

Highlights

- For 2017 we forecast a GDP growth of 0.46%, but there is a 45% probability of a decrease.
- The primary deficit shall reach R\$ 182 billion (2.8% of GDP) this year, against a target of R\$ 143 billion (2.2% of GDP).
- The budget cut necessary to meet the 2017 fiscal target would require a real decrease in spending of 0.5%.
- Tax expenditures will reach R\$ 284.8 billion in 2017, one-fifth of all revenue collected by the Federal Revenue Service.
- Interest expenditure declined in 2016, but it is still the highest among the major economies (6.6% of the GDP).
- Public debt is expected to reach 76.9% of GDP by the end of 2017 and 84.3% in 2021.

Summary

- For 2017, we forecast a GDP growth of 0.46%, much lower than the forecast of the Annual Budgetary Law of 2017 (1.6%). The dynamics of the activity is essential to define the trend of public revenues and, ultimately, the development of the primary result and of the public debt.
- Despite the positive scenario outlined by the IFI, the probability of a decrease in GDP in 2017 is 45%. This shows that the recovery process will be slow and permeated by risks, especially in the fiscal area. In the absence of external conditions similar to those of the last economic cycle, domestic vectors will have greater relevance.
- The primary deficit is expected to close 2017 at R\$ 182 billion (or 2.8% of GDP). Our forecasts embody a real increase of 0.2% for total revenues and a 2.4% advance for primary spending of the central government. Until 2021, there will be a gradual improvement, but the result will remain negative for a long time.
- As it can be seen, the waiver with tax expenditure could reach R\$ 284.8 billion in 2017, equivalent to 4.2% of GDP and 21.3% of the revenue administered by the Federal Internal Revenue. The costs and results of these policies need to be made more transparent.
- A simulation by the IFI shows that the targets set in the Budget Guidelines Law, if pursued, would require an adjustment much more concentrated on the expenditure and/or revenue side.
- The budget cut necessary to meet the 2017 fiscal target, of at least R\$ 38.9 billion, would require a real decrease in spending of 0.5% in the current year. For comparison purposes, the mere application of the ceiling rule allows a real primary expenditure growth of around 2.2%.
- Brazil will converge to lower real interest rates based on the new Selic reduction cycle initiated by the Central Bank. In the short term, public sector interest expenses will be directly affected: Each Selic reduction point generates savings of R\$ 28 billion annualized.
- The reversal of the cost of foreign exchange swaps between 2015 and 2016 generated a significant slack in financial expenses, despite the increase in interest paid on pre and post-fixed securities. Nevertheless, our net interest expense is still the highest among the major economies (6.6% of GDP).
- Public debt is expected to reach 76.9% of GDP by the end of 2017 and 84.3% in 2021. The primary effort needed to stabilize this level of indebtedness under a series of assumptions would have to be positive by at least 1.2 % of the GDP, well above the 1.2 % of the GDP forecasted deficit for 2021.

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Presentation

THE RAF – Fiscal Follow-Up Report - is a monthly publication of the IFI – Independent Fiscal Institution. It's purpose is to evaluate the leading fiscal and economic indicators, with prospective focus, in compliance with the provisions of the Senate Resolution No. 42/2016. Established in the end of 2016, IFI was created with a clear objective: To increase public accounts transparency.

In this first issue of the RAF, we assess the situation of government accounts and present forecasts for the fiscal framework, given the scenario predicted for the macroeconomic variables: GDP, inflation and interest rates. We analyze the fiscal results of 2016, estimate the primary deficit for 2017 and calculate the evolution of the debt/GDP ratio.

IFI forecasts point to a negative result for the consolidated public sector of around R\$ 182 billion in 2017 (or 2.8% of GDP), compared to R\$ 155.8 billion in 2016 (2.5% of GDP). The goal set in the Budget Guidelines Law (LDO) is R\$ 143.1 billion (2.2% of GDP), including the central government, state-owned companies and regional governments.

Therefore, the budget cut necessary to achieve the current goal is R\$ 38.9 billion. If such containment is carried out, expenditure will have an actual decrease of 0.5% in 2017, a much more restrictive framework than that imposed by the expenditure ceiling rule (actual increase of 2.2%). This highlights the scale of the fiscal challenge. Moreover, in the aggregate sum (including the interest account), the deficit closed 2016 at 9.1% of GDP.

In recent years, the dismantling of institutions and rules established in the spirit of fiscal responsibility has brought us to this scenario of severe imbalance of public accounts. The numbers show that reversing the damage caused by creative accounting will be a slow and arduous process.

Reducing the fiscal deficit in order to restore a sustainable path to public debt - which will still increase in the next years up to 84.3% of GDP - is the zero step to withdraw the economy and the Country from the quagmire.

At IFI, we hope that the RAF and other publications in general will help to qualify this debate and, ultimately, collaborate in the implementation of good economic, fiscal, and budgetary policies. *Alea jacta est.*

Felipe Scudeler Salto

Executive Director

Macroeconomic context

GDP

GDP is the most important variable for analyzing the repercussions of the macroeconomic situation on the fiscal situation. It affects directly and indirectly both revenues and public expenditures, while still having an impact on debt sustainability..

The effects on revenues occur through direct and indirect channels. The direct way is clear: the bigger the GDP, the greater the base of collection of diverse taxes and contributions. The indirect way, in turn, is manifested in several ways, with the labor market being the most important one.. As GDP increases, labor contracting starts to grow, albeit with a certain lag. Heating up of the labor market, in turn, increases the collection of taxes and contributions, especially those to the social welfare.

Public expenditures still show some degree of direct linkage to GDP, even after the reversal of the earmarking of expenses with healthcare, since other major expenses follow specific adjustment rules. The variation of the minimum wage, for example, is calculated according to the growth of GDP in the two previous years. Since the minimum wage is used to reajust social welfare and assistance benefits, its increase has an automatic impact on primary expenditures. This is just one case out of many.

In the case of the public debt, the main impact is on the sustainability. As the main indicators have GDP as reference, the higher its value, the lower the index and, consequently, the greater the degree of debt sustainability.

Given the importance of GDP for the design of fiscal variables, it is essential to draw a predictive scenario for this parameter and to compare it with the forecasts considered for the elaboration of fiscal and budgetary policy.

Table 1 presents three sets of forecasts with distinct origins. In the second column, we can observe the forecasts made by IFI from its own statistical models. The third column shows the market forecasts (median of the

Central Bank's Focus survey) and the fourth column shows the growth embedded in the Budget Guidelines Law (LDO) for 2017.

TABLE 1 - REAL GDP PROJECTED GROWTH

YEAR	IFI - BRAZILIAN INDEPENDENT FISCAL INSTITUTION		
	FOCUS ¹	LDO/LOA ²	
2017	0.46	0.50	1.60
2018	1.93	2.20	2.50
2019	2.38	2.50	2.50

1. Median of the top 5 ranking for the year-end rate Determination on January 20, 2017.

2. The values of the LOA for 2017 and of the LDO for the following years were taken into account.

Sources: IFI, Central Bank, LDO 2017 and LOA 2017. Prepared by: IFI - Brazilian Independent Fiscal Institution

As it can be seen, the forecasts in the LDO are invariably more optimistic than the others, with the exception of 2019, when it is equal to the market forecast.

As revenues depend on GDP growth, it is crucial to assess the realism of estimates contained in the LDO. To carry out this assessment, we propose to use an econometric model of time series¹ to calculate the probability that the GDP implicit in that law is reached or surpassed.

The growth rate expressed in the LDO (1.2%), for example, has a 35% probability of occurring. When considering the growth of 1.6% forecast in the Annual Budget Law (LOA) for 2017, it is estimated according to the model used here that the probability of reaching or exceeding this level is 28%.

These forecasts are considered optimistic, since the probability of occurrence of the events is less than 50% (what would classify the projection as neutral), not being, however, unrealistic.

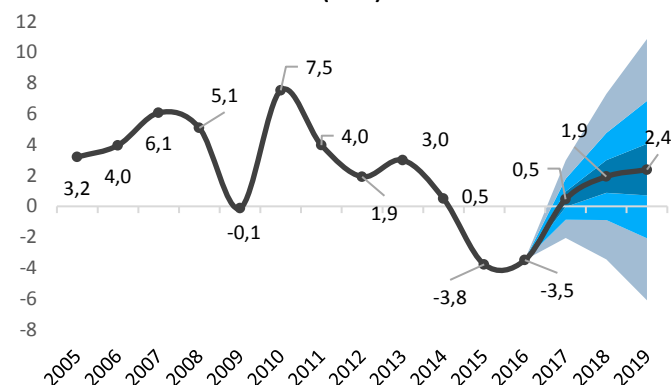
GDP growth forecasts for 2018 and 2019 contained in the LDO tend to be neutral, according to the forecast model used by IFI. In 2018 the probability of GDP increasing by

¹A methodological note with detailed specifications of the model will be published soon.

2.5% or more is 45%. For 2019 there is a 49% probability of reaching this growth range.

Graph 1 (*fan chart*) shows the evolution of GDP forecast by the IFI model, as well as the probability maps associated to it. The darkest band is related to an interval that covers, according to the model used, 20% of possibility to contain the value of the GDP to occur at the end of each considered year; the intermediate band, 50% of possibility², and the clearest band, 80% of possibility.

GRAPH 1 - GDP REAL GROWTH (IN %)



Source: Brazilian Institute of Geography and Statistics
Prepared by: IFI - Brazilian Independent Fiscal Institution

For example, the 50% range for 2017 comprises variation rates between -0.86% and 1.78%. That means that the GDP growth rate in 2017 has a 50% probability of being between these values.

It is worth noting that the forecasts generated by the model indicate a 45% probability that the Brazilian GDP has a negative variation in 2017, a relevant figure, especially in the context of a still uncertain economic recovery.

In order to ensure GDP growth, some elements are essential. First, the return of confidence in the Brazilian economy and public accounts. The return of credibility will provide economic agents with a scenario beneficial to the resumption of investments in infrastructure.

Then, lowering interest rates will allow a relief in corporate balance sheets and household budgets which, in turn, will encourage consumption and investment.

For this beneficial scenario to materialize, control of public accounts is crucial, both not to shake confidence again, as well as in order that interest rates can keep a downward trend.

Even in this positive scenario, recovery tends to be gradual. Industrial production will probably recover in 2017, but the existing large idle capacity in the branch indicates that this growth will occur with a low impact on the labor market. This supports our forecast of a 0.46% growth in 2017.

In 2018 and 2019, with the confidence of consumers and the industry consolidated at higher levels, and given the tendency to reduce idle capacity and improve conditions of indebtedness of companies and the population in general, we forecast more robust GDP growth rates: 1.93% and 2.38% respectively.

In the long run, average GDP growth rates converge to 2.2%. This number can be interpreted as the trend productivity of the Brazilian economy, purged of short-term shocks. The growth of this basal parameter should guide the economic policy, since it would allow to increase of the average growth rates for longer periods.

Interest rates

The main channel of influence of the interest rates on the public accounts is, of course, the payment of interests on the public debt resulting from it. Given a certain debt level, the higher the interest rate, the larger will be the amount of interest to be paid – or rolled over– by the public accounts.

Given this situation, a solution that is usually mentioned for the reduction of these payments is simply the reduction of the interest rate. However, the implementation of this proposal depends on a confluence of economic and fiscal factors.

