

2020

Annual Borrowing Plan



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Federal Public Debt: Annual Borrowing Plan 2020. 1/
Ministry of Economy, Special Secretariat of Finance,
National Treasury Secretariat, Brasília: National Treasury
Secretariat, January, 2020, number 20.

1. Federal Public Debt 2. Annual Borrowing Plan 3.
Planning 4. Strategy

I. Brazil. National Treasury Secretariat II. Title

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Last update: 01/27/2020

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National Treasury Statement

In 2020, we celebrate the 20th edition of the Annual Borrowing Plan – ABP, a fundamental part of Federal Public Debt – FPD planning. The document sets out debt management objective and guidelines, the annual strategy for federal government's domestic and external debts in the market and the reference limits for the main debt indicators, to be met throughout 2020. Thus, it represents an instrument for predictability and transparency of the National Treasury in its commitment of preserving fiscal sustainability and public spending quality.

The first ABP was launched in 2001, in a context of transformations in the Brazilian economy. By then, the adoption of floating exchange rate regime and the inflation-targeting framework were still recent in Brazil. Fiscal policy was strengthened by the generation of primary surpluses and by the recently enacted Fiscal Responsibility Law in 2000.

Amid these transformations, the ABP was launched with the purpose of improving Treasury institutional communication with society and contributing to guiding market players expectations. More than that, it is a tool that helps improving debt profile, as well as reducing debt costs and risks. Since the first ABP issue, FPD has consolidated lower maturity concentrations in the short term, longer average maturity and more diversified composition, with reduction of the foreign exchange exposure to levels below 5% of the outstanding volume.

Twenty years later, the 2020 ABP is also published in a context of changes in the Brazilian economy and in the public finance framework. The current fiscal challenge involves, above all, public spending control, so that fiscal accounts are able to generate primary surpluses and ensure a sustainable debt dynamic. A necessary condition for this is the persistence of the implementation of structural reforms in the framework of mandatory government spending, following the recently approved pension reform.

The progress of the reform agenda is already reflecting in economic conditions, allowing the country to face interest rates at minimum levels, inflation under control and an economic activity recovery, after one of the most severe crises in Brazilian history. The ongoing fiscal consolidation is the key element to support the sustainability of the current scenario, allowing a downward debt/GDP path in the medium-term and, as a corollary, expanding the space so that the Treasury can obtain a new cycle of improvements in the FPD profile, by reducing the share of floating-rate bonds and lengthening average maturity.

It is in this context that we launch the 2020 ABP. Here, we reaffirm our goal of reducing FPD's costs while maintaining prudent risk levels. There is also the expectation of taking advantage of opportunities for future improvements in debt management considering the ongoing changes in the economy.



1 Introduction

The 2020 Annual Borrowing Plan (ABP 2020) is the 20th edition of the document, whose purpose is to present the annual Federal Public Debt (FPD) strategy on the market, in light of the public debt management objective and guidelines. In particular, the results expected in 2020 for the main indicators will be highlighted, by reference limits.

The FPD management objective is to efficiently supply federal government borrowing needs at the lowest cost in the long term, maintaining prudent levels of risk and, in addition, seeking to contribute to the proper functioning of the Brazilian bond market.

In order to achieve this objective, the following qualitative guidelines guide the development of FPD borrowing strategies:

- Gradual replacement of floating-rate bonds by fixed-rate and inflation-linked bonds;
- Smoothing the yield curve, with particular attention to short-term maturity;

- Increasing outstanding debt average maturity;
- Yield curve development;
- Increasing federal public bonds liquidity on the secondary market;
- Broadening and diversifying the investors base.

This document is organized into five sections, in addition to this introduction. The next section presents macroeconomic scenarios and the estimated borrowing requirements for 2020. Section 3 discusses the borrowing strategy outlined, highlighting the main bonds to be issued during the year. Section 4 presents the results expected by the end of 2020, as well as reference limits for FPD indicators in the medium term. As a celebration of the 20th ABP edition, Section 5 brings an assessment of the ABP history. Final remarks are made in Section 6. There is also an additional supplement attached to the document, containing analysis on the different metrics for measuring interest expenses, under varied concepts.

2

Macroeconomic Scenarios and Borrowing Requirements

2.1 Macroeconomic scenarios

The scenarios outlined for the 2020 ABP consider an external environment marked global activity stabilization and maintenance of trade tensions, mainly involving the United States and China. This context results in the implementation of expansionary monetary policies by the main central banks in the world.

The international baseline scenario, to which we assign higher probability, includes: (i) moderate US-China tensions; (ii) *Brexit* with an agreement; (iii) global economy accommodation; and (iv) weak international trade dynamics and slumping commodities' prices. Additional factors such as American elections, geopolitical tensions and Argentinian economy slowdown also need to be monitored.

At the domestic level, the combination of a benign inflationary scenario persists, maintaining interest rates at historically low levels, gradual economic activity recovery and progress on the structural reform agenda, in order to support the ongoing fiscal adjustment.

In this sense, the baseline scenario is close to market forecasts for 2020. The fiscal scenario improvement, with primary deficits in a downward path, allows progress in the reform agenda, generating positive impacts in terms of financial

conditions, business environment and economic activity. The conditions for the balance of payments remain favorable, even with the possibility of increasing the current account deficit which is financed by robust foreign direct investments (FDI) inflow.

The alternative scenarios, which help defining reference ranges for the FPD indicators, consider risk factors relative to the baseline scenario.

A more conservative scenario, relative to the baseline scenario, assumes one or more of the following factors: deterioration in US-China relations, tensioning political scenario in the US, *Brexit* without agreement and stronger global economy slowdown. From a domestic point of view, the conservative scenario contemplates economic growth expectations under performance and a slower pace in the reform agenda progress, which could build up pressures for short-term solutions with negative fiscal impact.

On the other hand, a more favorable scenario, relative to the baseline, considers an agreement between the United States and China. From a domestic point of view, there would be an even more favorable political environment for the reform agenda, with positive impacts on market confidence which would lead to a more consistent growth recovery.

Scenarios with severe shocks or extreme situations remain as a tail risk and have not been contemplated for the decision of the limits in this ABP.

2.2. 2020 borrowing requirements

The definition of borrowing requirements used in the ABP considers only revenues and expenditures that will occur during the year. Once the Debt Management Office (DMO) has a liquidity reserve (cash cushion), the indicator should not be interpreted as the volume of bond issuances to be carried out over the year. Thus, gross borrowing requirements is compounded by the sum of FPD maturities, primary expenditures¹ to be paid with bonds issuances' proceeds and payments related to subnational governments' non-performing guaranteed debt. Budgetary resources intended to pay the debt and not derived from bond issuances proceeds are subtracted from this amount in order to obtain net borrowing requirements.

The ABP provides an *ex ante* view of the borrowing requirements, which, on the revenue side, only considers the revenues that will be collected in 2020. That is to say, this indicator, by definition, does not include revenue

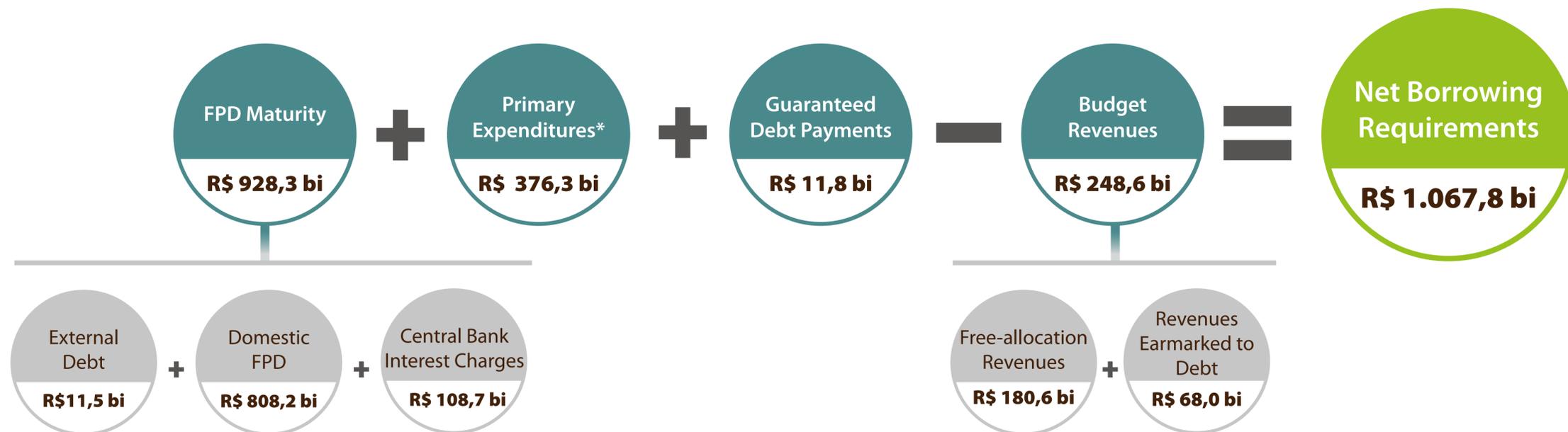
¹ Primary expenditures presented in this ABP include, by simplicity, financial expenditures of budget units external to public debt that will be paid out with debt issuances resources. However, these expenditures represent only BRL 1.8 billion of the total BRL 376.3 billion.

arising from the financial surplus, obtained in previous years, that is however available as cash position to cover debt expenditures. In this way, the net borrowing requirement should be interpreted as the amount that the National Treasury should issue in order to maintain stable the level of cash position (liquidity reserve) available to pay debt². The liquidity reserve (cash position) represents an important element of risk mitigation.

