LRF (art.30, I), Res SF 48/2007	All entities	Effective

Although the IFI has already included a wide range of fiscal rules present in Brazil, we believe that it would be worth adding to this list the constitutional rule that prohibits the financing of the National Treasury by the Central Bank, since it prevents the issue of money from being used to finance fiscal expenditures.

Rule	Description	Type	Defining standard	Legal Basis	Scope	Situation
Prohibition of Treasury financing by the Central Bank	Prohibits the Central Bank from granting loans to the National Treasury and to any body that is not a financial institution	Public Debt	Federal Constitution	CF (art.164, §1)	All Entities	Effective

As can be seen, the Brazilian legal framework has a series of limitations on both the expansion of public spending and its financing. In order to better understand how these rules affect the financing of the Central Government's fiscal public spending, we will analyze in more detail the following fiscal rules in effect for the Federal Government and that deal with this subject: i) the prohibition of financing the Treasury by the Central Bank; ii) the Golden Rule; and iii) the limit on credit operations.

2.1 Ban on Central Bank financing of the National Treasury

The first important limitation on the federal government's self-financing power is found in the 1988 Constitution itself, in art. 164:

> Art. 164. The competence of the Union to issue currency will be exercised exclusively by the central bank.
> § 1º The central bank is forbidden to grant, directly or indirectly, loans to the National Treasury and to any organ or entity that is not a financial institution.
> § The central bank may buy and sell securities issued by the National Treasury, with the objective of regulating the money supply or the interest rate.
> § 3 The available cash funds of the Federal Government will be deposited in the central bank; those of the States, the Federal District, the Municipalities and the organs or entities of the Public Power and the companies controlled by it, in official financial institutions, except in cases provided for by law. (emphasis added)

The Constitution is explicit in forbidding the Central Bank from financing the National Treasury, which, in other words, means that the public deficit cannot be financed by issuing money.

However, although it cannot finance the Treasury, the Central Bank can[21] issue currency to pay its expenses, such as:

a) Interest from repo operations;
b) Operations with international reserves;
c) Positive result of the Central Bank transferred to the Treasury; and
d) Interest from the Single Federal Account[22] deposited with the Central Bank.

Essas operações não são vistas como financiamento, mas sim como despesas operacionais da autoridade monetária necessárias para a realização de política monetária e cambial e de suas obrigações com o Tesouro.

These operations are not seen as financing, but rather as operational expenses of the monetary authority necessary to carry out monetary and exchange rate policy and its obligations to the Treasury.

In this way, it can be said that the issue of money is basically restricted to these operations, and that they are not linked to fiscal policy, i.e., to expenses of a fiscal nature linked to the National Treasury (payment of salaries, pensions, investments, subsidies, social policies, etc.), reinforcing the message that the federal government must finance itself above all by means of its own revenue and/or by issuing securities in the market.

It is worth mentioning that, despite the prohibition of Treasury financing by the Central Bank, there are three situations (not understood as financing) in which it is possible for the Treasury to issue securities directly to the Central Bank. Let us see what they are:

a) Treasury to cover the BC's negative results

Until the enactment of law 13,820/201, when the Central Bank's half-yearly operating result was in surplus it had to transfer it to the Treasury in cash and when it was in deficit the Treasury had to issue bonds for the Central Bank to recompose its equity, in an operation similar to a capital increase. Payment by the Central Bank in cash (into the Single Federal Account) in relation to its positive result had to be made until the 10th working day after approval of the half-yearly balance sheet and should be destined exclusively to payment of the Federal Public Securities Debt - DPMF[23]. On the other hand, the period for payment by the Treasury via bond issues to the Central Bank to cover the negative result was longer, as the amount had to be provided for in the budget. Because of this, and in order to have sufficient time for inclusion in the budget, the Central Bank's negative operating results were "paid"

21 The Central Bank does not necessarily finance these expenses by issuing money. It is only one of the possibilities.

22 CF, art. 164 defined that all cash available to the Federal Government must be deposited in the Central Bank, the so-called "Single Account".

23 Article 2 of Law 13,820/2019.

through the issue of securities within 10 working days in the fiscal year subsequent to that in which the Balance Sheet was approved by the CMN. For example, negative results from the 2nd semester/2020 (with balance approved in the 1st semester/21) and from the 1st semester/21 (approved in the 2nd semester/21) had issuance scheduled only for jan/22.

Under this system, the Treasury received in cash and paid in bonds, which generated a legal loophole that amplified the receipt of Treasury funds from the Central Bank. For a better understanding, imagine that, with the volatility of the exchange rate and the huge amount of international reserves held by the Central Bank, the half-yearly result of the exchange variation account was R$ 70 billion positive in one semester and R$ 70 billion negative in the following semester. Under the old system, the Treasury would have received R$ 70 billion from the Central Bank in cash and issued R$ 70 billion in securities. As a result, the Treasury would have inflated its cash position by R$ 70 billion and increased its debt by R$ 70 billion.

To prevent this from continuing to occur, law 13,820/2019 innovated by creating a Result Reserve account where the most volatile part of the Central Bank's profit (those originating from international reserves and foreign exchange derivatives) is now kept and used to cancel future negative results. The rest of the Central Bank's operating income continues to be transferred to the Single Federal Government Account in cash until the 10th working day after the balance sheet is approved.

Law 13,820/2019 now also allows the Central Bank's negative results to be covered by funds from the Income Reserve, by reducing the Central Bank's assets (without the need to issue Treasury bonds) and by issuing Treasury bonds (until the 10th working day of the fiscal year following the approval of the balance sheet) in cases where the Central Bank's assets reach the minimum limit of 1.5% of total assets on the balance sheet date.

The measures in law 13,820/2019 aimed to reduce the volatility of transactions, and consequently reduce the amount of funds received by the Treasury in the Single Account from the Central Bank, closing what could be seen as a liquidity "tap".

It is important to note that although the creation of the Central Bank's Result Reserve prevents the amounts from being sent to the Treasury, there is a device[24] that allows the National Monetary Council - CMN to authorize that the resources existing in the account may be used for payment of the DPMF when there are severe restrictions on liquidity conditions that significantly affect its refinancing. This escape clause was important in financing 2020 spending, as we shall see in the following sections.

24 Article 5 of Law #13,820/2019.

b) Treasury to recompose minimum levels of the BC's free portfolio (contribution)

Law 11,803/2008[25] authorizes the Treasury to issue securities directly to the Central Bank's portfolio in order to ensure that the amount of these securities in the portfolio (called Free Portfolio) is of adequate size for the execution of monetary policy (liquidity drying up). In this case, the same law foresees that such issuance of securities will be made without any financial counterpart to the Treasury.