In recent years, the interest account was used to carry out expenses with primary expenditure characteristics. There are several forms to carry out such subterfuge. One of them is by means of loans to government banks or government funds in a way that the operation presents itself as an accounting financial expense. With these

²The 50% chance of occurrence is the level of tolerance that the English Office of Budget Responsibility uses to assess the realism of the fiscal goals proposed by that country's government.

resources, the receiving entity starts to finance expenses such as housing construction, monthly university tuition payments, etc., which have a characteristic of primary expenditure, but avoid accounting as such..

.Another way to leverage such a practice is to inject government bonds into public entities. This way, the interest earned on these securities is used to finance expenses with characteristics of primary expenditures. Once more, these expenses do not appear “above the line”.

This type of strategy runs counter to the spirit of fiscal responsibility and transparency in public accounts, since they allow the accounting of expenses with a primary characteristic in the heading of interest (financial expenses). As the fiscal target is fixed annually only for the primary result, this strategy translates, in practice, into a generation of better primary results than if the operation were being carried out in a manner consistent with fiscal responsibility.

Moreover, the effectiveness of the monetary policy diminishes because increases in the interest rate causes the increase in the spending power of the public entities that hold these securities, therefore causing the contrary effect on demand.

The current situation - recession for more than two years combined with intense cooling of inflation - contemplates sufficient conditions to begin a cycle of adjustment in nominal and real interest rates. The adoption of measures to rebalance public accounts combined with the convergence of inflation expectations towards the center of the target, for 2017, gives the central bank space to keep cutting interest rates. The pace of 0.75 percentage point is appropriate and will provide significant relief for spending and public debt.

With these considerations in mind, Table 2 presents the scenarios for the Selic from the standpoint of the IFI and the market.

The IFI expects SELIC to have four 0.75% reductions in 2017, from the current level of 13% per year to 9% at the end of the year. This evolution would result in a real rate of 4.3% at the end of 2017.

The nominal interest rate and the real rate should converge to 7.5% and 3.4% respectively up to 2021.

TABLE 2 - REAL AND NOMINAL INTEREST RATES - FORECASTS

YEAR	GOAL - SELIC			REAL SELIC		
	IFI - Brazilian Independent Fiscal Institution	FOCUS *	LDO	IFI - Brazilian Independent Fiscal Institution	FOCUS *	LD O
2017	9.0	9.5	11.25	4.3	4.8	6.2
2018	8.5	9.5	10.75	3.8	4.8	5.2
2019	8.5	9.0	10.0	3.8	4.3	5.3
2020	8.0	9.0	-	3.8	4.3	-
2021	7.5	8.8	-	3.4	5.1	-

* Median of the top 5 ranking for the year-end rate

Source: Focus/Central Bank Report, LDO 2017 and IFI

Prepared by: IFI - Brazilian Independent Fiscal Institution

It is noteworthy that this scenario assumes that the conduct of economic policy, particularly on the fiscal side, is austere and that the social welfare reform is executed in order to stop the deficit in the medium term. Other changes on the side of revenues and expenditures will be necessary in order to achieve the rebalancing of public accounts, restoring a path of stability and a decline of the gross debt/GDP ratio.

The current level of real interest rates is still very high when compared to the rest of the world. Table 3 shows this general framework

TABLE 3 - NOMINAL AND REAL INTEREST RATES IN SELECTED COUNTRIES

COUNTRY	NOMINAL INTEREST RATES	INFLATION	REAL INTEREST RATES ¹
Brazil ²	13.00%	4.70%	7.93%
Russia	10.00%	4.91%	4.85%
Argentina	24.75%	20.50%	3.53%
Mexico	5.75%	3.14%	2.53%
China	4.35%	2.30%	2.00%
Turkey	8.00%	6.17%	1.72%
South Africa	7.00%	5.50%	1.42% (cont.)
India	6.25%	5.26%	0.94%
Chile	3.50%	3.00%	0.49%
Indonesia	4.75%	4.40%	0.34%

Euro Zone	0.00%	0.96%	-0.95%
United States	0.75%	2.56%	-1.76%

1. Real interest = $[(1 + \text{Nominal Interest}) / (1 + \text{Inflation})] - 1$

Source: IMF - World Economic Outlook and IFI. Prepared by: IFI - Brazilian Independent Fiscal Institution

Stronger downturns in the interest rates may occur if other reforms are carried out to increase the productivity of the economy and to reduce the inefficiency generated for the tax system.

Another important problem – which will be subject of a Special Study to be published in the next months by the IFI – is the existence of a contagion effect between the fiscal and the monetary policy. The intensive use of repurchase and resale agreements, today at about R\$ 1 trillion, reduces the effectiveness of the monetary policy, since an important share of the total public securities debt is still linked to the very instrument of monetary policy management – the Selic

Inflation

IFI forecasts inflation of 4.5% for the current year and a decreasing trend until the level of 3.0% in eight years. The ongoing adjustment of public accounts and the possibility of a gradual economic recovery, after a two-year period marked by recession higher than 7%, imply a high probability for a scenario of monetary stabilization.

From the fiscal point of view, inflation affects both revenues and expenses. Regarding the revenues, the mismatch between the taxable event and the actual payment of the tax can reduce the real value of the collection of taxes when there is inflation (Oliveira-Tanzi effect).

On the other hand, the deferment of expenditures in the course of the year will cause its real reduction in a scenario of high inflation (Patinkin effect). As the expenditures are fixed in the budget, the effective accomplishment of this expense – in the presence of rising prices – is equivalent to a real reduction. But it is necessary to be clear: these effects have bigger relevance in a scenario of high inflation, which is not the current forecast.

In the current scenario, inflation affects in real terms the primary spending ceiling. As the current rule provides

for the realignment of the ceiling according to the past inflation (Constitutional Amendment No. 95/2016), a drop in current inflation will increase the real value of the spending ceiling. For example, in 2017, the actual inflation will be nearly 3 percentage points below the index used to generate the expenditure ceiling of the year.

The scenarios for inflation show convergence, as can be seen in Table 4. This reflects the credibility vote that was given to the new management of the Central Bank. For 2017, the most pessimistic forecast for the IPCA comes from the government (4.8%).

TABLE 4 - INFLATION RATES (IPCA) – FORECASTS

YEAR	IFI - BRAZILIAN INDEPENDENT FISCAL INSTITUTION (end of period)	IFI - BRAZILIAN INDEPENDENT FISCAL INSTITUTION (for the purposes of the ceiling)	FOCUS ¹	LDO/LOA ²
2018	4.5	4.1	4.5	4.5
2019	4.5	4.5	4.5	4.5
2020	4.0	4.5	4.5	-
2021	4.0	4.2	3.5	-

1. Median of the top 5 ranking for the year-end rate

2. The values of the LOA and the LDO are coincident for 2017.

Source: Focus/Central Bank Report and IFI Prepared by: IFI - Brazilian Independent Fiscal Institution

The IFI and market scenarios differ only in the medium term. The market points to the maintenance of the inflation target (and its attainment) in 4.5% until 2020, when it then forecasts a decrease of this percentage to 3.5%.

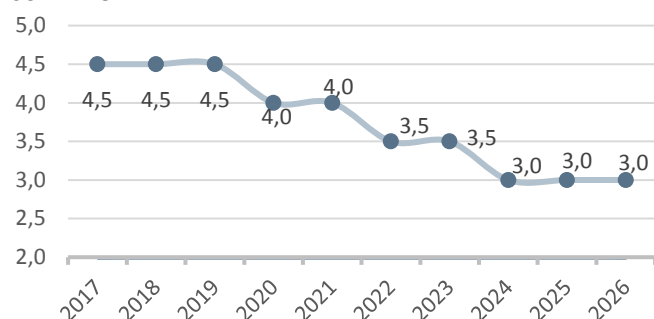
The IFI forecasts for the purposes of ceiling effect were carried out through the seasonal interpolation method and describe the expected values of spending ceiling readjustment.

It is worth noting that in 2018 the readjustment of the ceiling will be lower than the current inflation. This effect arises from the sharp drop in the IPCA variation in the second semester of 2016, when the annualized inflation was 3.6%. Since this period is included in the calculation of the 2018 ceiling readjustment, this will be lower than the expected current inflation for that year.

IFI's perspective is that, once the 4.5% target has been consolidated, the Central Bank will review it, but will not

commit itself to a more audacious goal in a short interval. The trend expected by IFI for the inflation rate values is shown in Chart 2.

GRAPH 2 - EVOLUTION OF THE IPCA GROWTH RATE - IFI SCENARIO



Source and Preparation IFI - Brazilian Independent Fiscal Institution

The 3% inflation target is taken as a long-term goal. It is interesting to observe that this is not a very ambitious goal and that other Latin American countries, such as Chile and Mexico, are already adopting it.. It is perfectly plausible to imagine a convergence towards a lower inflation rate, with equally lower real interest rates and a balanced fiscal framework. Such a situation would pave the way for a more robust advance in economic growth.

TABLE 5 - INFLATION TARGETS 2017 - SELECTED COUNTRIES

COUNTRY	TARGET	COUNTRY	TARGET
South Africa	3.0% - 6.0%	South Korea	2.0%
Euro Zone	< 2.0%	USA	2.0%
Argentina	between 12% and 17%	India	4.0% +/-2.0%
Australia	between 2% and 3%	Japan	2.00%
Brazil	4.5% +/-2.0%	Mexico	3.0% +/-1.0%
Canada	2.0% +/-1.0%	United Kingdom	2.0%
Chile	3.0% +/-1.0%	Switzerland	< 2.0%
China	3.0%	Turkey	5.0% +/-2.0%

Source: CentralBankNews.info. Prepared by: IFI - Brazilian Independent Fiscal Institution

External Sector

Events outside the Brazilian economy have several impacts on national public finances.. First of all, the

exchange rate between the Real and other currencies affects the stock of external debt and the assets held in foreign currencies.

Besides, sharp variations in the exchange rate induce the Central Bank to act in the currency market, and its gains or losses in these operations are passed on to the Treasury. For example, in 2015 the foreign exchange swap operations cost the public coffers R\$ 89.7 billion. In 2016, on the other hand, there was a profit of R\$ 75.6 billion

The management of the monetary policy is also affected by the international economy with serious repercussions on public accounts. For example, an increase in US interest rates attracts investments to that country. In order to avoid an outflow of the American currency, it is necessary to raise the internal rate. This in turn burdens the financing and refinancing of the securities debt.

Finally, international trade - affected by the exchange rate - generates tax revenues, since imports and exports are taxed, albeit in different measures and with the exception of some products and services.

The scenario of the world economy turned up to be quite troubled in 2016. The events to be highlighted are the voting for the exit of the United Kingdom from the European Union and Donald Trump's election in the United States.

These two events point to the restructuring of world trade. Indications that the new president will propose new barriers and taxes against countries that traditionally have a trade surplus with the US could establish new trade flows.

This phenomenon may also be reinforced by Britain's need to develop new strategic commercial partnerships in case their exit from the European Union is followed by tariff increases in trade with that economic community.

In the US case, it is most likely to disrupt trade flows with China and Mexico, countries classified by the new administration as unfair competitors to the United States.

The impact on international trade will be clearly negative if this rhetoric turns into action. However, the result for Brazil is not clear. On the one hand, the declining volume of trade would be bad for our exports, and consequently for our growth (not to mention the tax collection). On the other hand, increasing US barriers to products from

countries competing with Brazil in important markets may favor it.

Moreover, if the exit of the United Kingdom from the European Union means the end of free trade between them, it could result in new commercial opportunities for Brazilian products.