The estimate of federal government gross borrowing requirements for 2020 reaches BRL1,316.4 billion, while net borrowing requirements amounts to BRL 1,067.8 billion, as shown in Figure 1. The financial volume raised through issuances throughout the year may be equal, greater or less than net borrowing requirements, depending on market conditions.

² One reason for not including a forecast of the use of the financial surplus in the *ex ante* borrowing requirement concept is to prevent the same revenue from being considered in the estimate for more than one year. If the resource is not used in the same financial year as it was collected, it would distort borrowing requirements time series analysis. The *ex post* view, which is usually presented in the Annual Debt Reports, takes into account the financial surplus actually used in the year, so that the net *ex post* result indicates the amount of expenditure that has been paid out with resources of bond issuances, regardless of the variation in cash position.

Figure 1 – Borrowing requirements in 2020



* Mainly primary expenditures. The amount includes BRL1.8 billion in financial expenses of management units other than public debt that will be paid with issuances proceeds.

Source: National Treasury.

Currently, the National Treasury has a liquidity reserve large enough to pay FPD maturities in the market for over six months, including 2019 financial surpluses (see Table 1), such as those arising from the Central Bank balance result (BRL 162.6 billion)³ and pre-payments to the Treasury, by BNDES (BRL 70.0 billion)⁴ and Caixa Econômica Federal (BRL 8.3 billion). In addition to the liquidity reserve in domestic currency, the National Treasury already has enough foreign currency resources to pay off all external debt maturities in 2020.

Table 1 – Estimates of the financial surplus available for FPD in 2020 (BRL billion)

Budget revenue (source)*		Value
52	Central Bank result	162.6
59	Return on medium- and long-term Treasury loans**	81.1
71	Return on credit operations – BEA/BIB	0.1
73	Return on credit operations – states and municipalities	5.9
97	Federal government dividends	12.6
Total		262.3

* Considers only revenues earmarked to the FPD, other than issuances revenues.

** Includes pre-payments to the Treasury by BNDES in 2019 worth BRL 70.0 billion.

Source: National Treasury.

Outstanding FPD maturing in 2020 sums BRL 819.7 billion, including domestic and external debt maturities, almost all of which relative to domestic debt, as shown in Table 2. In addition, there are BRL 108.7 billion in interest

³ This amount corresponds to the sum of financial surpluses referring to the Central Bank's balance results of 2018 (BRL 141.2 billion) and 2019 (BRL 21.4 billion).

⁴ In 2019 the BNDES made pre-payments to the Treasury amounting to BRL 100 billion, of which BRL 30 billion were used in the same year and BRL 70 billion were transferred to be used in 2020.

payments relative to the bonds in the Central Bank portfolio that, by law, cannot be rolled over⁵.

Table 2 – Estimated FPD maturity in the market for 2020 (BRL billion and % of the total)

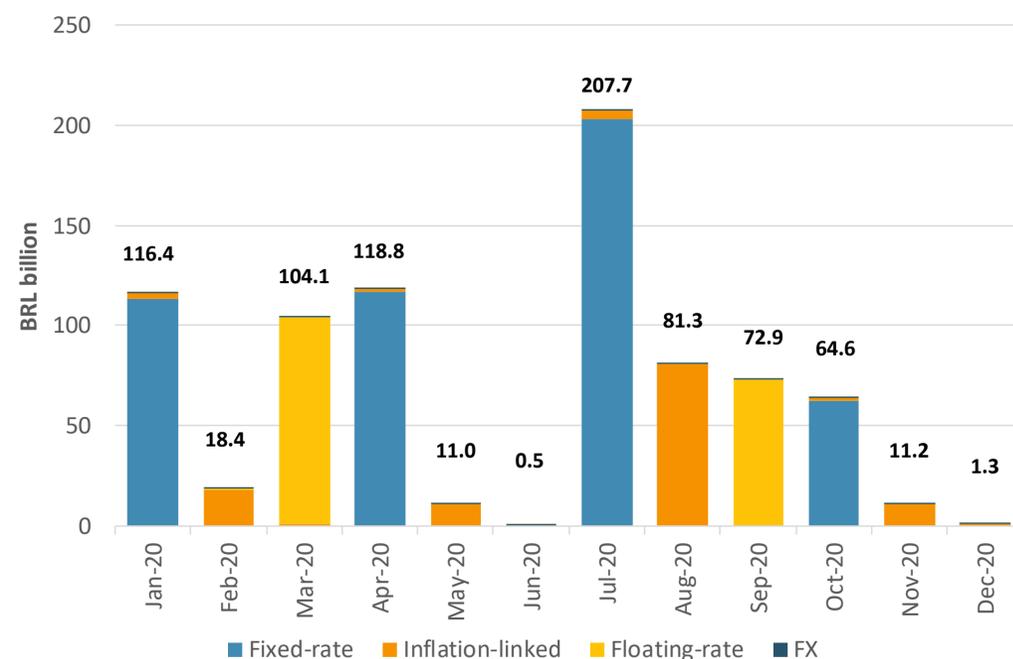
Type	FPD		DFPD	
	BRL billion	% of the total	BRL billion	% of the total
Fixed-rate	497.2	60.7%	496.1	61.4%
Floating-rate	176.4	21.5%	176.4	21.8%
Inflation-linked	134.1	16.4%	134.1	16.6%
FX	12.0	1.5%	1.6	0.2%
Total	819.7	100%	808.2	100%

Source: National Treasury.

Domestic Federal Public Debt (DFPD) maturities represent the largest share of FPD maturities in 2020 (BRL 808.2 bn). Unlike in previous years, the main maturity volumes are concentrated in July rather than January. As for the composition, it should be highlighted the low maturity volume of floating-rate bonds, especially LFT, and the dominance of fixed-rate bonds maturities (Figure 2).

⁵ By § 2nd of article 39 of the Fiscal Responsibility Law, the Central Bank may only buy bonds issued by the National Treasury to roll over the principal of the bonds maturing at its portfolio.

Figure 2 – Estimated DFPD maturity in market for 2020 (BRL billion)



DPMFi	BRL (Billion)	%
Principal	606.7	75%
Interest	201.4	25%
Total	808.2	100%

Source: National Treasury.

Estimated values, as of 12/31/2019.

In addition to debt maturities, the 2020 budget foresees the necessity of BRL 376.3 billion in bonds issuances to pay for primary expenditures. Of this amount, BRL 343.6 billion are expenses conditioned to the approval of additional credits by an absolute majority of the National Congress, in observation of the legislation known as the Golden Rule, according to Section III of Article 167 of the Federal Constitution. Breakdown of the primary expenditures corresponding to these credits are shown in Table 3.

Table 3 – Primary expenditures to be paid with government bonds issuances proceeds (BRL billion)

Budget Expenditures	Expected	Subject to Congress approval
Pension benefits	213.7	213.7
Payroll and social expenditures	84.4	84.4
Executive branch discretionary expenditures	20.5	11.6
Court orders	20.3	20.3
Compensation to the private-sector workers' pension system (FRGPs) for tax breaks	10.3	5.0
Bolsa Família	9.0	0.5
Benefits to public sector employees	3.3	3.3
Campaign financing	1.8	0.0
Subsidies, tax breaks and other	13.1	4.8
Total	376.3	343.6

Source: Federal Budget.

Produced by: National Treasury.

The gross borrowing requirements are complemented by the forecast of non-performing guaranteed debt. Part of the non-performing guaranteed debt payments value refers to the payment flows in contracts of subnational governments defaulting on debts guaranteed by the federal government, which have adhered or may accede to the Fiscal Recovery Regime - FRR (Complementary Law nº 159, of 2017). The expected honors of guarantees for Rio de Janeiro defaults, the only state that officially joined the FRR, amount to R \$ 7.6 billion in 2020.

Additionally, the budget forecast for non-performing guaranteed debt includes a margin of BRL 4.2 billion to secure the guaranteed contracts of the states of Amapá, Goiás, Minas Gerais and Rio Grande do Norte⁶. The Federal Government has regularly honoured the guaranteed contracts of these states. However, the

⁶ This forecast includes estimations for non-performing guaranteed debt in 2020. The 2020 budget foresees additional resources to ensure the payment due to new states joining the FRR and to legal injunctions

federal government is prevented from executing the collaterals of these guaranteed contracts due to the FRR or to legal injunctions.

The 2020 budget forecasts the allocation of BRL 248.6 billion in other budget revenues (sources) to cover for debt maturities. This value does not incorporate bonds issuances that are expected to occur during the year or cash availabilities from previous years (financial surpluses). The budget forecast includes two types of resources that will be collected in the 2020 fiscal year: (i) **earmarked revenues** consisting of revenue linked to FPD payments, as in the case of repayments of federal government loans to BNDES and subnational governments; and (ii) **free-allocation revenues**, i.e. resources without specific earmarking.