Law 13,820/2019[26] created an automatic mechanism for the issuance (called aportes) of Treasury bonds to the Central Bank whenever the Free Portfolio reaches a percentage equal to or below 4% of the Total Portfolio (Free Portfolio + securities in guarantee of repo operations), in addition to providing for the possibility of cancelling securities, after approval by the CMN.

In the cases in which the Treasury delivers securities (chosen by the Central Bank) to recompose the Free Portfolio, the Central Bank does not deposit resources in the Single Account. It is an operation without financial counterpart. There is also no need to have a budget for this operation, as it is considered an exception in view of its unpredictable and strategic character for the country's monetary policy. Finally, it does not affect the Golden Rule, since this issue is not considered a credit operation.

c) Treasury to roll over the principal of the debt stock held by the Central Bank[27]

When the Treasury bonds that are in the CB portfolio mature or pay interest coupons, the Treasury must pay the CB, which can request their rollover (only of the principal updated by inflation[28]), buying the bonds on the run[29] at the average price of the last auction. Real interest ends up being excluded from this systematic (STN, 2019), and must be financed along with other public spending. The amounts referring to the payment of interest and principal need to appear in the budget like the other traditional Treasury issues.

For roll-over, the Central Bank is allowed to buy Treasury bonds up to four auctions before the maturity date[30], limited to the updated principal amount that is maturing. Thus, the Central Bank

25 Article 2 of Law 11.803/2008.

26 Articles 7 and 8 of Law 13.820/2019.

27 The LRF, in its article 34, prohibited the Central Bank from issuing public debt securities as of May 2002. On the other hand, it allowed the Central Bank to acquire Treasury bonds at market price for the exclusive purpose of refinancing the federal securities debt maturing in its portfolio (art. 39 of the LRF). The LRF consolidated the understanding provided in the Constitution that the CB is prohibited from financing the Treasury, since the operation is understood as operationalization of monetary policy and not financing (STN, 2019).

28 The inflation indicator to be used is defined by the Budget Guidelines Law - LDO of each year. In 2021, the chosen indicator was the Broad Consumer Price Index - IPCA, from the Brazilian Institute of Geography and Statistics - IBGE. In the years prior to 2020, the index used was the General Price Index - Market - IGP-M, from the Getúlio Vargas Foundation.

29 On-the-run securities are the securities that are pre-defined and sold at traditional Treasury auctions.

30 The CB purchases the securities via direct issuance without participating in the public auction. This prevents the CB from having an influence on sale prices (STN, 2019).

buys directly the Treasury bonds at the average rate of the auctions and pays it in cash. When the free portfolio securities mature, the Treasury pays to the Central Bank in cash, from the single account, the total amount maturing. This is the only one of the 3 possibilities of issuing direct Treasury bonds to the CB where there is a financial counterpart between the two agencies.

The three exceptions for the issue of Treasury bonds to the Central Bank are possible because they are not characterized as financing operations. They are basically effects of the operationalization of the monetary and exchange rate policies of the Central Bank, and therefore do not interfere in the financing of expenses linked to fiscal policy. The Golden Rule, on the other hand, seeks to limit the financing of part of the expenses of a fiscal nature, as we shall see below.

2.2 Golden Rule

The Golden Rule arose from the ideas of the English economist John Maynard Keynes, who suggested the separation between current and capital budgets (mainly investment), and advocated that the current budget should remain in surplus or balanced while the capital budget should be used counter-cyclically (increasing investment in times of recession and reducing it in times of expansion) and financed through debt[31].

Derived from this understanding is the idea that credit operations should be used primarily to finance investments, and therefore, globally, should not exceed the total capital expenditures, which was later called the "Golden Rule".

Golden Rule:

Credit Operations ≤ Capital Expenditures

Put another way, the Golden Rule prevents the government from going into debt to finance current expenditures. It only allows borrowing to finance, basically, investments. Since public investments are used for several generations, it is only fair that future generations also help finance them.

Before we continue, it is worth explaining the two economic categories of expenditure: current and capital expenditure. This separation aims to evaluate the effect of public spending on the economy[32].

Current expenses are those necessary for the maintenance of public administration activities (salaries, pensions, social policies, transfers to other entities, consumption materials, etc.). In the budget, they are segregated between operating expenses and transfers.

Capital expenditures are those that contribute to the formation or acquisition of a capital good.

31 Keynes (1980), pgs 277-280.

32 See Law No. 4,320/1964, art. 12 (General Rules of Financial Law) and Glossary of Budgetary Terms of the National Congress (2020).

They are segregated between investments[33], financial investments[34], and capital transfers (debt amortization[35]).

Let's look at the following example:

Table 4 - Example of Golden Rule compliance:

	Scenario 1	Scenario 2	Scenario 3
Tax Revenue	1.000	1.000	1.000
Current Expenditure	500	1.000	1.000
Capital Expenditure	200	200	200
Primary Result	+300 (surplus)	-200 (deficit)	-200 (deficit)
Interest (current expense)	0	0	-100
Nominal Result	+300 (surplus)	-200 (deficit)	-300 (deficit)
Credit operations	0	+200	+300
Credit Operation <= capital expense	0 < 200	200 = 200	300 > 200
Fulfills Golden Rule?	Yes	Yes	No

In the example above, we have three different scenarios for the budget of a given imaginary country. In Scenario 1, the country generated a nominal surplus of R$300 and had no need to finance itself with credit operations, fulfilling the Golden Rule.

In Scenario 2, the country ran a nominal deficit of R$200, generating a need for R$200 to pay its bills. However, since the amount borrowed (credit operations) was equal to the amount spent on capital expenditure, it fulfilled the Golden Rule.

In Scenario 3, the country had a nominal deficit of R$300, generating a need for R$300 to pay its bills. However, this time the amount borrowed (credit operations) was greater than the amount spent on capital expenditure. Therefore, it did not comply with the Golden Rule and used borrowed funds to finance part of its current expenses.

33 Investments are expenses that generate an increase in assets and refer to new items. For example: building roads, constructing houses, buying new goods and equipment, etc. Therefore, investment spending increases a country's GDP, unlike financial investment.

34 Financial investments increase equity, but they refer basically to the purchase of real estate or already existing capital goods and participation in already established companies. From an economic point of view, they refer to expenditures that do not alter the GDP, but only transfer the ownership of an asset.