PANEL 1 - LEADING INDICATORS - EXTERNAL SECTOR 2016

BALANCE OF PAYMENTS	Billion R\$	Variation in respect of 2015
Current transactions	-23.5	-60.0%
Trade balance	45.0	154.9%
Exports	184.5	-3.0%
Imports	139.4	-19.1%
Direct Investments	78.9	6.0%
EXTERNAL DEBT AND RESERVES	Billion US\$	Variation in respect of 2015
External Debt	323.7	-4.1%
International Reserves	372.2	0.9%
Position in Foreign-Exchange Swap	105.1	-75.1%
EXTERNAL SECTOR INDICES		
Import financing with reserves		32 months
Gross external debt/exports		1.8
Reserves (liquidity)/debt service		3.2
OTHER VARIABLES	R\$	Variation in respect of 2015
Commercial dollar Purchase	3.2492	-19.4%
Euro Purchase	3.4253	-20.3%
Dow Jones Industrial Average		15.2%

Source: Central Bank

Prepared by: IFI - Brazilian Independent Fiscal Institution

Panel 1 presents a series of values and indices on the situation of the external sector in the Brazilian economy. Among the highlights is the sharp drop in imports, which was a key factor for the increase in the balance of trade, despite the drop in exports.

External debt and international reserves remained relatively stable, reflecting an inertial process with few active government operations.

The reduction in the consolidated position of foreign-exchange *swap* was significant. During 2016, the Central Bank took advantage of the positive flow of dollars to make the other end of *swap* and thus reduce its exposure level by more than 75% (see topic on nominal result).

Analysis of recent developments in fiscal policy and prospective scenario

Fiscal results for 2016 were within the target set by law. In the case of the Union, the aid of extraordinary revenues offset the unfulfilled revenue forecast derived from the negative performance of the economy.

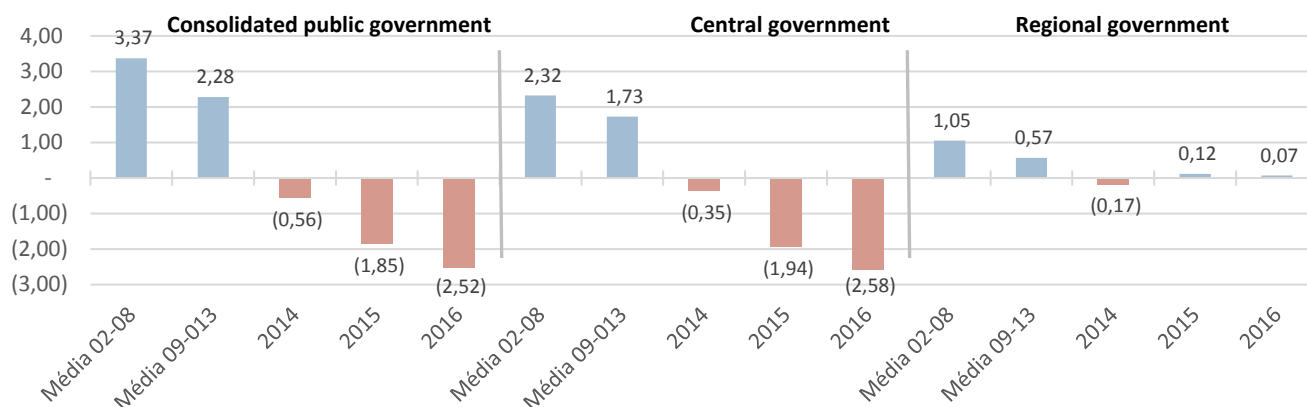
For the current year, we forecast a consolidated deficit of R\$ 182 billion, or 2.8% of GDP³, for the public sector, above the target of R\$ 143.1 billion, or 2.2% of GDP, set by law.

The primary deficit of the consolidated public sector, at 2.5% of GDP, was the worst among the analyzed periods (see Graph 3). In nominal values, the deficit was R\$ 155.8 billion, compared to the negative balance of R\$ 111.2 billion in 2015 (or 1.9% of GDP).

The central government deficit corresponded to R\$ 159.5 billion. States and municipalities, on the other hand, presented a R\$ 4.5 billion surplus, below the R\$ 7.1 billion observed in 2015.

³All information regarding GDP take into consideration the forecasts made by the IFI (including 2016), which may lead to discrepancies in relation to official data.

GRAPH 3 - PUBLIC SECTOR PRIMARY RESULT ACCUMULATED UNTIL DECEMBER - % OF GDP



Source: Central Bank of Brazil. Prepared by: IFI - Brazilian Independent Fiscal Institution

It is curious to note that the result of December for states and municipalities was negative at R\$ 6.1 billion, sharply reducing the effort observed until November. For the next few years, we understand that regional governments will produce deficits that will gradually decrease as a scenario of recovery of economic activity, and therefore of revenues, is restored.

The 2016 LDO set a primary deficit of R\$ 170.5 billion as target for the consolidated public sector. As it turns out, the target was met. On the other hand, the fiscal expansion observed between 2015 and 2016 was significant, with the recurrent primary result having worsened between 0.5% and 1% of GDP.

For 2017, we forecast a negative fiscal result of R\$ 182 billion, as mentioned, with the central government accounting for R\$ 177.9 billion. We work, hypothetically, with the expectation that regional governments and state-owned companies will present a combined primary deficit of R\$ 4.1 billion, in line with the provisions of the LDO.

Union's primary revenue in 2016 and 2017

In 2016, gross revenues showed a real decrease of 3.2%, already taking into account the high volume of non-recurring revenues of R\$ 92.9 billion, such as: (a) taxes and capital repatriation fines (R\$ 46.8 billion), (b) past issues of Refis (R\$ 16.4 billion), concessions and grants (R\$ 21.9 billion), as well as (c) other specific revenues (R\$ 7.8 billion).

From the perspective of the economic nature or the tax base, the main setbacks occurred in revenues from imports (26.1%) and production (16.6%), financial

transactions (10.9%) and turnover (7.2%). Taxation on payroll and labor income also showed a significant decline, of 5.8% and 0.5%, respectively.

For this year, we expect real growth of 0.2% for gross revenue, quite below the growth expectation foreseen in the LOA of 2017. There are two reasons to explain the discrepancy: different assumptions for GDP growth (0.46% of the IFI versus 1.6% of the LOA) and distinct estimates for extraordinary revenues (R\$ 35.6 billion of IFI versus R\$ 70.4 billion of LOA)

Among the composition of non-recurring revenues, IFI considers: amounts referring to past issues of Refis; The new tax regularization program (PRT); And the proceeds from the second round of repatriation of capital.

With regard to the managed revenue, which is more correlated with economic activity, our exercises point to a significant decrease in its elasticity, that is, in the relation between growth rates. While the elasticity of the revenue-GDP was 1.6 in the period from 1997 to 2016, the subperiod from 2012 to 2016 points to an elasticity below of 1.

The results call attention both for the decrease of the sensitivity of revenues to economic growth, and for its potential negative collateral impact on estimates of fiscal result. In other words, the economic recovery may, this time, produce lower revenues than in previous cycles.

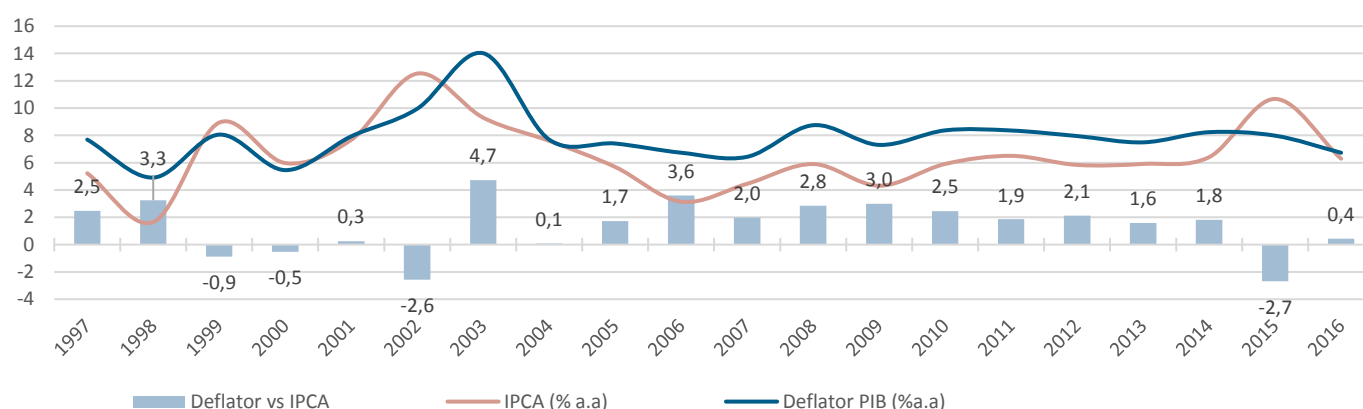
In addition to the need to purge the tax collection data, in particular those of non-recurring operations, the simulations around the sensitivity of revenues to growth raise a second important issue, related to the GDP deflator. As displayed in Graph 4, the dynamics of the

GDP deflator *vis-a-vis* the inflation rate measured by the IPCA has presented a significant decline.

For 2015, a period that concentrated a notable correction of relative prices, this ratio was negative. Although the dynamics of the GDP deflator is affected by a set of macroeconomic variables, our interest at this moment is restricted to drawing attention to its side effect on the dynamics of primary revenues.

Thus, both due to the lower elasticity of the revenue-GDP ratio and the lower expectation of economic growth for

GRAPH 4 DYNAMICS OF GDP DEFLATOR VERSUS IPCA



Source: Brazilian Institute of Geography and Statistics. Prepared by: IFI - Brazilian Independent Fiscal Institution

Among the most risky revenues, the highlights are concessions and grants (R \$ 24 billion), dividends (R \$ 4.9 billion) and operations with assets (R \$ 3.5 billion).

Even though the kick-off of the concession agenda this year are airport projects, its contribution in terms of tax collection will be relatively modest. This is because the main revenues from grants are concentrated in 2 segments: oil and gas and of electric energy. Given the regulatory and sectoral changes that have been made around these segments since last year, their implementation seems credible

this year, we expect an unfulfilled gross revenue forecast of

R\$ 39 billion (in relation to the LOA). It is worth noting that we are taking into consideration the positive indirect effect on tax revenue from the asset sales agenda, such as the Caixa Seguridade and IRB IPO, operations expected since 2016. In other words, it means that success of these operations is being taken into account, although the risks surrounding their operation are not negligible.

Regarding dividend income, we expect R\$ 2.8 billion less than the amount estimated in the LOA (see Table 6). Given the remarkable restructure of BNDES operations and Caixa's tenuous financial balance, it seems reasonable to expect a modest remittance of dividends from these companies, which should use a potential profit increase to finance their funding operations or strengthen their financial capacity.⁴

Finally, in regard to operations with assets, we expect R\$ 3.5 billion (R\$ 5.8 billion in the LOA) as a result of, among other factors, real estate sales (R\$1.5 billion).

⁴Just as an example, in the third quarter of 2016 the Basel Index was 13%, quite close to the regulatory minimum of 11%.

Box 1. Tax Expenses: Definition, International and Brazilian Experience

Definition

The concept of tax spending is not trivial. In the first sense, it corresponds to an indirect public expenditure made through the national tax system. Instead of being carried out by means of a public expenditure, tax expenditure take place by means of some legal tax exemption, accompanied by a waiver of public revenue.