The assignment of free-allocation budgetary revenues to FPD maturities payment directly reduces borrowing needs and mitigates the impact on the liquidity reserve (“liquidity cushion”) of using issuance revenues to pay for primary expenditures. The gap between the bonds issuances proceeds destined to primary expenditures and the free-allocation revenues expected for FPD represent the net amount of debt resources being used to pay primary expenditures, estimated at BRL 195.7 billion for 2020, as shown in Figure 3.

Figure 3 – Forecast for primary expenditures to be paid with bonds issuances (BRL bn)



Source: National Treasury.

The expected borrowing requirements do not include potential expenditures related to contingent liabilities managed by the National Treasury under recognition process, since the time to complete the regularization is unforeseeable. The 2020 Budgetary Guidelines Law, in its Fiscal Risks Annex, indicates a BRL 19.1 billion forecast for these liabilities, 72.1% of which are potential liabilities under the FCVS.



3

Borrowing Strategy

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This section seeks to describe the National Treasury expected performance by government bonds issuances on the market throughout 2020. Since 2015, the National Treasury has sought to execute annually DFPD net issuances, aiming to strengthen the liquidity reserve (liquidity cushion) in an environment of uncertainty while compensating system's liquidity increase deriving from recurrent primary deficits. As a result of public indebtedness rise observed since 2014, when the primary deficits period began, the annual volume of DFPD maturities should increase structurally from 2020 on. Federal debt borrowing strategy in 2020 remains in line with the strategies adopted in recent years considering the challenge of dealing with increasing public indebtedness while observing market conditions and following public debt management guidelines.

Cash position, composed by resources that are exclusively earmarked for federal debt payment, constitute a liquidity reserve ("liquidity cushion") in a volume enough to pay at least six months of DFPD maturities. This cushion mitigates occasional risks allowing the National Treasury to conduct its borrowing strategy with more flexibility.

3.1. Domestic debt

The strategy includes issuances of fixed-rate bonds (LTN and NTN-F), inflation-linked bonds (NTN-B) and floating-rate bonds (LFT). Fixed-rate bonds (LTN and NTN-F) are important in the process of reducing debt dependence on instruments linked to the overnight interest rate. Besides that, LTN bonds have an important role of increasing liquidity of federal government bonds on the secondary market. In addition, NTN-B issuances

play a role in increasing FPD average maturity. LFT, in turn, are floating-rate bonds that *ex ante* are expected to be less costly besides representing an important instrument for FPD financing, contributing to the maintenance of Treasury's liquidity cushion and reducing the risk of maturity concentration of in the short term.

The fixed-rate bonds have 6-, 12-, 24- and 48-month maturities for LTN, representing short- and medium-term benchmarks. The 6-, 12- and 24- month LTN benchmarks will have maturities in April and October, and the 48-month LTN benchmark will have maturities in January and July. NTN-F issuances will have 7- and 10- year benchmarks, with maturities in January/2027 and January/2031, respectively. The auctions of fixed-rate bonds (LTN and NTN-F) will have a weekly frequency.

Depending on market conditions, the National Treasury intends to take advantage of the structurally lower interest rates environment to create a fixed-rate benchmark with a maturity longer than 10 years.

Setting longer-term benchmarks contributes to the process of lengthening the yield curve with positive spillovers to the capitals market. Similar to other economies, this instrument is not expected to have a relevant contribution in federal debt financing volumes in the short term, although it might gradually contribute to improving debt statistical indicators.

Inflation-linked bonds (NTN-B) issuances will have maturities in May/2025, August/2030, August/2040 and May/2055. The NTN-B auctions will be held fortnightly.

The issuance strategy for floating-rate bonds includes the rollover of LFT benchmarks in order to offer four different benchmarks throughout the year (March/2026, September/2026, March/2027 and September/2027). This strategy contributes to the lengthening of public debt and to smoothing the debt maturity structure. The LFT auctions will be held fortnightly.

Finally, the National Treasury will hold NTN-B exchange auctions in order to contribute to the lengthening public debt and to the proper functioning of the secondary market. Similar auctions involving exchange of other federal bonds may also be held.

Table 4 presents expected bonds issuances during 2020 for each benchmark. The auction notices will define the bid selection criteria, which can be: (i) by uniform price auction, in which there are accepted all bids equal or greater than the minimum accepted bid, which price is applied to all the bidders; or (ii) by multiple price auction, in which accepted bids pay the price submitted in their respective bid.

Table 4 – Benchmarks issuances in 2020*

Bond	Indexer	Coupon	Benchmarks and maturities	
LTN	Fixed-rate	Zero-coupon (interest is paid at maturity corresponding to the difference between issuance and redemption values)	Short- and medium-term	6-month – Oct-2020 and Apr-2021
				12-month – Apr-2021 and Oct-2021
				24-month – Apr-2022 and Oct-2022
				48-month – Jan-2024 and Jul-2024
NTN-F	Fixed-rate	10% per year, payable semiannually	Long-term	7-year – Jan-2027
				10-year – Jan-2031
LFT	Selic rate	Zero-coupon (interest is paid at maturity according to index fluctuation)	6-year – Mar-26, Sep-26; Mar-27 and Sep-27	
NTN-B	IPCA (consumer price index)	6% per year, payable semiannually	Medium-term	5-year – May-2025
				10-year – Aug-2030
			Long-term	20-year – Aug-2040
				40-year – May-2055

* For more details on DFPD bonds characteristics, see Decree nº 9,292, of February 23rd, 2018.

Source: National Treasury.

See here the 2020 auctions schedule.

The National Treasury publishes [Annual Auctions Schedule](#) on its website, increasing transparency and predictability of its operations.

Notwithstanding, while executing its borrowing strategy, the debt manager continuously observes the prevailing conditions in the economy and in the financial markets and, at specific times, planning can be adjusted. Eventually, the National Treasury may choose to carry out unanticipated auctions to contribute to the proper functioning of the secondary market for government bonds or to create a fixed-rate benchmark with a maturity of more than 10 years.

3.2. External debt

The External Federal Public Debt (EFPD) strategy pursues the following guidelines:

- Creation and improvement of benchmarks in the yield curve;
- Maintenance of the buyback program;
- Possibility of external liability management operations aimed at enhancing external yield curve efficiency;
- Expanding and diversifying investors base.

In 2020, the Treasury will preserve a qualitative approach towards sovereign external issuances, with the objective of consolidating efficient and liquid external yield curves, that can serve as a reference for corporate sector issuances. For external yield curve improvement, the National Treasury will

seek to issue benchmarks in dollars (USD) and euros (EUR), maintain the buyback program and act through other liability management operations to remove less efficient bonds from the market. That way, the Treasury contributes to the yield curve development not only in the domestic market but also in the external market, in line with FPD guidelines.

The EFPD rollover risk in the short term has been mitigated, considering that all interest and principal maturities for 2020 have already been previously financed, either with from international issuances proceed, which resources have been maintained in dollars, or through issuances and currency purchases in the local market.

EFPD is a key instrument for lengthening public debt maturity. At the end of 2019, the average maturity of outstanding EFPD was 7.5 years, contributing positively to lengthening FPD, which has 4.0 years of average maturity.

Finally, the National Treasury remains attentive to the main changes and trends in the international fixed income market and can adapt its actions in order to always be aligned with the best debt management practices. Especially, the National Treasury will seek to address the best transparency practices regarding environmental, social and governance aspects (ESG), increasingly demanded by society and, mostly, by market analysts.

4

Expected
Results

4.1. FPD in the short term (2020)

Table 5 summarizes the expected results for FPD in 2020, considering the strategies previously described, borrowing requirements and the forecasted economic scenarios. Each FPD indicator expected performance is presented in the form of reference ranges between a minimum and a maximum limit. It grants a good degree of predictability while providing the necessary flexibility for public debt management to adjust its performance to the prevailing conditions in the public bonds market.

Table 5 – Reference limits for FPD in 2020

Statistics	2019	Reference limits for 2020	
		Minimum	Maximum
Outstanding debt (BRL billion)			
FPD	4,248.9	4,500.0	4,750.0
Composition (%)			
Fixed-rate	31.0	27.0	31.0
Inflation-linked	26.0	23.0	27.0
Floating-rate	38.9	40.0	44.0
FX	4.1	3.0	7.0
Maturity structure			
% maturing in 12 months	18.7	20.0	23.0
Average maturity (years)	4.0	3.9	4.1

Source: National Treasury.

The expected range for the outstanding FPD volume at the end of 2020, reflects both the expectation of interest accrual and the balance between planned issuances and redemptions throughout the year. The ABP 2020 reference limits comprehend a strategy that assumes about 100% rollover of domestic debt principal and interest maturing in the period. As a consequence, it prevents these flows from adding liquidity to the financial system, especially considering another year with a primary deficit in the public accounts. Besides, debt management maintains a comfortable cash position (liquidity reserve) as a factor to mitigate risks.

The combination of the strategy described in the previous paragraph and the fact that there is a low volume of LFT maturing in 2020, as presented in Figure 2, will result in the increase of the floating-rate bonds' share in the outstanding FPD. This trend initiated in 2015, will persist in 2020.