35 Debt amortization is the payment of the updated principal amount of a previously acquired debt.

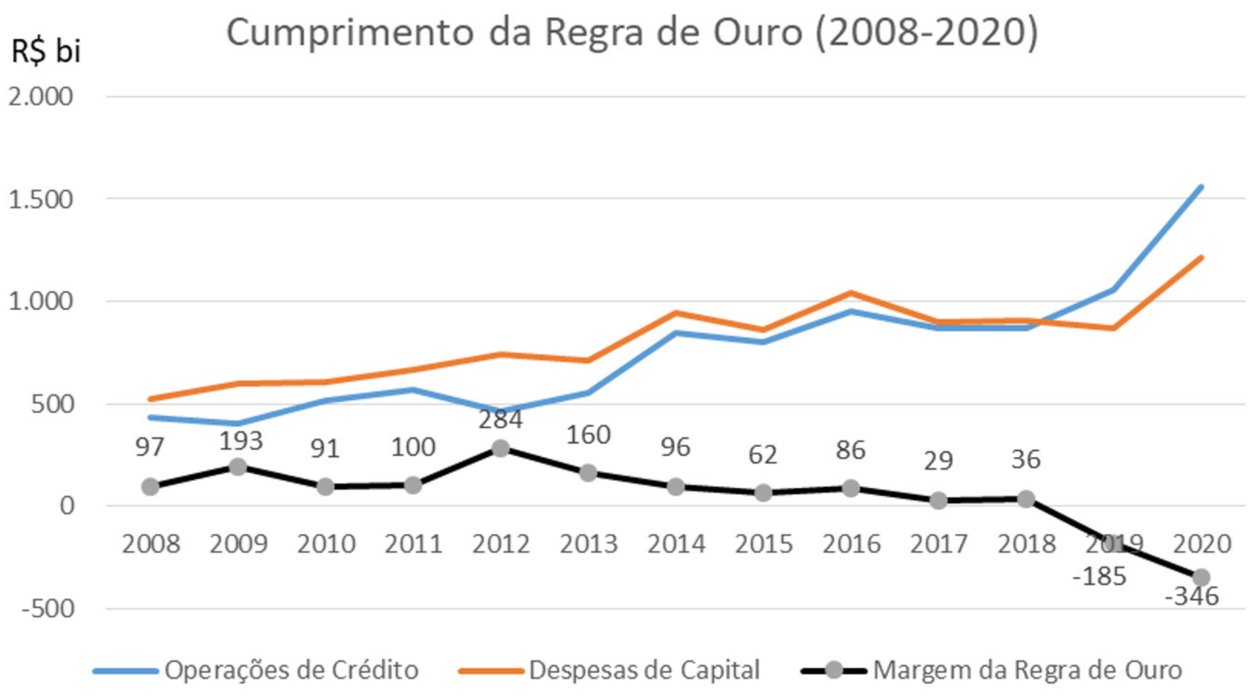
In the Brazilian case, the Golden Rule is foreseen in the Federal Constitution[36], in the Fiscal Responsibility Law - LRF[37] and in the Federal Senate's Resolution no. 48/2007.

It is worth noting that the government must comply with the rule both in formulating the budget and in carrying it out. This means that it cannot send a budget proposal to Congress without meeting the Golden Rule. This point is important because, until 2018, compliance with the Golden Rule had not been a problem for the federal government. However, in 2018, when preparing the 2019 budget, the government found that it would not be possible to comply with it given that its forecasts for current revenue collections were lower than the forecasts for current expenses, most of which are mandatory. Thus, it would be necessary to issue a larger volume of government bonds (credit operations) than the amount of capital expenditure forecast. The solution found was to request a supplementary or special credit from Congress, in accordance with the escape clause provided for in the Constitution[38]. The Golden Rule was "breached", but the legislation was complied with, which provided for the possibility of non-compliance, as long as expressly authorized by Congress under the due terms.

In chart 2, we see the evolution of compliance with the Golden Rule over the years, where it can be seen that since 2019 the amounts of credit operations have been higher than those of capital expenditures.

Graph 2 - Golden Rule follow-up (2008-2020)

Compliance with the Golden Rule (2008-2020)



36 Art. 167.

37 Art. 32.

38 CF, art. 167, item III.

Credit Operations | Capital Expenditure | Golden Rule Margin

Source: Federal Golden Rule Panel (STN, 2021c)

The Golden Rule meets most of the criteria listed above in the ideal rule, but it does not meet the requirements of being effective because, as we mentioned, it has not been complied with since 2019. The lack of an automatic corrective measure (such as preventing salary increases from being granted in case of non-compliance) along with the permission for non-compliance (provided it is approved by Congress) ended up reducing its efficiency to limit spending.

Nevertheless, the Golden Rule brings to the budget debate the idea that counter-cyclical measures should be focused on public investment (with a greater multiplier effect) and not on current spending.

The following fiscal rule is more restrictive than the Golden Rule as it also covers the limitation of capital expenditures.

2.3 Limit for credit operations

Article 30 of the LRF[39] determined that the President of the Republic would submit to the Federal Senate a proposal for global limits for the Union's external and internal credit operations. This was done and art. 7 of Federal Senate Resolution no. 48/2007 established that the overall amount of the Federal Government's credit operations in a financial year cannot exceed 60% of its Net Current Revenue (RCL).

For the calculation of the amount of credit operations, the issues referring to are deducted:

i) to the payment of DPF amortization and refinancing;

ii) to cover the BC's negative result;

iii) the coverage of the BC's Free Portfolio; and

iv) to the payment of guarantees.