But not all tax exemptions can be considered tax expenditure. Among the elements necessary to the characterization of tax expenditure are the search for a certain objective of public interest, such as with direct public expenditure, and the deviation from the basic structure of the tax exempted.

The latter attribute is the most difficult to understand. For example, the provision containing the differentiation of income tax rates by income bracket in the Personal Income Tax (IRPF) legislation is not a tax expense, since such differentiation implies the expected progressivity of an income tax. On the other hand, the deduction of health and education expenses fits into the definition of tax expenditure, since it consists of a deviation from the basic structure of the IRPF, and aims at public interest objectives, in this case of compensating the expenses incurred by taxpayers with services not provided by the State.

International Experience

International experience with tax expenditure has shown an important evolution of society with respect to transparency in the use of the public funds. Initially, its existence was virtually ignored.

In the 1980s and 1990s, especially in developed countries, tax expenditure gradually began to receive due attention: a more precise definition; more accurate estimate of revenue loss; greater integration to the budget and greater subjection to evaluation, control and limits. These last points are important because, although tax expenditure can be a relevant public policy instrument, it can be seen that the uncontrolled spread of this spending can also cause important distortions: increased regressivity and complexity of the tax system; greater inefficiency in the allocation of public resources; increased weight of the tax burden on non-benefited taxpayers and greater difficulty in controlling public accounts.

These distortions derive from the absence of appropriate rules that discipline tax expenditure individually and collectively. This statement applies both to the creation phase, with the ease of approval within the Executive and Legislative Branch; and in the validity phase, with the lack of liability mechanisms, period of validity and periodical evaluation. To be clear: tax expenditure need to be subject to evaluation in terms of size, purpose and outcome from an economic and social point of view.

Brazilian Experience

In Brazil, the first great innovation in terms of transparency came with the approval of the Federal Constitution of 1988, especially in § 6 of art. 165 of the Federal Constitution. This command determines that the budget bill be accompanied by a statement of the effects of the tax exemption on the budgeted revenue. Thus, since 1989 the Federal Revenue Service of Brazil (RFB) calculates the tax breaks arising from tax expenditure in the federal level, based on the revenues forecasts contained in the budget.

However, only in 2011, the agency began to calculate the waiver based on the revenues actually observed, but still with a three-year lag. It is worth noting that this is a methodologically complex calculation, because, in addition to the prior identification of which legal provision should or should not be considered as tax expense, it is still necessary to estimate what would have been the revenue had it not been for the existence of the tax exemption.

The results observed in the period 2011-2017 can be seen in the table below, according to information obtained from the RFB website⁵. As can be seen, the use of tax expenditure intensified in the 2012-2014 triennium,

followed by apparent stabilization and reversal in the following biennium. In 2013, the last year with effective data available, revenue losses were R\$ 223.3 billion, equivalent to 20.3% of revenue managed by RFB and 4.2% of GDP. This means that out of every 100 reais collected by the federal government, another 20.3 were not collected because of tax expenditure.

TAX BREAKS WITH TAX EXPENSES IN BRAZIL

	2011	2012	2013	2014*	2015*	2016*	2017*
Tax Break - RR (billion R\$)	152.4	182.4	223.3	253.7	271.8	267	284.8
RR/Revenues administered by RFB (%)	16.2	18.4	20.3	22.1	22.8	20.4	21,3
RR/GDP (%)	3.5	3.8	4.2	4.5	4.6	4.3	4.2

Source: RFB.

*RFB Forecast.

In relation to 2017, the values in the table above are those contained in the Annual Budget Bill for 2017 (PLOA - 2017)⁶. As it can be seen, the waiver with tax expenditure can reach R\$ 284.8 billion in 2017, equivalent to 4.2% of GDP and 21.3% of the revenue administered by the Federal Internal Revenue.

It is worth noting that these numbers refer to the Union, not including, therefore, the existing tax expenditure in states, the Federal District and municipalities. It is known, for example, that ICMS waivers are widely used by states as a public policy instrument, but there is no information at the subnational level such as those produced by the RFB, a shortcoming that must be overcome in order to comply with the provisions of the above mentioned § 6, art. 165 of the Federal Constitution.

Another information that is worth mentioning is related to the distribution of the total revenue waiver at Union level among the different modalities of tax expenses. The strong concentration in a few modalities is noteworthy, since only four of them account for about 55% of the waivers, and nine for more than 80%, according to RFB data for 2013. The table below informs the modalities of tax expenditure in decreasing order of revenue loss, accompanied by the participation of the respective loss in the total waiver.

Finally, it should be noted that the previously mentioned distortions arising from the widespread use of tax expenditure seem to be present in the Brazilian situation, as recorded by the National Accounts Court (TCU) in its audits.⁷ The importance of this diagnosis increased even more after the approval of the Constitutional Amendment No. 95 of 2016, the so-called New Fiscal Regime. The introduction of an overall limit on the expansion of federal expenses raises the risk of intensifying the use of tax expenditure as a means to bypass the established limit. Thus, there is still a long way to go in terms of improvements in the treatment of tax expenditure.

⁵Tax Expenditure Statements - Estimates Effective Bases 2013 - 2011-216 Series , p. 95 (https://idg.receita.fazenda.gov.br/dados/receitadata/renuncia-fiscal/demonstrativos-dos-gastos-tributarios/dgt-versao-para-republicacao_02-06-2016.pdf).

⁶Tax Expenditure Statement - PLOA 2017, p. 39 (<https://idg.receita.fazenda.gov.br/dados/receitadata/renuncia-fiscal/previsoes-ploa/dgt-ploa-2017-versao-1-1.pdf>).

⁷See, for example, the audit report made under Process No. TC 018259/2013-8, approved in the TCU plenary session on May 14, 2014, by Court Decision No. 1205/2014.

MODALITIES OF TAX EXPENDITURE - 2013

Modalities	Tax waiver (million R\$)	Share in the total amount (%)	Accumulated share (%) (%)
National "Simples"	62,056.6	27.8	27.8
Free Trade Zone of Manaus and Free Trade Areas	23,608.8	10.6	38.4
Agriculture and Agroindustry - Tax Exemption of Basic Food Basket	18,493.6	8.3	46.6
Immune and Exempt Non-Profit Bodies	18,343.1	8.2	54.9
Exempt and non-taxable income - IRPF	17,764.5	8.0	62.8
Deductions of Taxable Income - IRPF	12,905.4	5.8	68.6
Payroll Exemptions	12,284.3	5.5	74.1
Workers' Benefits	9,005.2	4.0	78.1
Digital Inclusion Program	5,829.9	2.6	80.7
Regional Development	5,746.4	2.6	83.3
Savings and Guaranteed Real Estate Bill	5,029.3	2.3	85.6
computer-technology and Automation	4,934.9	2.2	87.8
Medicines, Pharmaceuticals and Medical Equipment	4,337.9	1.9	89.7
Scientific Research and Technological Innovation	2,817.8	1.3	91.0
Automotive industry	2,519.4	1.1	92.1
REIDI*	2,217.6	1.0	93.1
Housing Financing	1,540.0	0.7	93.8
Vessels and Aircraft	1,531.3	0.7	94.5
Others	12,344.3	5.5	100.0
Total	223,310.5	100.0	

Source: RFB.

* Special Regime of Incentives for Infrastructure Development

Union's primary expenditure in 2016 and 2017

In 2016, central government primary expenditures fell 1.2% over the previous year in real terms, even with the high 2015 base due to "fiscal pedaling" payments. As a ratio of GDP, the expenses accumulated during 2016 accounted for 20.1%. Worthy of note is the increase in social welfare benefits of 7.2%, and of 8.8% in unemployment insurance and bonus. These headings are part of the so-called compulsory expenses, which accounted for 77.2% of total primary spending in 2016.

It is worth noting, among the main compulsory expenses, the evolution of social welfare spending. Expenditure on social welfare benefits, as can be seen in table 7, amounted to R\$ 508.8 billion in 2016 (8.2% of GDP). These expenses,

when compared to social welfare revenues of R\$ 358.1 billion (5.8% of GDP), generated a social welfare deficit in 2016 of R\$ 149.7 billion (2.4% of GDP). If the negative number of 2016 is in itself superlative, it becomes even more worrying when one considers its evolution, as well as the forecasts.

The values of the social welfare deficit observed in 2014 and 2015 were, respectively, R\$ 56.7 billion (1.0% of GDP) and R\$ 85.8 billion (1.5% of GDP). It is a rapid and worrying development. Social welfare represents nowadays the area of greatest risk for public accounts if structural changes – such as the Reform put forward by the Executive – are not quickly approved.

The considerable worsening of the deficit, in a very short time, is due to the significant growth of expenses in 2016 (7.2%) – which would hardly be accompanied by own

revenues. By the way, the recession experienced by the country in 2015 and 2016 - the worst in history – directly affected social welfare revenues in 2016 (down 2.3%). The combination of these two factors is explosive.

The dynamics of expenditure reveals specific characteristics of the RGPS (General Social Welfare Policy). These rules are considered very divergent from international standards, which are associated with the demographic evolution of the country (inversion of the demographic pyramid) and impose, specially on a partition system, a huge challenge.

When the amount of federal civil servants pensions is added to the General Social Welfare Policy account, the situation is even more worrying. According to Nery (2016)⁸, it accounts for an additional R\$ 70 billion, which increases social welfare expenditure to 9.4% of GDP. Keeping the current rules will lead to an increase in these expenses that is impossible to balance.

Regarding the composition of the deficit of the General Social Welfare Policy, it is worth highlighting the mismatch between the performance of urban and rural Social Welfare. While the Rural Social Welfare operates historically in sharp deficit, the urban has a more cyclical character, correlated to the labor market situation. In 2016, after nine years, the urban Social Welfare began to operate in deficit again: R\$ 46.3 billion or 0.7% of GDP.

Besides the deterioration of the employment and income levels on the labor market, an important cause for the worsening of the RGPS result, it is worth noting the increased sensitivity of its revenues to the economic worsening. The fall of 5.9% compared to 2015 was the sharpest since 1998. In addition to the side effect of the recession, the payroll exemption policy deepened the negative impact and procyclicality of INSS (National Institute of Social Security) revenues.

The aforementioned reform presented by the Executive Branch (PEC N. 287/2016) proposes to amend arts. 37, 40, 109, 149, 167, 195, 201 and 203 of the Constitution to provide for social security, establish transition rules and make further provisions, seeking to reform two of our main welfare policies (public civil servants – Special

Welfare Policy (RPPS) and General Social Welfare Policy (RGPS)).