The larger share of floating-rate bonds means higher exposure of public debt to variations on the monetary policy interest rate (Selic). Nonetheless, LFT are issued with about 6 years term thus avoiding maturity concentration in the short term, representing an alternative to short-term fixed-rate bonds.

Debt composition also benefits from the low share of bonds with foreign exchange exposure, which tends to be a more volatile indexer. This result is one of the effects of an essentially domestic FPD (external debt represented only 3.9% of FPD in December 2019), although with moderate participation of non-resident investors as DFPD bondholders.

Another dimension monitored in the ABP is the FPD maturity profile, through the indicators of share of debt maturing in 12 months and average outstanding debt maturity. While the former consists in a measure of short-term maturity concentration, the latter reflects the average remaining time for debt payments weighted by the present values of principal and interest flows. Debt refinancing risk, measured by these indicators, will be greater the higher the former and the lower the latter.

In 2020 exceptionally there will be an increase in the share of FPD maturing in 12 months, as a result of the high volume of 6-year maturity LFT issuances that occurred in 2015. These bonds will start maturing from 2021 on, influencing the 12-month maturity concentration indicator by the end of 2020. However, this risk is mitigated by the maintenance of the liquidity reserve (debt cash cushion), which volume is currently equivalent to more than six months of domestic debt maturities and tends to remain so by the end of the year.

In turn, the outstanding FPD average maturity tends to stabilize in 2020, with the midpoint of the reference range pointing to 4.0 years, the same value observed at the end of 2019. This indicator performance is associated with FPD composition changes, particularly with the declining trend in the share of inflation-linked bonds, which are typically longer duration instruments.

In addition to the average maturity, the Treasury regularly publishes statistics about average life (ATM, acronym for average time to maturity) for the FPD⁷. This indicator is useful for international comparisons, once many countries use this measure to calculate their outstanding debt maturities rather than the average maturity (duration) concept, which is monitored according to the reference ranges determined in this ABP FPD average life information can be found in: <https://www.gov.br/tesouronacional/en/federal-public-debt/about-federal-public-debt/key-figures-of-the-federal-public-debt>.

4.2. Optimal FPD long-term composition

Optimal FPD long-term composition, known as benchmark portfolio, is one of the main debt planning tools. It is obtained through a quantitative model which intends to answer which debt composition optimizes the balance between cost and risk in the long-run, given the assumed demand constraints for each bond type. The purpose is to provide quantitative guidelines for debt strategic planning in line with public debt objective and qualitative guidelines.

As a long-term reference, deviations from the benchmark may occur in the short term, as the National Treasury adjusts the strategies to the prevailing macroeconomic and financial conditions in order to avoid pressures that result in excessive cost or risk. Table 6 presents the benchmark FPD portfolio reference limits, unaltered relative to the previous year.

⁷ However, average life (ATM) is an indicator less efficient than the average maturity (duration), since it ignores coupon payments and does not calculate the principal payment flows by their present value. Such drawbacks, cause the indicator to show values well above the FPD average maturity which is the reason the Treasury gives less emphasis to this indicator on FPD statistics. Despite these limitations, most countries adopt an indicator similar to the average life in their maturity profile statistics, therefore direct comparisons with the measure adopted in this ABP are misleading.

Table 6 – Optimal FPD long-term composition

Statistics	Long-term limits	
	Reference	Range
Composition - %		
Fixed-rate	40.0	+/- 2.0
Inflation-linked	35.0	+/- 2.0
Floating-rate	20.0	+/- 2.0
FX	5.0	+/- 2.0
Maturity structure		
% maturing in 12 months	20.0	+/- 2.0
Average maturity (years)	5.5	+/- 0.5

Source: National Treasury.

4.3. Reference limits for the FPD in the medium term

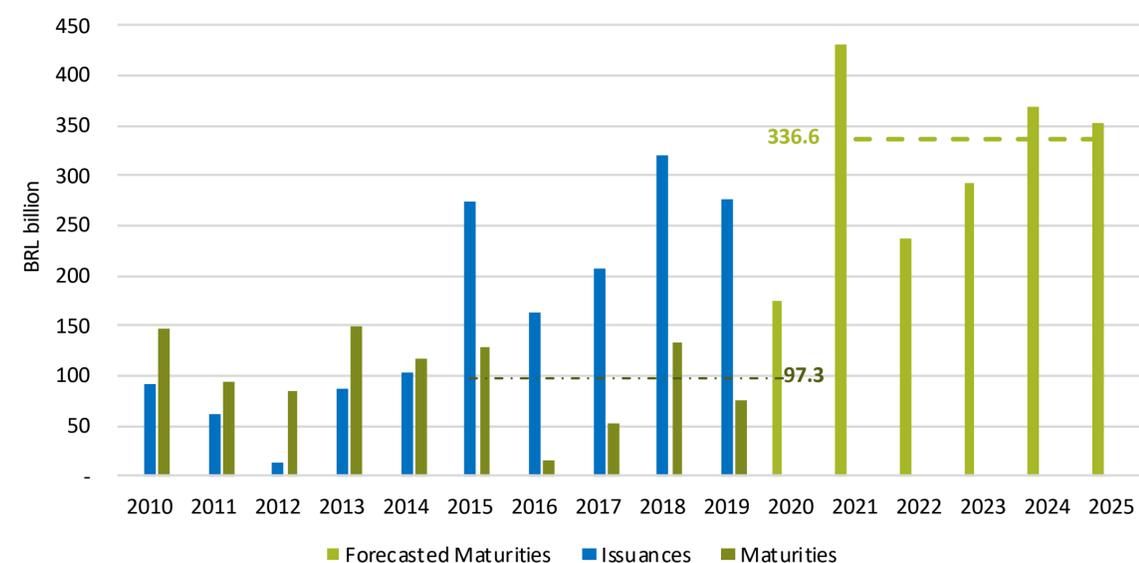
The forecasted dynamic for FPD profile indicators in 2020 reflects the ongoing gradual fiscal adjustment. Most of the fiscal deterioration effects tend to rapidly impact debt indicators, but it takes time for this impact to dissipate. This is because, in periods of fiscal struggle, it is common to increase floating-rate bonds issuances as a result of investors' higher risk aversion. The persistence of fiscal primary deficits since 2014 and the public indebtedness growth associated to it have constrained the possibilities to promote FPD indicators convergence to benchmark values, particularly that referent to floating-rate bonds reduction.

Medium-term simulations consist in forecasting bond issuances strategies for the following 10 years, assuming different scenarios. As a result, the model projects dynamics for the main FPD indicators. This simulation is essential to verify short-term strategy adherence to the long-term objectives.

Figure 4 shows the balance of LFT flows over the last 10 years as well as the maturities expected for the coming years. The period between 2010 and 2014

was characterised by FPD net redemptions and low LFT issuances volumes, compared to the respective maturity, resulting in: (1) drop in the share of floating-rate bonds in the FPD; and (2) low LFT maturities in the period from 2015 to 2020 (average of BRL97 billion). As of 2015, there was a reversal of this pattern due to the need to increase these bonds' issuances, in a context of primary deficits. As the LFT maturity term is about six years, issuances made from 2015 onwards start maturing in 2021 (average of BRL 337 billion until 2025), opening an interesting window of opportunity for their replacement by fixed-rate or inflation-linked bonds.

Figure 4 – LFT issuances and maturity flows (in market) (BRL billion)



Source: National Treasury.

However, in order for the FPD composition to resume its path towards the benchmark presented in Table 6, it is essential to continue the process of fiscal consolidation, enabling structural primary surpluses. The results of FPD composition projections for the medium term are shown in Figure 5.

The upward trend in the share of floating-rate bonds can be reversed from 2021 on, when LFT maturities increase considerably.

Figure 5 – FPD composition in the medium term
% of FPD



For the early years of the medium-term forecasts roll-over rates are assumed to be slightly above 100% of the DFPD maturing in the market, avoiding increasing excess financial liquidity derived from recurrent primary deficits. Over time, the possibility of primary fiscal surpluses will help reducing liquidity, making room for the National Treasury to conduct its borrowing strategy with lower issuance volumes. Such a move would allow an improvement in the GGGD composition, including with a lower proportion of repo operations and a larger share of FPD.

Analyzing the maturity profile, in Figure 6, the estimates show a temporary increase in the share of debt maturing in 12 months in 2020, which is justified by the approaching of LFT maturities in 2021, derived from the issuances of this type of bond in 2015. Despite this exception, the strategy is not impaired by deviations from the benchmark, especially when considering the liquidity cushion.

Source: National Treasury.

Figure 6 – FPD maturity structure indicators in the medium term (% of FPD, years)



Source: National Treasury.

Also regarding the liquidity reserve, FPD's medium-term projections incorporate the assumption of maintaining the cash cushion at prudent risk levels, that is to say, at a level that ensures flexibility for the debt manager to act amid occasional stress circumstances.