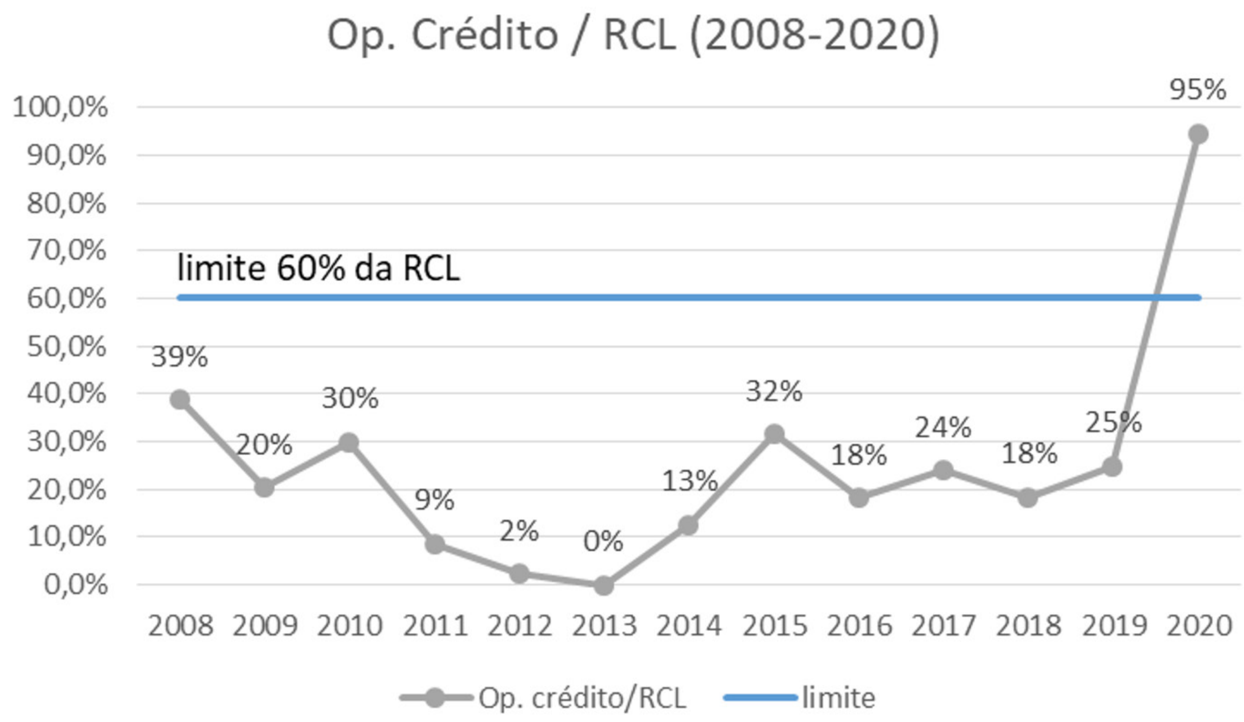
Unlike the Golden Rule, which restricts only the financing of current expenditures, the limitation for credit operations reaches both current and capital expenditures. And, similarly to the Golden Rule, the limit for credit operations also has an escape clause (art. 65 of the LRF) providing that the limits need not be met in cases where there is a public calamity recognized by the National Congress.

The monitoring of compliance with the limit for credit operations is done every four months by the STN's Fiscal Management Report - RGF. In graph 3, we can see how the evolution of the Union's credit operations / RCL indicator has been between 2008 and 2020.

39 Complementary Law 101/2000.

Graph 3 - Federal Government Credit Operations / RCL (2008-2020)

Credit Op. / RCL (2008-2020)



Limit 60% of the RCL

Op. Credit/RCL | limit

Source: RGF (STN, 2021d)

As we can see, the rule was complied with in all years with relative ease, with the exception of 2020 (95% of the RCL), the year of the COVID-19 pandemic and when the National Congress recognized the occurrence of a public calamity, thus allowing its non-compliance. Escape clauses like this are important and justifiable, since they occur in exceptional and temporary moments when the State's presence is demanded by the entire population.

Given the fiscal rules that restrict the financing of public spending, we will see how effectively the federal government financed its spending in 2020.

3. Financing tax expenditures in 2020

The previous section showed that the Brazilian legal framework prevents the financing of fiscal expenditures by issuing money and limits financing via public securities. Thus, it implicitly creates the requirement that public spending must be financed exclusively in 2 ways: own revenue (taxes, asset sales, transfers from the Central Bank to the Treasury and other government revenues) and/or limited issuance of securities in the market. Given the importance of the transfers from the Central Bank to the Treasury in 2020, we will separate them from the rest of own revenue for the purposes of this article.

As we saw in the introduction, the Central Government's total financing need rose by 97% between 2019 and 2020, from R$907.9 bn to R$1,791.0 bn, an increase of R$883.1 bn, which brought enormous financing challenges for the federal government's economic team. According to STN (2021e), of the entire R$883.1 bi increase in the funding requirement, R$524.0 bi was generated directly by the fight against the COVID-19 pandemic.

The change in the level of funding needs was so abrupt that it was necessary to resort not only to traditional instruments (bond issues, balance in the single account) but also to alternative sources.

Besides financing instruments, it was also necessary to relax some legal determinations that usually hinder/impede the increase in public spending. From the legal point of view, the most important measure was the enactment of the Constitutional Amendment - EC No. 106/2020, which created an extraordinary fiscal, financial and hiring regime to meet the needs of the pandemic during the period of public calamity decreed by the National Congress[40]. Moreover, together with the authorization to not comply with the spending cap, it dispensed with the legal limitations present mainly in the LRF (offsets, impact estimates) for the creation/expansion of expenses or revenue waiver, enabling the federal government to expand spending to face the calamity, which consequently required a change in the government's funding strategy.

The decree of the state of calamity by the National Congress was also important to trigger the escape clauses of the credit operations limit rule and suspend compliance with the fiscal targets required by the LRF[41].

To understand all this impact, we will reconstruct the official statistics, especially financial expenditures and revenues, to put together what would be the Central Government's financing needs and which sources were used. It is not the intention of this article to redo the public accounting in its details, but to identify, through estimates and official documents, the magnitude of the values of the main sources of financing the Central Government's expenditures in 2020.

Thus, considering the legal framework analyzed in the previous section and adding the available cash from previous periods[42], we will evaluate how each of the following instruments collaborated to the financing of 2020 spending:

- Own revenue (collections, concessions, dividends, other revenues);
- Cash on hand from previous years;
- Transfers from the Central Bank to the Treasury;

40 The National Congress published Legislative Decree no. 6, of 03/20/2020, which recognized the state of public calamity with effects until 12/31/2020, in response to Presidential Message no. 93, of 03/18/2020. With the national state of public calamity decreed, the attainment of the fiscal targets defined in the LDO is exempted, in addition to other effects, among them, the exemption of compensations for the creation/expansion of expenses or revenue waiver.

41 Art. 65 of the LRF.

42 The initial cash is the fruit of the same instruments, but they were formed in previous years.

- Issuance of public securities (Federal Public Debt); and
- Purchase of Treasury Bonds by the Central Bank.

3.1 Own Revenue

Before we begin this part, it is important to make clear what we will call Own Revenue for the purpose of this article. The purpose of the classification is to segregate the revenues that, despite entering the cash of the Union will need to be returned in the future (credit operations) from other revenues (own revenues). In addition, we will segregate from own revenues the transfers from the Central Bank to the Treasury, in view of its peculiarity[43] and magnitude. Thus, in this article, Own Revenues are all revenues (primary and financial) received by the Central Government, with the exception of credit operations (issues of securities[44]) and transfers from the Central Bank to the Treasury.