For 2017, IFI estimates a Social Welfare deficit of R\$ 187.1 billion, instead of R\$ 181.3 foreseen in the LOA - 2017. This is an expressive amount to be financed by Brazilian citizens. The effects of the reform, whose final design is still to be defined by the National Congress, should be felt more intensely in the medium and long term

Reforma da Previdência: uma introdução em perguntas e respostas
[Social Welfare Reform: An introduction in questions and answers].
Available at:
<<http://jornalngn.com.br/sites/default/files/documentos/http://jorn>

algnn.com.br/sites/default/files/documentos/reforma_da_previdencia_-_pedro_nery.pdf>. Accessed on January 26, 2017

Box 2. Public expenditure by government activity area

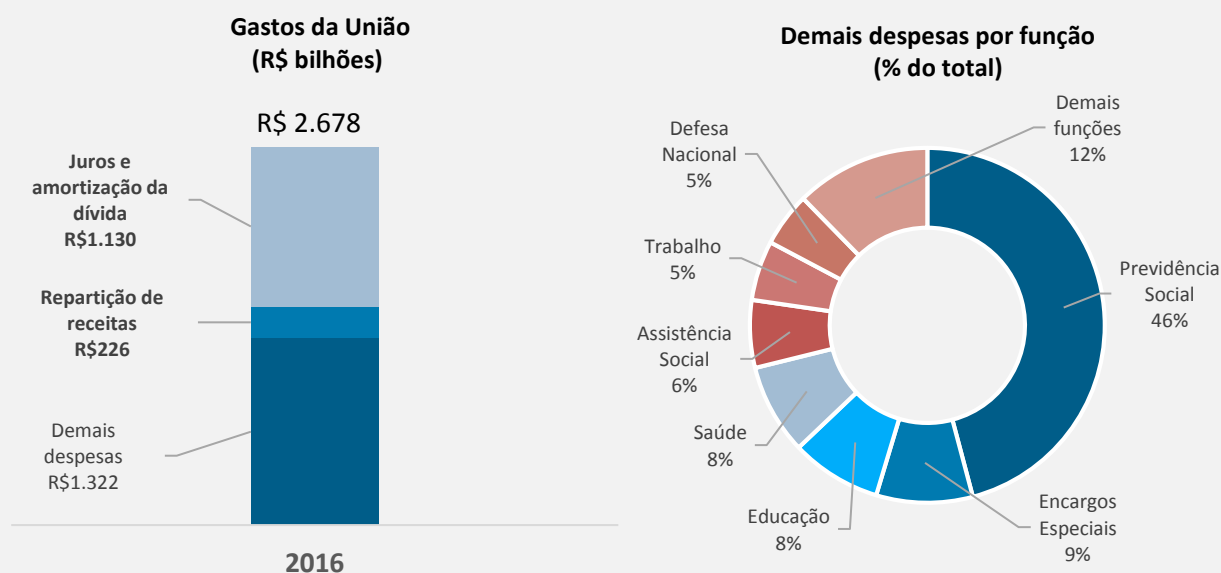
The analysis of government spending from the fiscal standpoint drives attention to relevant aggregates in monitoring the primary result and meeting fiscal targets, an example of the typical separation between mandatory and discretionary spending. This division, although useful for evaluating the degree of budgetary rigidity, reveals little about the composition of public spending among the different areas in which the State is active: education, health, social welfare, national defense, among others.

The sectoral view says a lot about the allocative choices of governments and society itself, since they reveal preferences contained in the constitutional text and in the laws approved by Congress.

In 2016, of the total R\$ 2.7 trillion in Union expenditures, R\$ 1.3 trillion may in fact be associated with spending in the different areas of government activity (the difference corresponds to debt repayments and interest, in addition to revenue sharing with other entities). Almost half of this net amount is intended to cover exclusively Social Welfare expenses (46%).

There are at least two relevant aspects regarding the Union's social welfare expenditure. Firstly, it should be borne in mind that the payment of the expenses of the General Social Welfare Policy is the responsibility of the Union, so that such participation in the total expenditure does not happen in most federal entities.

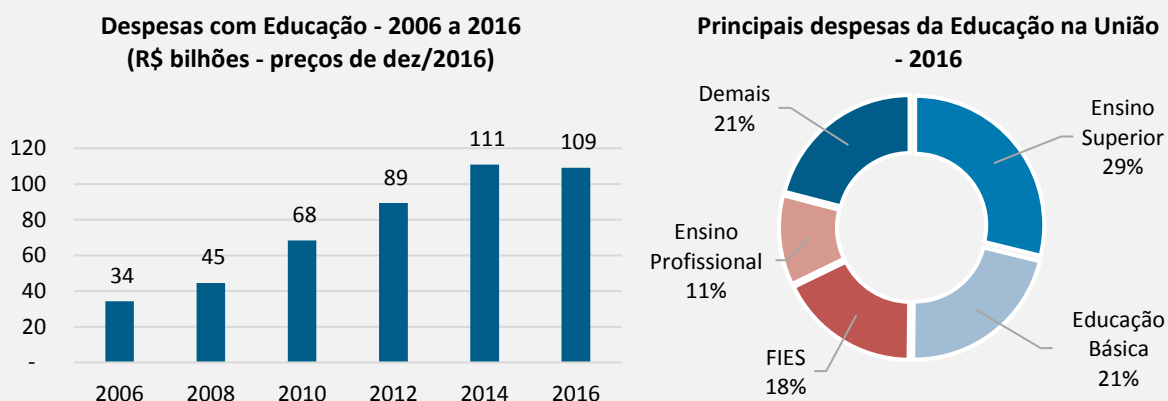
Secondly, this volume of resources shows, from a more economic perspective, the State's performance as a mere resource supplier: A significant part of what it collects from society is returned to it in form of retirement benefits, survivor's pensions and other social welfare and social assistance benefits.



Source: *Siga Brasil*. Prepared by: IFI - Brazilian Independent Fiscal Institution

In addition to Social Welfare, other government functions play a significant role in total expenditures, such as health and education. The latter, in fact, has significantly increased its share of total public expenditure in recent years. In 2016, this share was 8%, whereas in 2006 it was only 4%. The increase was propelled by expenditures on higher education, whose responsibility falls primarily on the Union, as set forth in the Federal Constitution.

However, the increase in resources for education was not accompanied by a detailed monitoring of its effectiveness, which would make it possible to discern whether in fact corresponding social gains were generated.



Source: Siga Brasil. Prepared by: IFI - Brazilian Independent Fiscal Institution

Of the R\$ 109 billion spent on education in 2016, 29% correspond to expenditures on higher education. This figure still does not consider the financing granted under the Financing Fund for Higher Education Students (FIES), which alone accounted for 18% of the total expenditure on education. With regard to Fies, it is important to highlight the fiscal risks associated with defaults in financing contracts, especially under the effect of the recent labor market weakening. This issue will be dealt with in detail in a specific IFI publication.

Primary result and budget cut

The primary deficit forecast by the IFI for the central government (R\$ 139 billion) is worse than the R\$ 38.9 billion target set forth by law, a figure that represents the budgetary contingency necessary for the target to be met, given our revenue forecast for the year.

That is, with total revenues increasing at 0.2%, slightly below the increase forecast by IFI to GDP (0.5%), it would be necessary to cut the budget more significantly so that the target set forth by law were met. The cut, in turn, would lead to a much more restrictive dynamic than that imposed by the ceiling rule (EC 95), ie, expenses would have to show a real decrease of 0.5%. Under the new rule, the real increase rate will be 2.2%.

Decree Nº8.961/2017, which defined budgetary and financial programming, and established the Executive's monthly disbursement schedule for the fiscal year 2017, opted to release 3/18 (16.7%) of the discretionary spending in the first three Months of 2017. A linear monthly schedule would correspond to the release of 3/12 of total expenses (25%) in the first three months of the year.

This restriction, although prudent, considering a possible contingency to be introduced in the bimonthly evaluation report of March, does not represent, in fact, a resource limitation, since the remaining amount of expenditures was automatically transferred to the other months of the year, which does not promote an effective expenditure limitation of through the aforementioned instrument.

Therefore, in the absence of large extraordinary revenues, there will be a need for contingency, which is important in order to achieve the primary surplus target.

In addition to the primary surplus goal set forth in the Budget, the government started to have another fiscal rule set forth by the New Fiscal Regime (EC 95). That is, from now on, the central government has a double target: primary result and spending ceiling. Briefly, the new constitutional provision imposes a ceiling on growth for a significant share of the Union's primary spending. The ceiling is defined according to the past inflation measured by the IPCA (Broad National Consumer Price Index).

As for this innovation, two aspects are worth highlighting. The first one concerns the calculation methodology of the ceiling for 2017 and its relation to the elaboration of the Annual Budget Bill for 2017 (PLOA 2017). In establishing the spending limits for the Executive Branch and the other branches of the Union, EC 95 determined that, for the fiscal year 2017, the individualized limit of primary expenses should correspond to the expenses paid in the fiscal year 2016, including outstanding liabilities paid and other operations that affect the primary result, adjusted by 7.2% (IPCA until the middle of the year accumulated in 12 months).

When preparing PLOA 2017, sent to the National Congress by August 31, 2016, the amounts paid in that year were still open, so that the value of the ceiling it should be applied to the project had to be estimated.. As with any estimate, the amounts entered in the PLOA and consequently in the LOA⁹, could represent values that are higher or lower than the limit actually observed after the closing of the year (ie, based on the expenses incurred).

In the event that the amount approved in the LOA is lower than the spending limit, the situation could be dealt with by means of additional credits, provided that in line with the revenues collected in the year and with the primary result rule. Otherwise, however, if LOA values exceed the allowable limit, there is no rule to deal with this matter. This was the case for the 2017 budget, whose ceiling reference base (set several months ago under the LOA) exceeds the ceiling limit by R\$ 4.7 billion. The way to deal with this difference deserves special attention from fiscal policy makers¹⁰.

The second aspect worth commenting is the possibility that the spending ceiling only proves effective to produce a primary result aligned with fiscal targets in the years 2024 and 2025.

The explanation is simple: Two rules are in effect today, as we mentioned. It happens that the pace imposed by the application of the ceiling rule to public expenditures - in the presence of revenues growing at a pace similar to that estimated for GDP - will promote a significant

recovery of the primary result. However, this recovery is decoupled from the primary targets policy.

This can be observed on Table 6, which shows the evolution of the primary result under the ceiling rule in comparison to the goals set in the LDO. There is a very significant need for contingency so that the primary result curve resulting from the enforcement of the ceiling rule approaches, since now, the goals set forth in the law.

It is important to mention that the scenarios contained in this simulation made by the IFI are conservative. That is, total expenditures (and not only those subject to the ceiling) increase according to past inflation and revenues grow at the pace of the economy.

The government has two possibilities: Either it adjusts the goals of the LDO to the PEC framework, which means to assume an important trend of fiscal adjustment, but much slower than that imposed by the current goals, or it blocks, year after year, significant amounts of the budget to adjust the spending to the goals of the LDO.

It has to be clear: The two rules in effect seek distinct goals or, at least, distinct degrees of primary fiscal effort. The ceiling rule aims at a recovery of the primary result that is much less rigid in these initial years of its effectiveness than the effort implied in the goals set forth in the law currently. As it is known, the LDO sets targets for the period from 2017 to 2019. We extrapolated the subsequent years assuming a primary result equal to zero, which is quite conservative, just to complete the simulation.

One way of perceiving the magnitude of the problem is to incorporate the contingency needs (last line of Table 6) into the forecasts for the net revenue of the central government. This allows us to assess what the average real growth rate of revenues would have to be between 2018 and 2025 so that the fiscal targets would be met without additional adjustment on the side of the expenditure, that is, with zero budget cut.

The result is intriguing: the average real growth rate of collection would have to be double-digit for the first two years to meet this goal. In the full period average, real growth would have to remain at 3.8%, compared to a

⁹Sanctioned on January 10, 2017, prior to the disclosure of the closed data from the previous fiscal year.

¹⁰Prior to the closing of this report, the Planning Minister announced that there would be an adjustment of the budgetary programming.

GDP average evolution of 2.2%, an elasticity that will hardly materialize.