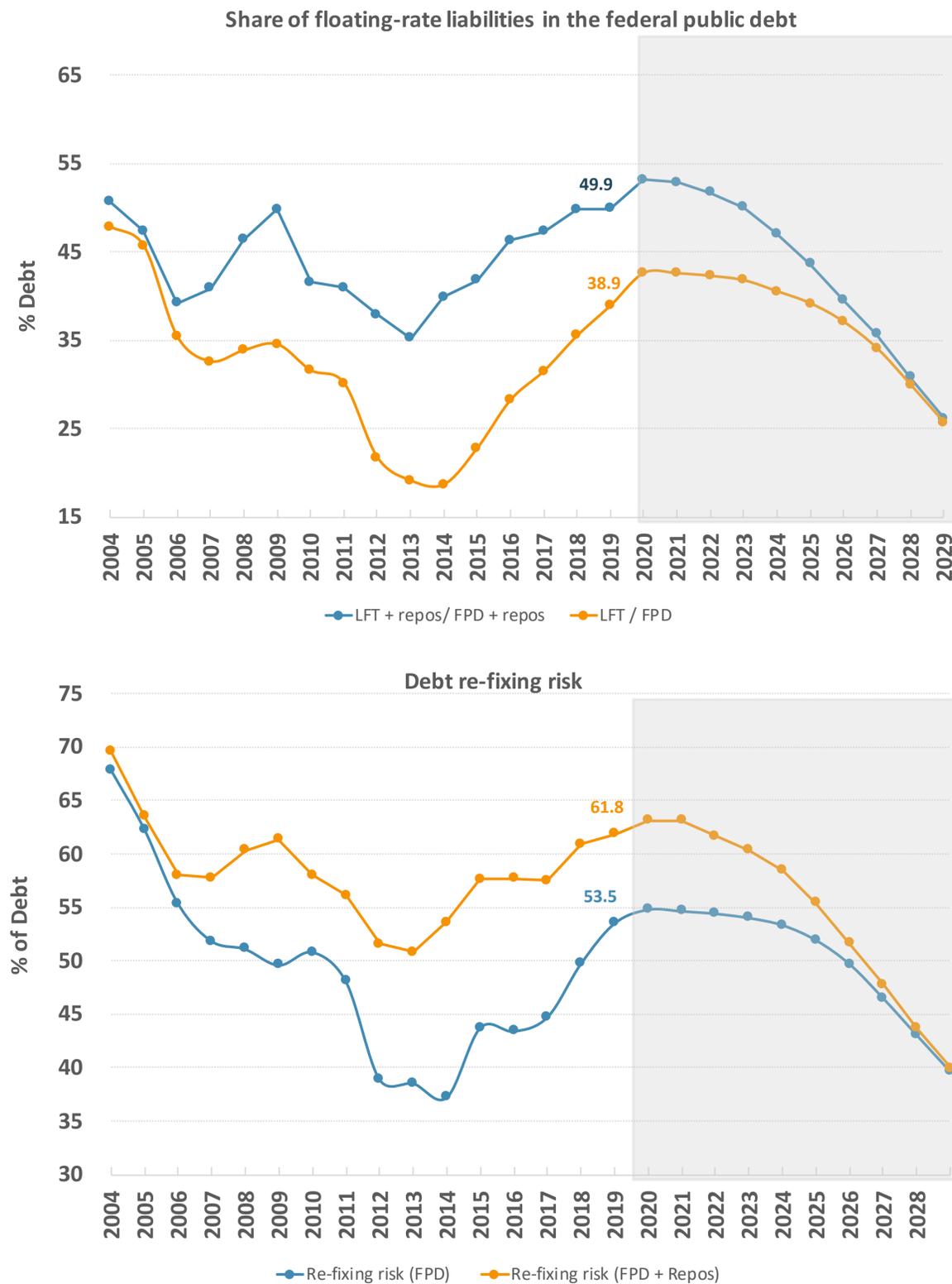
Finally, Figure 6 presents the forecast for the average maturity indicator. Debt lengthening requires higher issuances' volumes of inflation-linked or long-term fixed-rate bonds. Faced with potential demand limits for longer-term instruments in the early years of the planning horizon, the average maturity of FPD remains stable around 4 years throughout the period, and can rise in more favorable scenarios. However, in the more likely scenarios the convergence to benchmark portfolio value is not yet anticipated.

4.4. Broader debt composition analysis

The LFT share in the outstanding debt is an indicator of debt exposure to interest rate risk. The reason for this is that variations in the indexer of this type of bond cause changes in the average cost proportionally to the share of these bonds in the outstanding FPD. However, from a more comprehensive debt perspective, this analysis should be expanded to consider other instruments that are also sensitive to changes in the monetary policy interest rate. This is the case for the Central Bank repo operations, which are included in GGGD and yield approximately the Selic interest rate.

The share of LFT in the FPD tends to fall from 2021 on. The same dynamics should also be observed for the debt measure amplified by repo operations, as shown in Figure 7. *Ceteris paribus* the amplified indicator is not altered when the National Treasury issues more LFT to avoid increasing financial system liquidity.

Figure 7 – **Share of debt with floating interest and re-fixing risk**
(% of debt)



Source: National Treasury.

In a narrower perspective, re-fixing risk should also consider the share of FPD maturing in 12 months, which, therefore, will have its cost redefined in the short term. Thus, the indicator seeks to combine the effects of changes both in debt composition and in debt maturity profile. This risk would not change, for example, by replacing LFT with short-term fixed-rate bonds (LTN).

The guidelines consistent with convergence for the benchmark portfolio prescribe a preference for long-term fixed-rate and inflation-linked financing instruments. This means seeking a reduction in the re-fixing risk in the long term. However, a strategy focused only on these bonds tends to face limits regarding demand conditions, therefore endorsing prudence to avoid supply from creating pressures that could distort government bonds prices.

The re-fixing risk (Figure 7) has shown a trend of growth since 2013, both in FPD and in the concept including repo operations, accompanying indebtedness growth. For the future, it is expected that this metric will fall again from 2021 onwards, in a combined process of reducing repo operations and LFT. A key assumption in this scenario is the generation of primary surpluses.

5

20 years of Annual Borrowing Plans

The ABP emerged in 2000, amid a series of transformations undertaken in the wake of the adoption of the macroeconomic pillars of the Real Plan: floating exchange rate regime, inflation targets and fiscal responsibility. In this context, the approval of the Fiscal Responsibility Law symbolized the institutionalization of a series of commitments to the fiscal policy sustainability. In line with these improvements, the Brazilian DMO spontaneously launched the first ABP with the aim of increasing transparency, predictability and efficiency in the strategic public debt planning process.

Since then, each year, ABP has been the main instrument for disseminating FPD's financing strategy and has consolidated as a debt management guiding mechanism and as a reference for market players expectations. This is done mainly by setting targets in the form of reference limits for the results expected with the implementation of the strategy. Initially (in 2001 and 2002), the ABP only included DFPD indicators. From 2003 to 2007 there were separate reference limits for DFPD and FPD. As of 2008, with the process of consolidating domestic and external debts, limits began to be defined only with respect to FPD.

This framework based on limits has brought relevant information, allowing investors to evaluate, within the ABP references, the National Treasury

performance in the government bonds market, in addition to the impact of this strategy on the debt profile. Meanwhile, this framework has allowed the National Treasury to preserve flexibility to adjust its performance to market conditions, avoiding amounting pressures during contexts of high volatility and taking advantage of more favorable moments to advance towards its guidelines.

In the ABP indicators are assessed according to the outstanding volume, composition and maturity structure of the FPD. A reference range is defined for each of the statistics to evaluate a FPD characteristic. Monitoring of the results enables to carry out an overall assessment of the debt profile.

To define ABP reference range indicators, the National Treasury considers different scenarios contemplating market fluctuations but situations with intense volatility are excluded. To deal with exceptional conditions not contemplated in the scenarios initially foreseen, there is the possibility of ABP reference ranges throughout the year. The decision to reassess the ABP takes into account, besides Brazil's macroeconomic and financial environment, the clear need to establish new reference limits to market players, occasional pressures that the earlier ABP might be putting over the bonds market, and ABP's credibility, among other factors.

Over the twenty-year of ABP history, 177 reference limits have been defined, as shown in Table 7. That figure falls to 127 when it is considered FPD only, starting from 2003. Overall, 68% of the results met the reference limits set at the beginning of the year. This percentage rises to 74% if considered only FPD.

Table 7 – Historical ABP reference limits conformity

Indicator	All the ABP limits			ABP limits for the FPD		
	Number of limits	Statistics within the limits		Number of limits	Statistics within the limits	
		Original	Revised		Original	Revised
Outstanding debt	23	14	16	17	12	14
Composition	106	76	81	76	57	62
Maturity structure	48	31	31	34	25	25
Total	177	121	128	127	94	101

Source: National Treasury.

Only in 2008, 2015, 2016 and 2018 ABP had its original limits reassessed. Considering reassessments, the share of indicators that met ABP limits rises to 72% in the overall result, and to 76% if 2002 is considered as a negative outlier. In this second year of ABP, both external and domestic adverse shocks made it impossible to implement the planned strategy, also difficulting the reassessment of the limits for that year. Taking FPD only, the share of results within the reference ranges reaches 80%, considering ABP reassessments.

Figure 8 presents the historical indicative ranges defined for FPD composition and the results obtained by the end of each year. The results performance illustrates the commitment to the defined reference ranges, in addition to the ABP relevance as a guide for the strategy towards public debt long-term objectives, considering market conditions. Should be highlighted the significant reduction in the percentage of foreign exchange-linked debt (from 45.8% in 2002 to 4.1% in 2019) and a significant increase in the share of fixed-rate and inflation-linked bonds (from 1.5% and 9.2% in 2002 to 31% and 26% in 2019 respectively).