Still considering a distinction between two groups of Own Revenues, according to their impact on the primary result, we have the following categories of own revenues of the Central Government:

a) Primary Own Revenue
  a. Tax collection;
  b. Concessions and Permissions;
  c. Dividends; and
  d. Other primary revenues[45].

b) Own Financial Revenue
  a. Disposal of assets (financial); and
  b. Loan Repayment

According to the MTO-2020[46] (SOF, 2020), in general, financial revenues are those that do not change the net indebtedness of the Government, since they create an obligation or extinguish a right, both of a financial nature, with the private sector, with the exception of revenue from interest on financial operations, which, despite contributing to the reduction of net indebtedness, are also characterized as financial revenue. The remaining revenues are considered primary.

43 Although they do not need to be returned in the future either, their values are relevant and are received from an organ that belongs to the Central Government, in this case the Central Bank.

44 Securities issues are basically credit operations and, by their nature, must be returned to the lenders after the term stipulated in each security.

45 Included are asset disposal (of a primary nature), agencies' own revenues, other.

46 Technical Budget Manual, published by the Federal Budget Secretariat -SOF (SOF, 2020).

Primary Own Revenue

Considering the classification established in this article, the Primary Own Revenue is equivalent to the total Net Revenue of the Central Government, disclosed by the STN (STN, 2021a). Thus, when analyzing the evolution of the Central Government Primary Own Revenues (Table 5), it is noted that, on average over the last 5 years before the pandemic (2015-2019), tax collection[47] represented 93% of all the Central Government's Primary Own Revenues. Therefore, it can be stated that it is the main primary federal revenue instrument with the magnitude to finance part of the relevant emergency expenses, if necessary.

Table 5 - Central Government Primary Own Revenue 2015-2019

Discrimination	2015	2016	2017	2018	2019	Average 2015-2019
Primary Own Revenue Central Govt.	1243.6	1.315.0	1383.1	1.488.3	1.635.1	1.414.0
Tax Revenue Collection	1.175.2	1.232.9	1278.8	1.391.9	1.460.1	1.307.8
96 Tributes Collection/Total Revenue	94%	94%	92%	94%	89%	93%

Source: RTN (STN, 2021a)

However, it is worth remembering that, depending on the impacts resulting from the emergency situation, the increase in taxation to finance expenses may be counterproductive and cause more damage to the population, given the financial fragility of families and companies. One-off tax increases in sectors not affected and with greater ability to pay would be more recommended, if this is the politically defined choice. However, sectors affected by the emergency situation should be excluded from the additional charges, even if temporary, or even receive temporary tax exemptions.

In general, tax increases may be a way to finance part of the relevant emergency expenses, but depending on the magnitude of the crisis, taxation would hardly be the best financing instrument. Let's imagine that the 2020 spending increase related to COVID-19 (R$ 524.0 billion) had been financed exclusively by tax increases. Considering the federal tax collection in 2019 (R$ 1,460.1 billion), it would be necessary to increase it by 35.9% to cover the entire expenditure, which would be unfeasible, especially at a time of falling economic activity, which generally leads to a drop in the Central Government's tax collection.

As we saw in the introduction, the Net Central Government Revenue (Primary Own Revenue) reduced by R$ 142.8 bn in 2020 compared to 2019 (table 6).

47 We consider Taxes Collection to be: revenue managed by the Brazilian Internal Revenue Service - tax incentives + net collection for the RGPS + Contribution to the Public Servants Security Plan + revenue from the exploitation of natural resources + education salary contribution.

Table 6 – Variation of Net Central Government Revenue between 2019-2020[48]

Central Government - current values R$ billion	2019	2020	Var (R$ bi)
Total Net Revenue (Primary Own Revenue)	**1.346.8**	**1.204.0**	**-142.8**
Taxes Collection	1.460.1	1.399.3	-60.8
Concessions and Permissions	93.3	8.2	-85.1
Dividends and Interests	20.9	6.6	-14.3
Other Revenues	60.9	53.8	-7.1
Transfers by revenue sharing	-288.3	-263.8	24.5

Source: RTN (STN, 2021a)

The fall in economic activity[49] directly impacted all lines of the Central Government's Primary Own Revenue in 2020 and ended up not contributing as a source of funding for COVID-19 spending. On the contrary, the fall in revenue required additional funding efforts for the federal government by widening the primary deficit.

Own Financial Revenue

When we analyze the Financial Own Revenues, we highlight 2 main groups: a) disposal of assets (financial); and b) amortization of loans.

By means of the Budgetary Balance present in the Accountability Report of the President of the Republic for 2019[50] (PRESIDENCY OF THE REPUBLIC, 2020) and 2020[51] (PRESIDENCY OF THE REPUBLIC, 2021), we find the statement of capital revenues, which include mostly the financial revenues of the Central Government. In 2019, by removing the value of credit operations and transfers from the Central Bank to the Treasury from total capital revenues, we have a value of R$ 160.7 billion that refer basically to: a) amortization of loans[52] (R$ 156.7 billion) and; b) sale of assets (R$ 4.0 billion). Since part of the sale of assets (R$ 1.2 billion) was classified as primary revenue (STN, 2021a), we estimate the value of financial revenue from the sale of assets at R$ 2.8 billion. Therefore, the total

48 Instead of analyzing only the 2020 figure, we include the variation in revenue between the two years because we will start from the analysis of the financing of the 2020 primary result and the fall in revenue between the two years, ceteris paribus, increases the need to finance the primary result.

49 According to preliminary data from the Brazilian Institute of Geography and Statistics - IBGE, the Brazilian GDP fell by 4.1% in 2020.

50 Item 4.1.4, page 307.

51 Item 4.1.7, page 309.

52 Basically receipt of payment of the debts of the subnational entities with the Union.

financial own revenue in 2019 was R$159.5 (table 7).

Similarly, in 2020, when we remove the value of credit operations and transfers from the Central Bank to the Treasury from total capital revenues, we have a value of R$ 37.2 billion that refer basically to: a) amortization of loans[53] (R$ 35.3 billion) and; b) sale of assets (R$ 1.9 billion). Since part of the sale of assets (R$ 1.4 billion) was classified as primary revenue (STN, 2021a), we estimate the value of the financial revenue from the sale of assets at only R$ 0.5 billion. Therefore, we have a total of R$ 35.8 billion for own financial revenues.

Similarly to Primary Own Revenues, it can be seen that there was a reduction in the contribution of Financial Own Revenues in the financing of the Central Government between 2019 and 2020 (table 7).