TABLE 6 - ESTIMATED CENTRAL GOVERNMENT REVENUES AND EXPENSES - CURRENT BILLION R\$

	2017	2018	2019	2020	2021	2022	2023	2024	2025
Estimated Revenues (A)	1,152	1,227	1,313	1,396	1,484	1,569	1,660	1,748	1,840
Estimated Expenditure (B)	1,330	1,390	1,452	1,518	1,579	1,642	1,699	1,759	1,811
Result (C = A-B)	-178	-163	-140	-122	-95	-72	-39	-11	29
LDO Fiscal Target (Budget Guidelines Law) (D)	-139	-79	0	0	0	0	0	0	0
Contingency (D - C)	39	84	140	122	95	72	39	11	-29

Source: IFI and LDO 2017. Development and forecasts by: IFI - Brazilian Independent Fiscal Institution

Consolidated nominal result for the public sector

On the side of financial spending, there was a significant improvement between 2015 and 2016. Interest payments (net of financial revenues) produced a consolidated aggregate or nominal result of the public sector with a deficit of R\$ 562.8 billion (or 9.1% of GDP), compared to a deficit of R\$ 613 billion (or 10.2% of GDP) in 2015. Despite the improvement, which is explained by the strong reversal of exchange rate swap results, the result is still very worrying.

The decrease of real interest rates - which began after the new downward cycle of the Selic - will help reduce the burden of financial expenses on the aggregate result of the public sector. This is a crucial point for the State to recover its capacity to take debt at low cost, that is, for the debt/GDP ratio to be sustainable again.

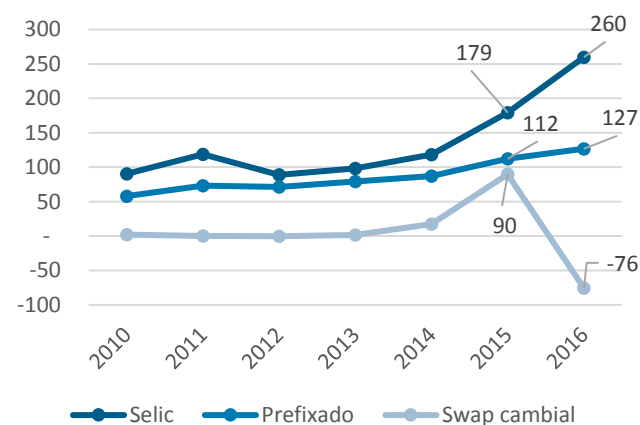
Between 2015 and 2016, public sector interest expenses decreased from R\$ 501.8 billion or 8.4% of GDP to R\$ 407 billion or 6,6% of GDP. This reduction was due to the reversal of results generated by foreign exchange swap operations. In 2015, the fiscal cost of foreign exchange swap operations was R\$ 89.7 billion. In 2016, there was a positive result of R\$ 75.6 billion, that is, a reduction effect of R\$ 165.3 billion in net interest payments.

On the other hand, interest paid on Selic index-tied securities increased R\$ 81 billion, above the increase observed in the cost of fixed-rate securities (a R\$ 15 billion increase).

The comparison of the evolution of these three interest components - gain/loss on swaps, Selic-linked expenses

and cost of prefixed securities - can be observed on Graph 5.

GRAPH 5 - SELECTED COMPONENTS OF INTEREST NET PAYMENT- BILLION R\$



Source: Central Bank Prepared by: IFI - Brazilian Independent Fiscal Institution

Despite the improvement between 2015 and 2016 - due to exchange rate volatility - interest payments still account for 72% of the nominal deficit.

Each percentage point reduced in the Selic represents estimated savings of R\$ 28 billion for the Treasury in annualized terms. This means that the current cycle of monetary loosening will produce major reductive effects on the interest account in 2017. Moreover, the composition of the debt tends to improve, since the current fiscal adjustment may give way to an increase in the share of fixed-rate securities. A possible lengthening of average debt maturities combined with a reduction of their cost would be very beneficial to the dynamics of the debt (see topic about the evolution of the public debt).

Our forecasts for the nominal deficit indicate a result of 8,8% of GDP for the current year. In addition to the consolidated primary deficit of 2.8% of GDP for the public sector (0.3 pp worse than the closing of 2016), the interest account should total 6% of GDP (lower by 0.6% compared to 2015). It is noted that the relief forecast for financial expenses is positive, but insufficient. The assessment of the nominal result reinforces the conclusion that the process of restoring order to public accounts will be gradual and complex.

Comments on the recurring primary result.

In the next monthly reports, IFI will publish the recurring primary result. Now hereby it is proposed to evaluate the evolution of the fiscal policy strategies over the last few governments, which justifies the need for this kind of analysis in addition to the examination of traditional indicators.

Apart from the analysis of these commonly used indicators, the assessment of the so-called recurring primary result has gained space in recent years. The idea contained in this variable is to assess the fiscal effort free from atypical factors that affect expenses and revenues, clouding the conclusions regarding the dynamics of public accounts of a given country.

The burden of non-recurring revenues for the closing of fiscal results has increased substantially in recent years. Hence the importance of assessing the expunged result of these events. In a simplified way, it is possible to divide the evolution of tax results into three periods of time. The first one, from 1997 to 2002, characterized by atypical revenues from privatizations, used to booster fiscal consolidation. The second one, between 2003 and 2008, characterized by a lesser use of atypical revenues and an increase in the effective primary effort. The third one, as of 2009, in which the fiscal expansion was partially concealed by accounting mechanisms, including a relevant amount of extraordinary revenues. The magnitude of these revenues, averaging almost 1% of GDP from 2009 to 2013, reinforces this diagnosis: Despite the high volume of dividends paid in advance by the federal state-owned companies, a series of tax refinancing (Refis) was carried out on favourable terms for defaulters. Thus, this is also one of the main reasons,

in addition to the sharp fall in economic growth, as of 2012, to explain the tax collection deterioration.

Beginning in 2014, when the capacity to maintain a high volume of non-recurring revenues was reduced and economic growth dropped to zero, the generation of successive primary deficits became frequent in the tax administration.

In 2016, the negative side-effect of the deep recession on primary revenues, coupled with the strategy of accelerated settlement of the high volume of outstanding liabilities contained in the public budgeting, revealed the country's deep fiscal imbalance: About 3 times worse than that existing at the end of the 1990s.

Whether due to the expectation of a slow recovery of the economic growth (with effects, of course, on tax collection), or due to the very negative starting point, the process of fiscal consolidation will be notably slow.

TABLE 7: ANNUAL EVALUATION - REALIZED VALUES, FORECASTS AND VARIATION RATES (IN MILLION R\$)

*IFI - Brazilian Independent Fiscal Institution

Breakdown	2016				2017		Actual variations			
	Amounts	% of GDP	LOA		Amounts	% of GDP	IFI-LOA		2017/2016 (%)	
			Amounts	% of GDP			Amounts	Dif. %	LOA	IFI*
I. TOTAL REVENUE	1,314,952.9	21.3	1,422,815.6	22.9	1,376,808.4	22.2	-46,007.2	-3.2	3.5	0.2
<i>I.1 - Revenue Administered by RFB</i>	819,751.9	13.3	881,587.5	14.2	842,571.2	13.6	-39,016.3	-4.4	2.9	-1.6
<i>I.2 - Net Revenues for the RGPS (General Social Welfare Policy)</i>	358,137.3	5.8	381,109.5	6.1	379,412.1	6.1	-1,697.4	-0.4	1.8	1.4
<i>I.3 - Revenues not administered by RFB</i>	137,226.9	2.2	160,118.5	2.6	154,825.1	2.5	-5,293.4	-3.3	11.7	8.0
<i>I.3.1 Concessions and grants</i>	21,907.8	0.4	23,963.2	0.4	24,000.0	0.4	36.8	0.2	4.7	4.8
<i>I.3.2 Dividends and profit participations</i>	2,847.8	0.0	7,708.0	0.1	4,942.0	0.1	-2,766.0	-35.9	159.0	66.1
<i>I.3.3 Asset Transactions</i>	771.0	0.0	5,880.7	0.1	3,500.0	0.1	-2,380.7	-40.5	629.9	334.4
<i>I.3.5 Other Revenues</i>	111,700.3	1.8	122,566.7	2.0	122,383.1	2.0	-183.6	-0.1	5.0	4.8
II. TRANSF. II. TRANSFERS THROUGH REVENUE ALLOCATION	226,835.3	3.7	235,357.6	3.8	224,702.4	3.6	-10,655.3	-4.5	-0.7	-5.2
III. NET REVENUE (I-II)	1,088,117.6	17.6	1,187,457.9	19.1	1,152,106.0	18.6	-35,351.9	-3.0	4.4	1.3
IV. TOTAL EXPENDITURE	1,242,372.9	20.1	1,326,450.1	21.4	1,330,040.5	21.4	3,590.4	0.3	2.2	2.4
<i>IV.1 Mandatory Expenditure</i>	958,672.5	15.5	1,036,279.4	16.7	1,039,069.8	16.7	2,790.4	0.3	3.4	3.7
<i>IV.1.1 Social Welfare Benefits</i>	507,871.3	8.2	562,369.4	9.1	566,527.2	9.1	4,157.8	0.7	6.0	6.7
<i>IV.1.2 Personnel and Employer Contributions</i>	257,871.8	4.2	284,058.2	4.6	284,000.0	4.6	-58.2	0.0	5.4	5.4
<i>IV.1.3 Bonus and Unemployment Compensation</i>	56,013.8	0.9	57,440.7	0.9	55,868.4	0.9	-1,572.3	-2.7	-1.9	-4.6
<i>IV.1.4 Continued Payment Benefits of the LOAS/RMV</i>	48,990.1	0.8	50,948.8	0.8	53,479.5	0.9	2,530.8	5.0	-0.5	4.5
<i>IV.1.5 FGTS complement (LC No. 110/01)</i>	5,624.3	0.1	5,596.1	0.1	5,933.4	0.1	337.4	6.0	-4.8	1.0
<i>IV.1.6 Compensation to the General Social Welfare Policy for Payroll Exemptions</i>	17,593.3	0.3	16,002.9	0.3	16,002.9	0.3	0.0	0.0	-13.0	-13.0
<i>IV.1.7 FUNDEB (complementation by the Union)</i>	13,674.8	0.2	13,969.8	0.2	13,236.2	0.2	-733.6	-5.3	-2.2	-7.4
<i>IV.1.8 Federal District Constitutional Fund</i>	1,174.2	0.0	2,313.7	0.0	2,313.7	0.0	0.0	-	88.6	88.6
<i>IV.1.9 Kandir Act (LC No. 87/96 and 102/00)</i>	5,857.8	0.1	3,860.4	0.1	3,900.0	0.1	39.6	1.0	-36.9	-36.3
<i>IV.1.10 Court Decisions and Precatory Letters - OCC</i>	10,163.4	0.2	11,315.3	0.2	11,315.3	0.2	0.0	0.0	6.5	6.5
<i>IV.1.11 Subsidies, Grants and Proagro (Farm Activity Guarantee Program)</i>	23,327.6	0.4	23,419.1	0.4	23,179.0	0.4	-240.1	-1.0	-3.9	-4.9
<i>IV.3.12 Other Mandatory Expenses</i>	10,510.1	0.2	4,985.0	0.1	3,314.1	0.1	-1,670.9	-33.5	-54.6	-69.8
<i>Discretionary Spending - All Branches</i>	283,700.4	4.6	290,170.7	4.7	290,970.7	4.7	800.0	0.3	-2.1	-1.9
<i>IV.2.1 Bolsa Família (Family Allowance)</i>	28,506.2	0.5	29,825.1	0.5	29,700.0	0.5	-125.1	-0.4	0.1	-0.3
<i>IV.2.2 Growth Acceleration Program (Ex: Minha Casa Minha Vida Program)</i>	34,077.5	0.6	30,286.9	0.5	29,300.0	0.5	-986.9	-3.3	-15.0	-17.7
<i>IV.2.3 MCMV (Minha Casa Minha Vida Program)</i>	7,965.3	0.1	6,908.8	0.1	6,500.0	0.1	-408.8	-5.9	-17.0	-21.9
<i>IV.2.4 LEJU/MPU</i>	13,004.2	0.2	13,954.2	0.2	14,754.2	0.2	800.0	5.7	2.7	8.6
<i>IV.2.4 Other Discretionary Spendings</i>	228,653.5	3.7	209,195.6	3.4	210,716.4	3.4	1,520.8	0.7	-12.4	-11.8
V. BRAZIL'S SOVEREIGN WEALTH FUND	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-
VI. PRIMARY RESULT CENTRAL GOVERNMENT	-154,255.4	-2.5	-138,992.2	-2.2	-177,934.5	-2.9	-38,942.3	28.0	-13.8	10.4

Monthly results and forecasts for Jan/2017

In December 2016, public sector consolidated primary result (federal sphere and regional governments) presented a R\$ 70.7 billion deficit. Compared to the same month of the previous year (R\$ 71.7 billion deficit), there was a 7.2% real decrease. States and municipalities, isolatedly, had a R\$ 6.1 billion deficit in the last month of last year.