Figure 8 – FPD composition performance in the Annual Borrowing Plans



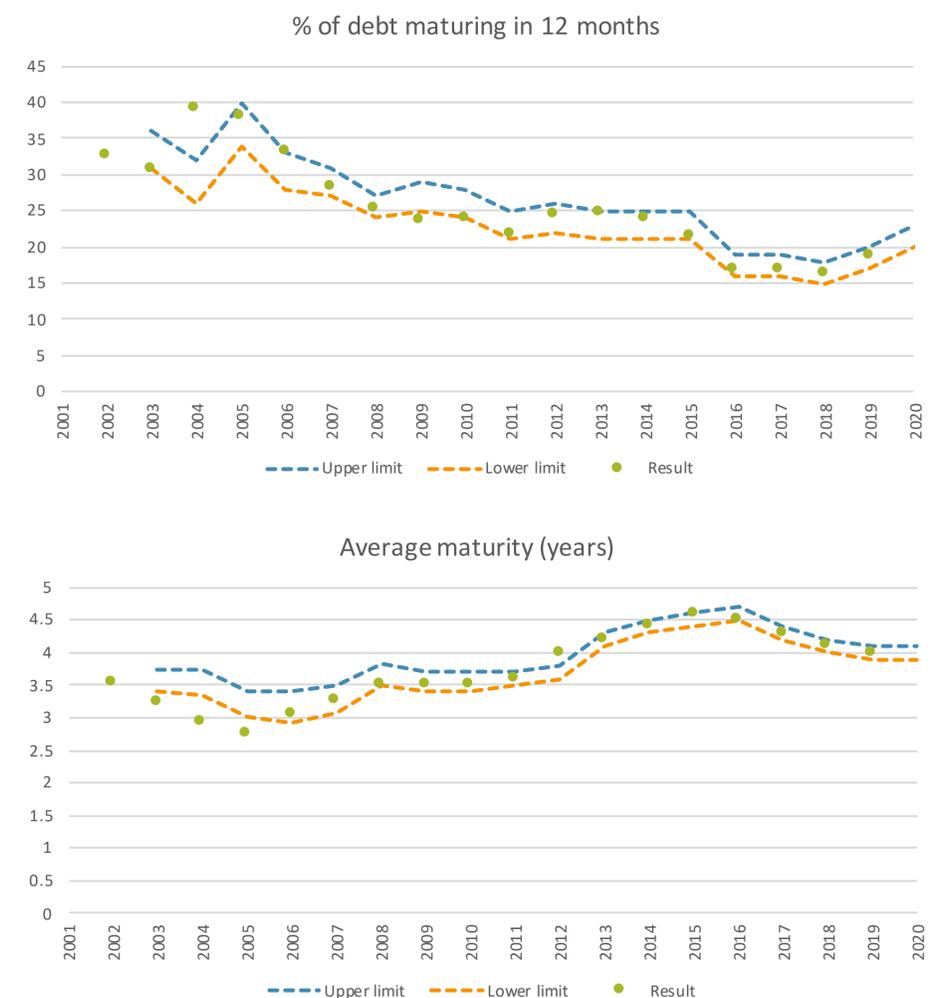
For 2008, 2015, 2016 and 2018 the limits refer to the values announced in ABP reassessments. Data from 2001 and 2002 were not included because no reference limits were set for FPD as a whole, only for DFDP.

Source: National Treasury

There was also a positive dynamic in maturity structure indicators, as shown in Figure 9. While in the 2003 ABP the share of debt maturing in 12 months was expected to be between 36% and 31%, the range expected for this indicator in 2020 is from 20% to 23%, even with a larger presence of fixed-rate bonds, which tend to have shorter maturities. This represents a significant decrease in the maturity concentration in the short term, which indicates a lower re-fixing risk. The average maturity of the outstanding debt marked 3.6 years in 2002, fell to 2.7 years in 2005, as FX-debt was gradually replaced by fixed-rate bonds, and rose again later, reaching 4.0 years in 2019.

ABP publication has a history of consistency and its adherence to the defined limits grants credibility to the report and its commitments, increasing predictability over National Treasury operations, contributing to market development, and, ultimately, strengthening macroeconomic fundamentals.

Figure 9 – FPD maturity structure in the Annual Borrowing Plans



Source: National Treasury.

6

Final
Remarks

The 2020 ABP is launched in a context of gradual recovery of the domestic economy and historically low interest rates. On the one hand, the current moment of the monetary policy cycle mitigates the debt growth dynamics through the interest account. On the other hand, this context favors a new demand for government bonds, which beneficial effects for the borrowing strategy depend on the market perceptions related to the fiscal consolidation process progress compatible with debt stabilization in sustainable levels.

The reform agenda progress promoted throughout 2019, in particular the approval of the pension reform, has contributed to the continuity of the gradual fiscal consolidation path. However, such trend entails the persistence of fiscal deficits in the short term which, even though in lower levels, must be partially financed by debt issuances. As a result of the fiscal challenge, it is therefore expected that in 2020 the share of floating-rate bonds will continue to increase relative to fixed-rate and inflation-linked bonds.

Thus, the short-term perspective still points to a temporary debt composition deviation from the optimal long-term benchmark profile. The pursuit of this optimal profile should be conducted through a sustainable path, observing market conditions and their cyclical implications on the balance between cost and risk for public debt.

Willing to promote innovations that contribute to increasing transparency in public debt management, the National Treasury is available for suggestions that might contribute to improvements in this report. E-mail for comments: ascom@tesouro.gov.br.

Special supplement to ABP 2020

Interest Expense on the Debt Outstanding

Lacerda Elevator, Salvador, Bahia, Brazil

Interest expenses are part of government's borrowing needs and are therefore one of the determining factors for the country's public debt dynamic. Interest payments also represent the cost of debt. Thus, understanding the dynamic and weight of the interest burden for public finances is a feature as important as knowing the level of outstanding debt. The challenge, however, is dealing with multiple debt indicators and associating each of them to the appropriate interest expense statistics and their meaning. This supplement intends to shed light on this challenge⁸.

Interest expense in fiscal statistics

Public finance statistics in Brazil follow a criterion that aggregates interest payments to the outstanding debt volume on a *pro rata* basis. This means that

⁸ In this supplement we will refer to debt interest indicators with less conceptual accuracy, favoring a more didactic approach for the reader who might be less familiarized.

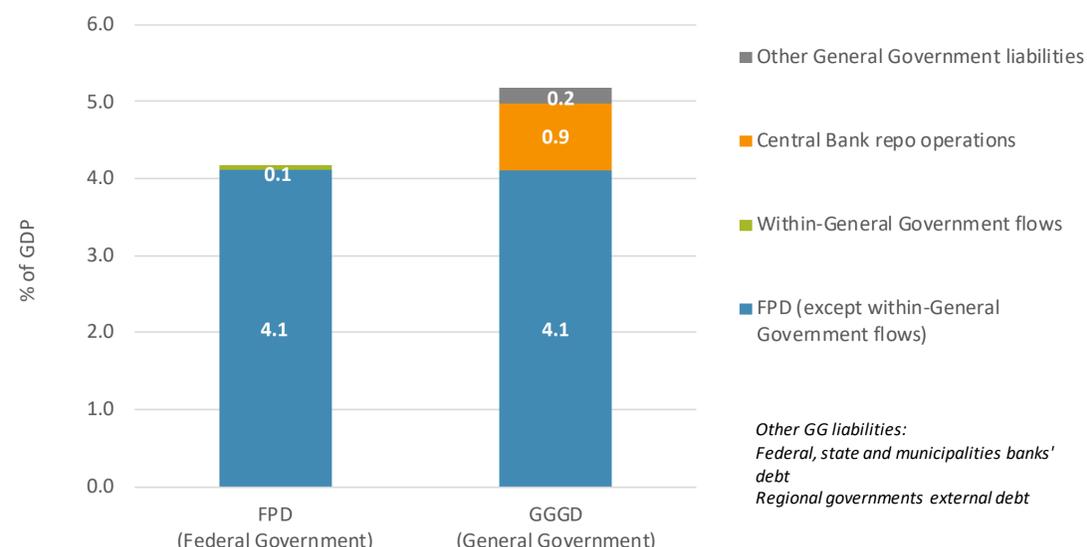
nominal interest⁹ is calculated over time and incorporated into the outstanding debt volume as it is incurred (usually daily), regardless of whether the payment has actually occurred. This is called accrued interest accounting and should be adopted to interpret the variation of debt over time.

The ABP focuses on FPD, which is Federal Government's (FG) outstanding debt in the market, including domestic and foreign debt (in sovereign bonds and in loans). Another widely observed debt concept is the General Government Gross Debt – GGGD, which besides outstanding FPD, comprises state and municipal governments debts with the private sector, plus the Central Bank of Brazil – BCB repurchase agreement operations. Accrued nominal interest statistics for these two aggregates are shown in Figure 10¹⁰.

⁹ Nominal interest refers to the total debt interest flows. Nominal interest can be broken down into two parts: (1) real interest, which is the portion net from inflation effects; (2) inflation correction, which is the part that measures inflation effects over debt value. This distinction between nominal and real interests will be useful later in the discussion on interests for budgetary purposes.