Table 7 – Financial Own Revenues (2019 and 2020)

Own Financial Revenues - R$ bi	2019	2020	Var (R$ bi)
Own Financial Revenues	**159.5**	**35.8**	**-123.7**
Loan Amortization	156.7	35.3	-121.4
Asset Alienation (financial)	2.8	0.5	-2.3
Others	0.0	0.0	-0.0

Source: Accountability of the President of the Republic (PRESIDENCY OF THE REPUBLIC, 2020 and 2021)

3.2 Cash on hand from previous years

The Single Federal Account, held at the Central Bank[54], reflects the cash available from all sources of financing (own revenues, transfers from the Central Bank to the Treasury and issues) produced in previous years. These cash availabilities are remunerated[55] by the Central Bank based on the weighted arithmetic average rate of intrinsic profitability of DPMFi bonds issued by the Treasury and held by the Central Bank. Therefore, besides being a source of financing, it generates financial revenue for the Central Government, as we will see in section 3.3.

53 idem.

54 Art. 164 of the FC.

55 Article 1 of Provisory Measure 2.179-36/2001.

Table 8 - Balance of the Single Account at the Central Bank (2019-2020)

Available funds in the Single Account (R$ bi)	2019	2020	Var (R$ bi)
Balance in the Single Account at the Central Bank	**1.438.8**	**1.452.6**	**13.8**

Source: CB (2021a)

In Table 8, we note that, according to the Central Bank statements (2021a), the Single Federal Government Account began 2020 with a balance of R$1,438.8 billion and ended with a balance of R$1,452.6 billion, a positive variation of R$13.8 billion. As positive variations indicate that the Union's cash flow has grown, it can be said that, in the annual balance, the resources from previous years did not contribute to financing the 2020 deficit. However, it is important to emphasize that the high cash balances (which include the debt liquidity cushion) were crucial for the Treasury to be able to meet its obligations, both expected (DPF maturities and fiscal obligations) and unexpected (resulting from COVID-19), right at the beginning of the pandemic. The maintenance of high values is designed precisely to pay the next DPF maturities (interest and amortization), fiscal obligations[56] and deal with exceptional situations, such as that of 2020.

3.3 Transfers from the Central Bank to the Treasury

As seen in the previous sections, the two main transfers of funds from the Central Bank to the Treasury are derived from the positive result of the Central Bank (direct transfer or via the Result Reserve) and from the Single Account Remuneration.

Positive CB Result

Of the total amount of the BC's positive result calculated every six months, a part is directed to the Result Reserve and another part is paid directly to the Treasury.

The Central Bank's profit in the first half of 2020 was R$ 503.2 billion, of which R$ 478.5 billion derived from the international reserves and foreign exchange derivatives were allocated to the constitution of a Result Reserve (in the Central Bank's net worth) and R$ 24.7 billion from the other operations were transferred directly to the Treasury in August 2020[57]. A large part of the Central Bank's profit in the period was due to the devaluation of the Real[58], which consequently generated an accounting profit from exchange variation due to the valuation of the Central Bank's International Reserves, which at the end of June/2020 totaled US$ 345.7 billion (Central Bank, 2021b). In the second semester,

56 Wages, pensions, social spending, etc.

57 As we have seen, the operating result except for the gains from international reserves and derivatives continues to be transferred directly to the Treasury within 10 working days after the approval of the Central Bank's semi-annual balance sheet.

58 The commercial dollar went from R$ 4.03 (12/31/2019) to R$ 5.47 (06/30/2020), an appreciation of 35.7%.

the Central Bank generated a loss of R$ 33.6 billion that was fully covered by the Result Reserve, as shown in table 9.

Table 9 - Movement of the CB Result Reserve (2020)

CB Income Reserve - R$ bi	**2020**	
	1º sem	**2º sem**
Initial Balance (a)	45.0	523.5
CB Result	503.2	-33.6
Profit of CB to Reserve (b)	478.5	0.0
CB loss to Reserve (c)	0.0	-33.6
CB Profit automatically transferred (d)	24.7	0.0
Transfer Reserve to Treasury (e)	0.0	-325.0
Closing Balance of BC Income Reserve (a+b+c+e)	**523.5**	**164.9**
Amount transferred from CB to Treasury (d-e)	**24.7**	**325.0**

Source: CB (2021a)

On 08/27/2020, the National Monetary Council - CMN authorized the transfer of R$ 325.0 billion from the Outcome Reserve to the National Treasury due to the severe liquidity constraints present at that time. The resource entered the Single Federal Account to help pay DPF maturities and free up existing resources for the payment of primary expenses.

In 2019, there was no transfer from the Liquidity Reserve to the Treasury, and part of the profit (R$42.6 bn of the R$85.6 bn profit in the year) entered the account, which ended the year with a balance of R$45.0 bn. The other part of the profit, R$ 43.0 billion, was transferred directly to the Treasury (table 10).

Table 10 - Movement of the CB Result Reserve (2019 and 2020)

BC Income Reserve - R$ bi	**2019**	**2020**
Initial Balance (a)	2.4	45.0
CB Result	85.6	469.6
Profit of CB to Reserve (b)	42.6	478.5
CB loss to Reserve (c)	0.0	-33.6
CB Profit automatically transferred (d)	43.0	24.7

Transfer Reserve to Treasury (e)	0.0	-325.0
Closing Balance of BC Income Reserve (a+b+c+e)	**45.0**	**164.9**
Amount transferred from CB to Treasury (d-e)	**43.0**	**349.7**

Source: CB (2020) and CB (2021a)

In summary, the result of the CB contributed R$349.7 bn (R$325.0 bn from Reserves and R$24.7 transferred directly) to the federal government to finance the deficit and expenses to fight the pandemic in 2020. An increase of R$306.7 bn over the amount transferred in 2019.

The CMN's authorization to release R$ 325.0 billion from the Central Bank's Result Reserve was fundamental to complete the resources needed to finance the deficit generated by the COVID-19 fight. Although the amounts in the Outcome Reserve were directed to the payment of public debt maturities, as provided by law, they released the resources coming from domestic issues.

Remuneration of the Single Account

Another important transfer of resources from the Central Bank to the Treasury refers to the remuneration of the amounts deposited in the Single Account. As we have seen, these funds are remunerated[59] by the Central Bank based on the weighted arithmetic average rate of intrinsic profitability of the DPMFi bonds issued by the Treasury and held by the Central Bank, and, therefore, generate financial revenues for the Central Government.