Now focusing on the analysis of the central government (Treasury, Social Welfare and Central Bank), the result of December was a deficit of R\$ 64.2 billion. Compared to December 2015 (R\$ 60.9 billion), the fiscal result of the month represented an actual worsening of 0.8%.

In December 2016, there was a sharp decrease in central government's gross (down 6.8% compared to the same month of the previous year) and net revenue (down 18.4% on the same basis). The deepening of net revenue decline occurred due to larger transfers to states and municipalities, especially due to resource transfers as fines of the capital repatriation program.

Despite the sharp decrease in gross revenue, signs of stabilization can be identified at the margin. After declining at double-digit rates at the beginning of the year, administered revenue closed the month of December with a 1.2% increase. The stabilization at the end of last year was not enough to compensate the decrease occurred in the other months of the year, so that the accumulated reduction of 2016 the was 1.6%.

Among the main taxes collected, it is worth highlighting the improvement in December of those applicable to companies turnover. Despite the less marked fall at the end of last year, the variation in the accumulated in the year was relevant: Declines of 7.2%, 26.1% and 10.9%, respectively, for turnover, imports and financial transactions. On the other hand, social welfare revenues declined sharply, both in relation to the same period of the previous year (9.6%) and at the end of the year (5.9%). In short, despite the stabilization, at the margin, revenues retraction has been significant.

With regard to the expectancy for the tax collection in January 2017 (R\$ 138.1 billion), we expect a nominal

worsening in respect of the same period of the previous year .

In 2016, a substantial part of revenues increase occurred in January due to the receipt of R\$ 11 billion related to the grant bonus for the concession of hydropower plants in November 2015. This extraordinary effect will not be repeated in January 2017.

On the side of expenditure , the month of December included total central government expenditures of around R\$ 154 billion (see Table 8). IFI Estimates for January 2017 indicate monthly expenditures of R\$ 109 billion, from which R\$ 90.5 bilhões are mandatory expenditures and R\$ 18.5 billion are discretionary expenditures.

Among the mandatory expenditures, we highlight R\$ 40.9 billion for social welfare benefits, R\$ 24 billion for personnel and employer contributions, as well as R\$ 11.1 billion for subsidies, grants, and Proagro. The latter are explained by the concentration of payments in two months of the year (January and July), following its own execution system.

Among the discretionary expenditures (R\$ 18.5 billion), R\$ 2.4 billion are estimated for the Bolsa Família Program, R\$ 2.9 billion for the PAC (Growth Acceleration Program), and R\$ 0.5 billion for the My House, My Life Program (Programa Minha Casa, Minha Vida). Further details are given in Table 8, which breaks down tforecasts into the main expenditure items. It is worth noting that the IFI forecasts for January 2017 already take into consideration the effects of the decree that limits the execution of the month by 1/18, though not imposing contingency.

With expenses similar to those of the same period of the previous year, taking into account the stronger impact of subsidy spending, the primary result will be positive, but well below the one observed in the first month of last year. We expect a surplus of R\$ 4.5 billion, close to the median contained in the Fiscal Prism (R\$ 3.6 billion), a paper published by the Ministry of Finance, in which market projections are consolidated.

TABLE 8: MONTHLY EVALUATION - REALIZED VALUES, VARIATION RATES AND FORECAST FOR THE FOLLOWING MONTH (IN MILLION R\$)

Breakdown	Nov-16	Dec-16	Actual variation in Dec-16			IFI - Brazilian Independent Fiscal Institution Jan-17
			In the month (t/t-1)	In one year (t/t-12)	Accum. in the year (Accum year t/ Accum year t-12)	
I. TOTAL REVENUE	100,316.9	128,655.3	27.9%	-6.8%	-3.1%	138,139.6
<i>I.1 - Revenue Administered by RFB</i>	61,267.3	70,553.9	14.8%	1.2%	-1.6%	96,139.2
<i>I. 2 - Net Revenues for the RGPS (General Social Welfare Policy)</i>	28,563.4	46,809.5	63.4%	-9.6%	-5.9%	27,827.3
<i>I.3 - Revenues not administered by RFB</i>	10,486.1	11,444.6	8.8%	-30.9%	-4.4%	14,173.1
I.3.1 Concessions and grants	277.3	270.5	-2.8%	32.7%	245.4%	500.0
I.3.2 Dividends and profit participations	183.3	1,082.1	488.5%	-83.1%	-78.1%	0.0
I.3.3 Asset Transactions	72.5	104.9	44.3%	-	-	0.0
I.3.5 Other Revenues	9,953.0	9,987.1	0.0	0.0	-0.1	13,673.1
II. TRANSFERS THROUGH REVENUE ALLOCATION	25,778.5	34,737.6	34.4%	51.6%	1.6%	24,711.5
III. NET REVENUE (I-II)	74,538.4	93,917.6	25.6%	-18.4%	-4.1%	113,428.1
IV. TOTAL EXPENDITURE	112,892.2	154,041.6	36.0%	-14.6%	-1.2%	108,957.4
<i>IV.1 Mandatory Expenditure</i>	88,317.1	106,065.2	19.7%	-30.4%	-2.3%	90,493.3
IV.1.1 Social Welfare Benefits	47,529.8	53,681.4	12.6%	10.6%	7.2%	40,911.5
IV.1.2 Personnel and Employer Contributions	27,934.1	28,488.3	1.7%	5.9%	-0.5%	24,029.0
IV.1.3 Bonus and Unemployment Compensation	4,622.9	3,521.2	-24.1%	-7.2%	8.8%	5,966.0
IV.1.4 LOAS/RMV Continued Payment Benefits	4,190.4	4,030.0	-4.1%	7.6%	5.9%	4,310.7
IV.1.5 FGTS complement (LC No. 110/01)	396.8	792.3	99.1%	-93.5%	-68.7%	505.9
IV.1.6 Compensation to the General Social Welfare Policy for Payroll Tax Reliefs	967.5	1,112.8	14.7%	-83.1%	-35.9%	967.5
IV.1.7 FUNDEB (complementation by the Union)	800.9	2,057.2	156.1%	150.4%	-6.1%	1,941.6
IV.1.8 Federal District Constitutional Fund	110.8	125.7	13.1%	-68.9%	-84.8%	193.0
IV.1.9 Kandir Act (LC No. 87/96 and 102/00)	162.5	2,112.5	1,196.1%	205.8%	39.8%	162.5
IV.1.10 Court Decisions and Precatory Letters - OCC	856.3	8,036.8	835.7%	4.0%	-3.7%	215.8
IV.1.11 Subsidies, Grants and Proagro (Farm Activity Guarantee Program)	181.0	344.2	89.6%	-99.1%	-58.3%	11,065.1
IV.3.12 Other Mandatory Expenses	564.1	1,762.9	211.6%	-53.4%	-10.1%	224.6
<i>Discretionary Spending - All Branches</i>	24,575.1	47,976.4	94.6%	70.9%	2.8%	18,464.1
IV.2.1 Bolsa Família (Family Allowance)	2,490.3	2,458.2		0.0	-0.1	2,391.2
IV.2.2 Growth Acceleration Program (Ex: Minha Casa Minha Vida Program)	2,395.7	8,015.3	233.6%	147.2%	18.0%	2,876.8
IV.2.3 MCMV (Minha Casa Minha Vida Program)	580.6	2,110.2	262.4%	-78.6%	-64.3%	541.7
IV.2.4 LEJU/MPU	1,033.1	1,913.0	84.6%	58.2%	1.4%	1,007.9
IV.2.4 Other Discretionary Spendings	20,565.7	35,937.9	0.7	1.6	0.1	11,646.6
V. BRAZIL'S SOVEREIGN WEALTH FUND	0.0	0.0	-	-	-100.0%	
VI. PRIMARY RESULT CENTRAL GOVERNMENT	-38,353.8	-60,123.9	56.3%	-6.7%	26.7%	4,470.7

Public Debt Evolution¹¹

Recent evolution

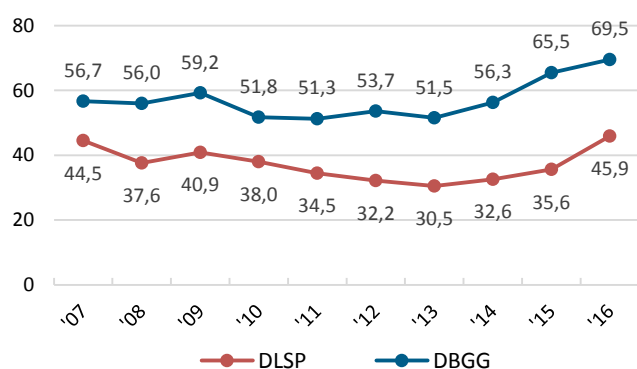
In 2016, government's general gross debt (DBGG) closed the fiscal year at 69.5% of GDP (R\$ 4.4 trillion), the highest level for the month since 2006, the beginning of the Central Bank's historical series. Compared to December 2015, there was a 4% increase. Compared to November 2016, there was a 1% decrease.

The evolution of DBGG in 2016 reflected basically the increase in the National Treasury's securities debt and the Central Bank's repo operations, which together increased 4.6 pp in the period.

The public sector net debt (DLSP), in turn, closed 2016 at 45.9% of GDP (R\$ 2.9 trillion), showing a significant advance in the year, over 10.3%. This is due, on the one hand, to the growth of DBGG and, on the other, to the negative result of Central Bank operations with foreign exchange reserves and foreign exchange swaps, according to calculations presented previously.

Graph 6 below describes the evolution of DBGG in the past ten years.

GRAPH 6 GOVERNMENT'S GENERAL GROSS DEBT AND NET DEBT OF CONSOLIDATED PUBLIC SECTOR. - % OF GDP



Source: Central Bank Prepared by: IFI - Brazilian Independent Fiscal Institution

¹¹The data of this topic consider the values in % of GDP for the public debt according to a Central Bank worksheet for 2016.

¹²According to the IMF concept, the DBGG includes the securities debt of the Treasury held by the market and also that held by the Central

Bank. That is, it includes all government bonds in the assets of the Central Bank.