¹⁰ A similar decomposition can also be made for the outstanding debt statistics. See special supplement to 2017 ABP (https://www.tesourotransparente.gov.br/publicacoes/annual-borrowing-plan-abp-ingles/2017/114?ano_selecionado=2017).

Figure 10 – Comparison of interest expense on the FPD and on the GGGD



As of November 2019.

Source: Central Bank of Brazil (Fiscal Statistics Press Release, November 2019).

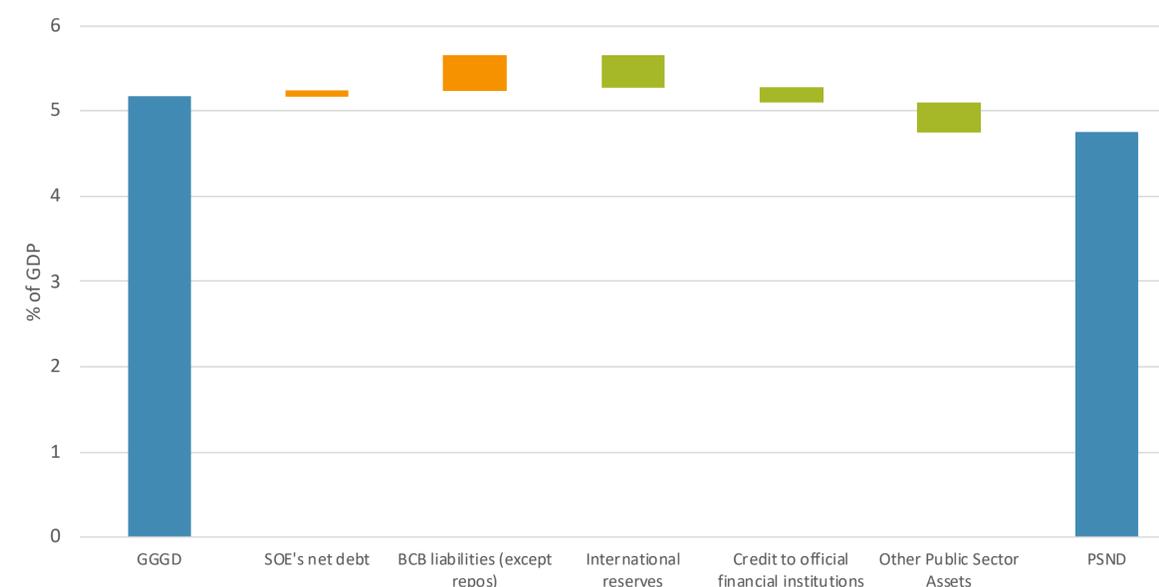
Produced by: National Treasury.

Nominal interest statistics, more closely observed in Brazil, however, are associated with the Public Sector Net Debt – PSND, by the accrual criterion. This is the concept used as a reference for the calculation of the public sector borrowing requirement, which is also known as the nominal result “below the line” (corresponding to the primary result plus interest) and represents the reference for setting government's fiscal targets.

Two differences stand out in the comparison between GGGD and PSND. The first one is related to the institutional coverage, as in addition to General Government (GG), the public sector (PS) comprises non-financial state-owned enterprises and the BCB. The second one refers to the fact that PSND considers public sector assets, which are deducted from gross debt to obtain the net debt indicator.

Thus, the PSND interest statistics should consider, in addition to GGGD service, interest on all liabilities held by the BCB¹¹ and non-financial state-owned enterprises. However, it is necessary to deduct from this value all interest revenues derived from international reserves, from National Treasury's loans to public banks and other assets. Figure 11 illustrates this calculation.

Figure 11 – Comparison of GGGD and PSND interest flows



As of November 2019.

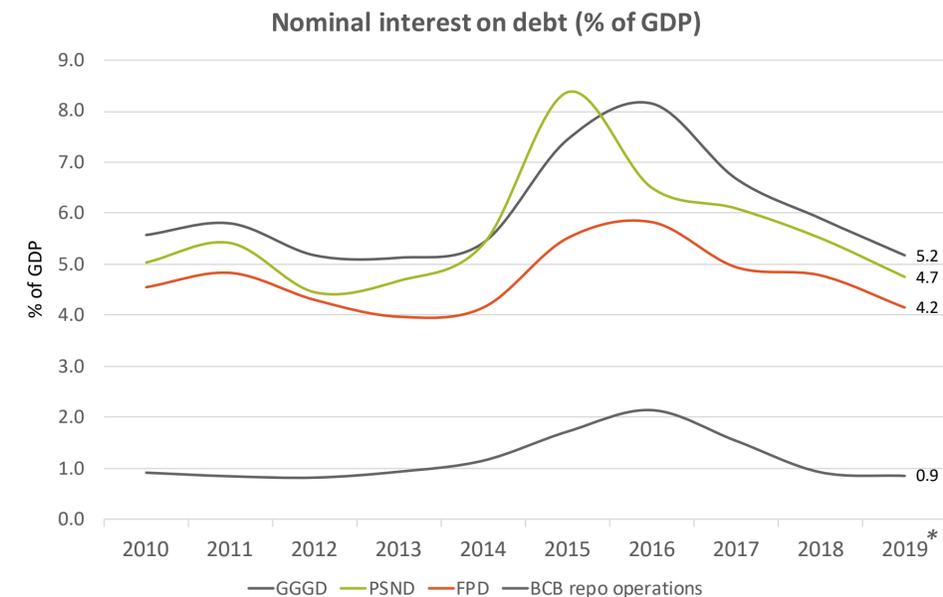
Source: Central Bank of Brazil (Fiscal Statistics Press Release, November 2019).

Produced by: National Treasury.

Figure 12 shows the historical performance of these statistics since 2010. In general, gross debt presents an interest burden larger than net debt. But this is not always the case when we compare GGGD and PSND, since these indicators involve different institutional coverages (GG and PS). Thus, there might be the case that the liabilities included in the PSND relative to the GGGD statistic have higher interest rates than the return on assets, making PSND's interest to outweigh GGGD's. In particular, PSND interest tends to be closer or even higher than GGGD interest when assets yields are low, mainly due to implicit subsidies, as observed in the period 2014-2016.

¹¹ It includes liabilities such as the monetary base and compulsory deposits. The BCB repurchase agreement operations are computed in the GGGD.

Figure 12 – Interest dynamics for GGGD, PSND and FPD

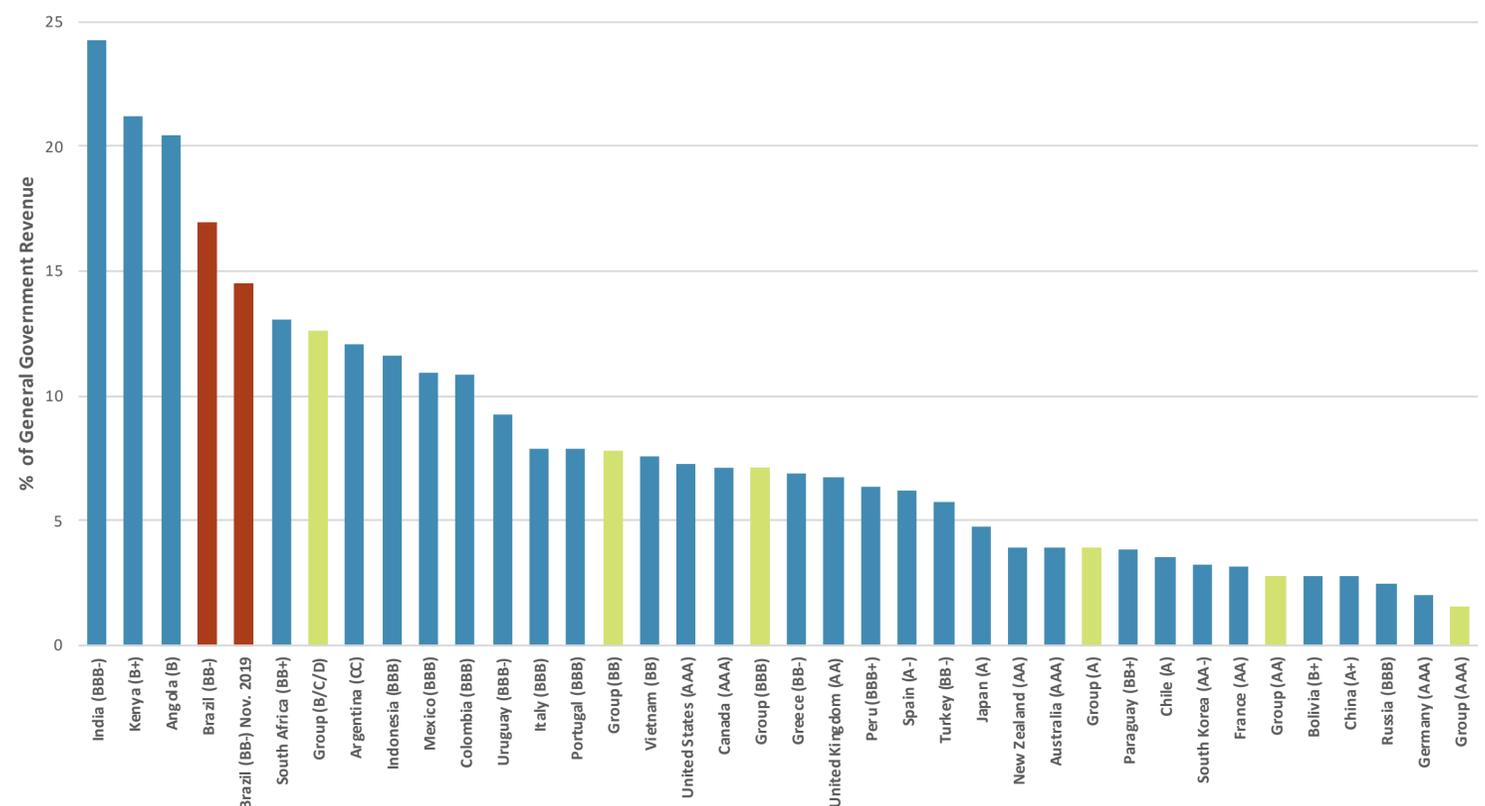


*As of November 2019.