According to the Budgetary Balance contained in the Summarized Report of the Budgetary Execution - RREO of Dec/2020 (STN, 2021f), the Central Government's revenue from the remuneration of the Treasury's available funds was R$66.4 billion in 2020, an amount R$21.6 billion less[60] than that of 2019 (STN, 2020a), but which helped pay part of the expenses with COVID-19 (table 11).

Table 11 - Remuneration of the Single Account (2019 and 2020)

Remuneration of the Single Account (R$ bi)	2019	2020	Var (R$ bi)
Single Account Remuneration	**88.0**	**66.4**	**-21.6**

Source: RREO 2019 and 2020 (STN, 2020a and STN,2021f)

59 Article 1 of Provisory Measure 2.179-36/2001.

60 The remuneration of the 2020 Single Account was lower than that of 2019 due mainly to the fall in the yield rate of the DPMFibonds, pulled by the drop in the SELIC in the period.

3.4 Federal Public Debt - DPF

The federal government has the legal prerogative[61] to issue debt securities to the market (domestic and/or foreign) and be able to finance its expenditures.

As we have seen, although there are self-imposed rules that restrict financing via debt in normal situations, such rules provide escape clauses for emergency situations of public calamity, as in the case of the 2020 COVID-19 pandemic.

DPF is composed of both securities issued and contractual debt. However, in 2020 only 0.4% referred to contractual debt. Almost all DPF is composed of securities debt (issuance of bonds), with emissions divided between the internal and external markets. Although there are different definitions of external debt[62], in Brazil, external debt is understood as that in which payment is made in foreign currency (even if denominated in local currency). For example: since the Global BRL bond is denominated in Reais, but with payment made in foreign currency outside Brazil, it is considered an external debt.

Table 12 shows the evolution of the DPF stock between 2019 and 2020, emissions and the share of the Domestic Federal Public Securities Debt - DPFMi and the External Federal Public Debt - DPFe in total 2020 emissions.

Table 12 - DPF Stock and Issues

Stock and Issues DPF (R$ bi)	Stock 2019	Stock 2020	Emissions 2019	Emissions 2020	Var (R$ bi)	Participation Emissions 2020
DPMFi	4.083.2	4.766.1	738.1	1.296.5	558.4	97.6%
DPFe	165.7	243.5	21.1	32.4	11.3	2.4%
DPF	**4.248.9**	**5.009.6**	**759.2**	**1.328.9**	**569.7**	**100%**

Source: DAR 2019 and 2020 (STN, 2020b and STN, 2021b)

Note that the share of DPFe in total issues is low (2.4% in 2020), being less important as a financing instrument and more important as a qualitative instrument for debt lengthening, investor base diversification and price reference provider for the corporate sector (STN 2021b).

Between 2019 and 2020, DPF emissions increased by R$ 569.7 billion, and of the total 2020 issuance (R$ 1,328.9 billion), 97.6% refers to the DPMFi (R$ 1,296.5 billion), which historically is the

61 Law 10,179/2001 authorizes the Executive Branch to issue public debt securities under the responsibility of the National Treasury. In addition, other specific laws may also authorize emissions for specific purposes (e.g. FIES Law no. 10,260/01). Decree no. 9,292/2018 defines the characteristic of most Federal Public Debt securities.

62 Depending on the analysis required, external debt can be understood as the part of the debt indexed to foreign currency or the part that must be paid in foreign currency.

federal government's main financing instrument.

In view of the magnitude of the amounts, public bond issues, especially those related to the domestic market, were indispensable for the Central Government to finance its deficit, including emergency expenditures with COVID-19. The market was able to absorb the additional volume of issues, but the government needed to alter its strategy to adapt to the demands of the buyers. We will see in more detail what happened to public debt in the next section.

3.5 Purchase of Treasury Bonds by the Central Bank

Although it has not been used, it is important to mention that permission for the Central Bank to purchase Treasury bonds was given by Constitutional Amendment 106/2020[63], on a temporary basis during the period of national public calamity (until 12/31/2020).

The measure was included on a prudential basis since it was not known beforehand all the impacts of the pandemic and how the market would react to the growth of emissions in the domestic market.

It is worth remembering that the issuance of Treasury bonds in the domestic market (DPMFi) rose from R$ 738.1 billion in 2019 to R$ 1,296.5 billion in 2020, an increase of 76% in a short period of time. The emergency situation made it necessary for the STN to make strong adjustments in its Annual Borrowing Plan - PAF and to carry out extraordinary actions at certain moments. The uncertainty and the high need for placing securities led the STN to issue shorter securities, especially 6 and 12 month prefixed securities (National Treasury Bills - LTN). With this, the percentage of DPF maturing in 12 months rose from 18.7% (Dec/2019) to 27.6% (Dec/2020) and its average maturity rose from 4.0 to 3.6 years in the same period (STN, 2021b).

Given the magnitude of the increase in emissions, there was the fear that the market would not be able to absorb the entire amount of securities required. However, as observed in the 2020 DAR (STN, 2021b), the high liquidity reserve (debt cushion), the predominance of domestic debt and the depth and organization of the public securities market proved to be important mechanisms to enable the financing of COVID-19 expenditures in 2020.

In any case, the provision to allow the financing of the Treasury by the Central Bank and to temporarily remove the lock provided in the Constitution was important to create a legal alternative for financing should the situation worsen.

63 Article 7 of EC nº 106, of 05/07/2020.

3.6 Summary Table - Funding in 2020

In summary, when we estimate the big numbers of the Central Government's funding requirement during 2020 (among them those related to fighting COVID-19), and its main funding sources[64], we have the following tables:

Table 13 - Primary Result - 2020

Governo Central - valores correntes R$ bilhões	2020
Receita Líquida (Receita Própria Primária)	1.204,0
Despesa Total	1.947,2
Resultado Primário Gov Geral (acima da linha)	-743,3
Ajustes abaixo da Linha	-2,0
Resultado Primário Gov Geral (abaixo da linha)	-745,3

Source: RTN (STN, 2021a)

The rise in primary expenditures and the fall in Primary Own Revenues raised the 2020 primary deficit to R$ 745.3 billion (table 13).

Table 14 - Estimates of Central Government Borrowing Requirements and its Sources - 2020

Estimated Central Government Borrowing Requirements (R$ bi)	2020
Primary Deficit 2020	745.3
DPMFi Maturing	1.017.7
DPFe Maturities	14.7
Honors and Guarantees	13.3
Estimated Total Borrowing Requirements	**1.791.0**

Estimated Sources of Financing (R$ bi)	2020	Partic.
Change in Single Account - Cash Availability from Previous Years	-13.8	-0.8%
Emissions - DPMFi	1.296.5	72.4%

64 Here the intention is to assess the big numbers of the financing needs and their sources in 2020 and not to arrive with precision at the numbers for the year. In this estimate, the amount of R$ 59.8 billion related to other sources of funding were not raised and can be attributed to the other financial revenues obtained by the Union, such as interest received from the payment of the debts of subnational entities.

Emissions - DPFe	32.4	1.8%
Central Bank Result Transferred to the Treasury	349.7	19.5%
Single Account Remuneration	66.4	3.7%
Own Financial Revenues	35.8	2.0%
Others**	24.0	1.3%
Estimated Sources of Funds	**1.791.0**	**100.0%**

* We included only the financial own revenues because the primary ones were already considered in the primary deficit

** The "other" line is the adjustment line for arriving at the total amount financed.

Source: Elaborated by the author

When adding the main financial expenses (DPF maturities and honors and guarantees) by cash criteria, we arrive at a total Central Government borrowing requirement of R$ 1,791.0 billion (table 14), which corresponded to 24% of GDP[65].

From table 14, it is clear that the federal government financed the huge deficit in the public accounts of 2020, much of it generated by the expenses coming from the fight against COVID-19 (R$524.0 bi) by two main instruments:

a) public bond issues in the domestic market (R$ 1,296.5 billion); and

b) the result transfer from the Central Bank to the Treasury (R$ 349.7 billion).

Together, the two instruments financed 91.9% of the Central Government's needs in 2020. Without the changes in the level of emissions and without the legal changes made, the government would not be able to finance the emergency expenses resulting from the fight against the COVID-19 pandemic.

4. Conclusions

The year 2020 was extremely difficult for both the population and the federal government. The COVID-19 pandemic reduced revenues and increased public spending, generating a primary deficit of R$ 745.3 billion for the Central Government and a need for total funding close to R$ 1.8 trillion (24% of GDP), of which R$ 524.0 billion originated from actions to combat the pandemic and its effects.

65 GDP in 2020: R$ 7.44 trillion, according to the IBGE forecast in October/2021.

Considering the Brazilian legal framework with its fiscal rules, the traditional sources of financing the public deficit are the following:

- Own revenue (collections, concessions, dividends, other revenues);
- Cash on hand from previous years;
- Transfers from the Central Bank to the Treasury; and
- Issuance of government bonds (Federal Public Debt).

In normal situations, financing a deficit of the magnitude observed in 2020 would be prohibited by the fiscal rules in force, given both the limitations on public spending (spending cap, LRF, etc.) and the limitations on financing spending (limitation of Treasury financing by the Central Bank, the Golden Rule and limit on credit operations). However, as the year 2020 was atypical, with the declaration of a national public calamity and the need for emergency spending, the escape clauses provided for in the fiscal rules were used and, together with the constitutional changes made by EC no. 106/2020, temporarily broke the legal restrictions allowing spending and its financing.

Thus, the Central Government's funding requirement and its funding sources ended the year 2020 as follows:

Table 15 - Estimates of Central Government Borrowing Requirements and its Sources - 2020

Estimated Central Government Borrowing Requirements (R$ bi)	**2020**
Primary Deficit 2020	745.3
DPMFi Maturing	1.017.7
DPFe Maturities	14.7
Honors and Guarantees	13.3
Estimated Total Borrowing Requirements	**1.791.0**

Estimated Sources of Financing (R$ bi)	**2020**	**Partic.**
Change in Single Account - Cash Availability from Previous Years	-13.8	-0.8%
Issuances - DPMFi	1.296.5	72.4%
Issuances - DPFe	32.4	1.8%
Central Bank Result Transferred to the Treasury	349.7	19.5%
Single Account Remuneration	66.4	3.7%

Own Financial Revenues	35.8	2.0%
Others**	24.0	1.3%
Estimated Sources of Funds	**1.791.0**	**100.0%**

* We included only the financial own revenues because the primary ones were already considered in the primary deficit

** The "other" line is the adjustment line for arriving at the total amount financed .

Source: Elaborated by the author

With the temporary emergency permission, the federal government was authorized to finance the expenditures to combat COVID-19 using mainly the issue of government bonds and the receipt of R$ 325 billion from the Central Bank's Result Reserve, which was extremely important to provide the necessary liquidity and reduce the pressure on the bond auctions held by the Treasury. It is worth remembering that the greater the need to issue securities, the greater the premiums charged by the market to accept their placement. With the receipt of R$ 325 billion from the Central Bank directed to the payment of maturing debt, the Treasury needed to issue fewer securities to the market.

Another important measure to reduce the pressure on the auctions of Treasury bonds was the temporary constitutional permission provided in EC nº 106/2020 for the purchase of bonds by the Central Bank. Although it was not used, it created an alternative source of financing that was available to the government in case the pandemic worsened and the market refused to continue financing the expenditures.

Furthermore, EC no. 106/2020 created an extraordinary fiscal, financial and hiring regime to meet the needs of the pandemic during the period of public calamity decreed by the National Congress. Together with the authorization to not comply with the spending cap, it dispensed with the legal limitations (offsets, impact estimates) for the creation/expansion of expenses or revenue waiver, making it possible for the federal government to expand spending to face the calamity, which, on the other hand, required a change in the spending financing strategy.

The high volume of emissions ended up altering the DPF profile, especially by increasing the concentration of debt maturing in the short term. The percentage of DPF maturing in 12 months rose from 18.7% (Dec/2019) to 27.6% (Dec/2020) and its average maturity rose from 4.0 to 3.6 years in the same period. However, the high liquidity reserve (debt cushion), the predominance of domestic debt and the depth and organization of the public securities market proved to be important mechanisms to allow the financing of spending without major upsets.

The challenges were great, but the main lesson left by the COVID-19 pandemic regarding Central Government funding was that in emergency situations where public spending has to take a temporary jump, there will be a need to adopt the following measures:

1. Enact Constitutional Amendment that:
   a. temporarily break the legal rules that limit public spending/revenue forgone (spending cap, LRF, etc.) for emergency expenditures; and
   b. allow funding from the Central Bank to the Treasury temporarily and only for emergency expenses.
2. Decree a state of calamity that triggers the escape clauses of the rule limiting credit operations and the rule of compliance with the fiscal targets of the LRF; and
3. Approve special or supplemental credit request to comply with the Golden Rule.

We hope and wish that pandemics like COVID-19 will not happen again, but we must be prepared to act if they do.

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