Source: Central Bank of Brazil for GGGD, PSND and GDP. National Treasury for FPD.

Interest expenditure on public debt has been falling in recent years, as shown for the three indicators in Figure 12, mainly due to the fall in Brazilian interest rates, which reduced the cost of debt. However, the government's interest account is still high in Brazil, compared to other countries. Figure 13 presents a sample of countries from different regions and rating categories, where there are few countries (emphasis on India) with a public debt interest over revenues ratio larger than in Brazil in 2018. Even with the expected reduction to the interest account in 2019, the new level should not yet put Brazil in a better position in this ranking.

Figure 13 – Interest payments as a proportion of general government revenue



Source: Fitch. 2018 and 2019 (November) for Brazil and 2018 for the other countries.

Produced by: National Treasury

The path for reducing interest burden in Brazil entails the maintenance of low interest rates, macroeconomic stability and growth, but above all, a fiscal consolidation progress sufficient to resume a decreasing debt-to-GDP dynamic.

Interest payments in the budgetary context

The execution of any public expenditure depends on authorisation by the budget law. This rule also applies to public debt principal payments, which have specific budgets for principal and interest payments. However, there are important differences between interests considered in the fiscal statistics and interests presented in the federal government budget, as discussed below.

In the budgetary process, interests are computed only at the moment of payment, which depends on debt maturity schedule. That is, interest expenditure occurs when the corresponding disbursement takes place. This is called the cash criterion for interest accounting.

Another difference from the fiscal statistics is that interest expenditures in the budget corresponds to the real interest concept. The other portion of the nominal interests, which is the inflation correction, is classified in the budget as principal payments.

A third difference between fiscal and budget statistics, in the case of FPD, is that the federal government debt budget must authorize the payment of interest on bonds held in the BCB portfolio. In the context of fiscal statistics, the financial flows between the National Treasury and the Central Bank are treated as a within-government relationship. For instance, since both institutions are part of the public sector, the PSND statistics only computes flows arising from each of them when directed to entities outside the public sector. Figure 14 shows interest expenditures dynamic in the Federal Government's debt budgetary execution.

Figure 14 – Budget execution of interest on FPD



*As of November 2019.

Source: Central Bank of Brazil for GGGD, PSND and GDP. National Treasury for FPD.

Due to these methodological aspects, it is natural that interest payments in the federal government's budget might differ from its performance in fiscal statistics. This fact is mainly explained by the FPD bonds characteristics. For example, LFT are bonds which all interest are accrued and paid at the maturity, which is usually six years. In this case, the fiscal statistics will capture the interests accrued each year to the LFT outstanding volume, but the budget

will predict interest payments only in the sixth year. The LFT case illustrates the difference between the cash and accrual criteria.

Example of accrual versus cash methodology for interest calculations

Let us take an example of these two criteria by taking the LFT bond as a reference. Assume the government has issued an equivalent of BRL100 million in LFT bonds in two-years and that during that period the LFT interest rate remains constant at 10% Y.o.Y. For simplification, assume zero inflation rate during the period (so we do not need to correct the principal for inflation as determined by the current legislation).

In this case, by the end of the first year, the outstanding debt will be BRL 110 million (a BRL 100 million increase due to the 10% interest). The statistics by the accrual methodology will indicate interest amounting to BRL 10 million. However, LFT is a bond that only pays interests on its maturity, so that, by the cash criterion, the statistics will show interests equal to zero in the period.

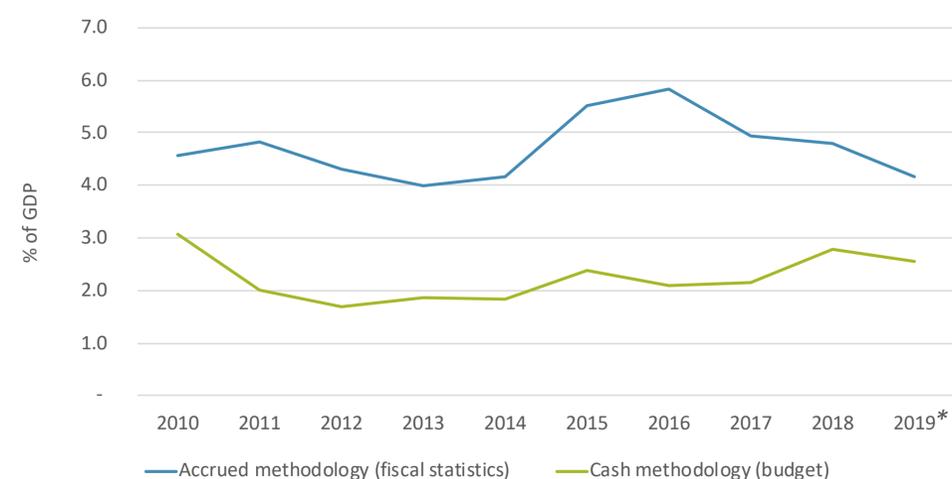
At the end of the second year, the outstanding debt will increase 10% more and will reach BRL 121 million. The accrual interest criterion will reflect this increase in outstanding volume and will register interests of BRL 11 million. Nevertheless, as the bond reached its maturity, the government will have to pay the bondholder the amount of BRL 121 million. In this case, BRL 21 million are referent to interests by the cash criterion and the remaining BRL 100 million corresponds to the bond principal.

In this example, the sum of the interests accrued in two years by the accrual criterion equals the interest by the cash criterion at the end of the period. In the budgetary process, however, these values may differ because the value of the principal increases due to the inflation correction, reducing interests in the cash criterion by the same amount. That is, in Brazilian budget, debt interest burden corresponds to real interest (i.e., discounting inflation) instead of nominal interest.

The distinction between nominal and real interest can be illustrated by the case of NTN-B bonds. These bonds yield real interest coupons every six months. The fact that these intermediate coupon flows refer to real interest hampers the convergence between budget and fiscal statistics.

Figure 15 shows the time series of FPD¹² interest payments in the market under the budgetary perspective, which indicates the actual interest payment flows, and under the perspective of accrual interest to the outstanding debt.

Figure 15 – Interest on FPD, according to accrual and cash criteria



*As of November 2019.

Source: National Treasury.

Although the source for accounting information for the calculation of these data is the same, the treatment given to the information in each case is bound to its own criteria, according to Brazilian legislation and the alignment to international government finance statistics manuals. Data interpretation must therefore take into account these particular aspects.

¹² This distinction is particularly relevant for federal government debt due to the characteristics of the FPD bonds. In the case of the BCB's repurchase agreement operations, for example, interest under cash and accrual criteria tend to be close, once it consists in a very short-term liability.

Budget data allow an interpretation of the payment flows burden to the financing and cash federal government borrowing needs. It is also an important statistic for assessment of compliance of some of the fiscal rules. For example, the Golden Rule (Section III, Article 167 of the Federal Constitution) limits credit operations to the amount of capital expenditures during each financial year. In fact, this rule imposes restrictions on using debt issuances proceeds for the payment of current expenditures, which includes interest from the budgetary point of view.

In turn, in fiscal statistics, interest represents the cost for holding debt. It is a statistic that directly influences debt dynamics and the state fiscal sustainability. The fiscal effort to ensure debt-to-GDP at sustainable levels will be greater the higher the interest bill.

Table 8 summarizes the methodological concepts explored in this special supplement and their more usual applications.

Table 8 – Interest on debt: common concepts and applications

Definition	Debt indicator	Gross/ Net	Methodology	Nominal/ Real	Applications
Public Sector interest	PSND	Net	Accrued	Nominal	Nominal result
					Fiscal targets
General Government nominal interest	GGGD	Gross	Accrued	Nominal	GGGD dynamic
					GGGD in the market cost
FPD by the accrual methodology	FPD in market	Gross	Accrued	Nominal	FPD in the market dynamic
					FPD in the market cost
FPD interest expenditures	FPD in market and in the BCB portfolio	Gross	Cash	Real	Budget expenditures with FPD service
					Impact on FPD liquidity reserve (cash cushion)
					Golden rule

PSND: Public Sector Net Debt

FPD: Federal Public Debt

GGGD: General Government Gross Debt

Produced by: National Treasury.