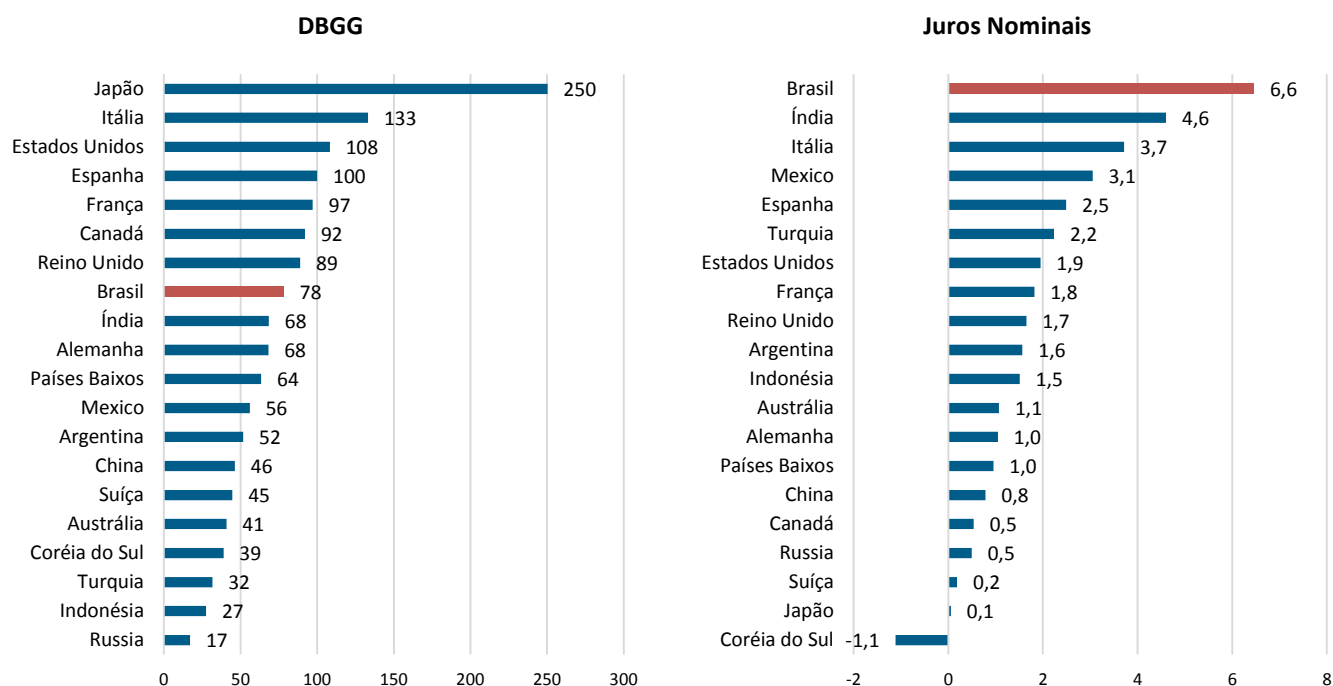
The evolution of public indebtedness in recent years entails the discussion about the fiscal solvency of the State. The sustainability of the Brazilian public debt has been compromised not only by the economic downturn in recent years, but also by the deterioration of fiscal results.

Debt instruments are important to ensure that the state has the capacity to absorb unexpected shocks and events in the macroeconomic sphere. In other words, the fiscal policy must ensure that enough fiscal savings are generated during periods of growth to be used in times of downturn.

In the international comparison, using International Monetary Fund methodology¹², the Brazilian public debt is in a level close to that of major economies in the world. Among the most relevant emerging economies, however, Brazil has the highest indebtedness.

Regarding the cost of carrying the debt, Brazil stands out as the country with the highest interest load as a GDP ratio among the most relevant economies. In 2016, net nominal interests stood at 6.6% of GDP, followed by far by India (4.6%) and Italy (3.7%).

GRAPH 7 DBGG AND NOMINAL INTERESTS – INTERNATIONAL COMPARISON



Source: International Monetary Fund and Central Bank Prepared by: IFI - Brazilian Independent Fiscal Institution

Over the last three years, public sector net debt has gone from 30.6% to 45.9% of GDP. This increase reflects the significant growth of public sector liabilities, particularly the securities debt and the balance of repurchase and resale agreements, which was only partially offset by the growth in assets. The balance of repurchase and resale agreements was nearly 17% of GDP in 2016. The securities debt, in turn, reached 47% of GDP.

Regarding assets, international reserves stand out, reaching 19% of GDP in December. This level is 2.7% higher than in 2013 and 11.4% higher than in 2006. The significant growth over the past ten years can be explained, until 2013, by the accumulation of assets in foreign currency, and subsequently by the devaluation of the Brazilian currency (R\$ real) against other currencies.

Attention should be paid to the cost of maintaining foreign currency assets of this magnitude. Traditionally, a great deal of these assets are invested in low risk sovereign bonds, which yield little in relation to other financial assets in Brazil.

TABLE 9: PUBLIC SECTOR MAJOR LIABILITIES

Breakdown	2013	2016	Variation
Public sector major liabilities	47.7	63.9	16.2
Treasury Securities Debt	37.8	47.2	9.4
Repurchase and resale agreements	9.9	16.6	6.7
Public sector major assets	25.1	28.2	3.1
International reserves	16.3	19.0	2.7
Credits granted by the Union to official institutions	8.8	9.2	0.4

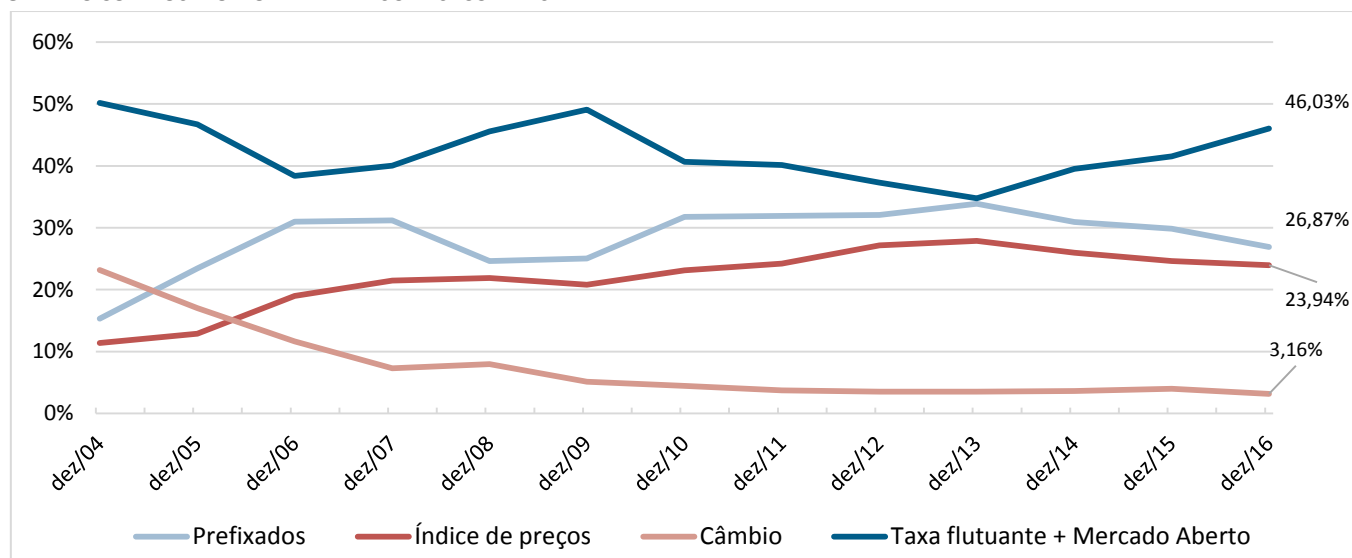
Source: Central Bank

The change in the Treasury securities debt was not only in magnitude, but also in terms of its composition. Although the participation of floating rate securities (post-fixed) has fallen in recent years, when added to the repurchase and resale agreements, with returns also linked to the Selic rate, the percentage has remained relatively stable over time. Fixed-rate securities, in turn, have had a relatively increased share since 2004. The

desired lengthening of the debt maturity profile and the increase in fixed-rate participation, it is worth

mentioning, depends on the success of the ongoing fiscal adjustment process.

GRAPH 8 COMPOSITION OF THE TREASURY SECURITIES DEBT



Source: Central Bank. Prepared by: IFI - Brazilian Independent Fiscal Institution

Forecasts

Our forecasts for the debt were made considering the implementation of a fiscal adjustment based on expenditure growth control. The basic scenario takes into account specifically a zero real growth fiscal rule of the primary expenditure, similar to the Constitutional Amendment (EC) 95.

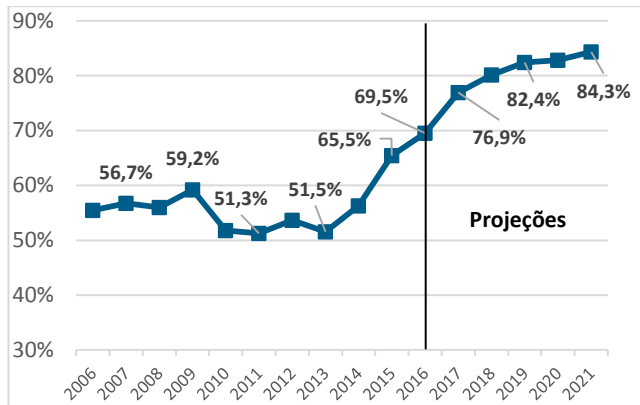
The central assumption behind the basic scenario is that the fiscal adjustment based on the control of expenditure growth rather than revenue growth over the medium term has a positive impact on inflation, interest rates, and GDP growth.

As of 2017, it is considered that: (i) inflation, as measured by the IPCA (Broad National Consumer Price Index), will converge already in 2017 to the center of the target, reaching 4% per year in 2020 and 2021; (ii) there will be a new cycle of monetary expansion, with a gradual decline of the Selic rate, so that in 2021 the real interest rate will be close to 3.6% per year. (closer to the average of the other countries); (iii) primary revenues will grow according to GDP (elasticity of primary revenue in

relation to unit GDP; (iv) primary expenditures will evolve according to inflation (zero real growth); and

Under these conditions, the debt presents a growing trend in the period, reaching 84.3% of GDP in 2021, even considering the fiscal adjustment and a gradual recovery of the economy. The result is due to the starting conditions of the economy in 2016, with interest still and high primary deficits. Thus, although a fiscal rule limiting primary expenditure growth is foreseen, the trend is that the reversal of the debt evolution will be noticed only over a longer period of time.

GRAPH 9 GOVERNMENT GENERAL GROSS DEBT - % OF GDP



Source: Central Bank, National Treasury and IFI. Development and forecasts by: IFI - Brazilian Independent Fiscal Institution

Considering our projections, in order to maintain a gross debt ratio of 84.3% of GDP as of 2021, it would be necessary to generate a primary surplus of 1.2% of GDP, a result much higher than that forecast by the IFI for the period, which is a deficit of 1,2% of GDP. This suggests an additional fiscal effort of 2.4% of GDP, without which debt is likely to continue on an upward trend beyond 2021.

Forecasts under uncertainty

Forecasts for public debt, though based on the expected behavior of the economy for the coming years, are not capable of incorporating satisfactorily the uncertainty that lies behind macroeconomic variables.

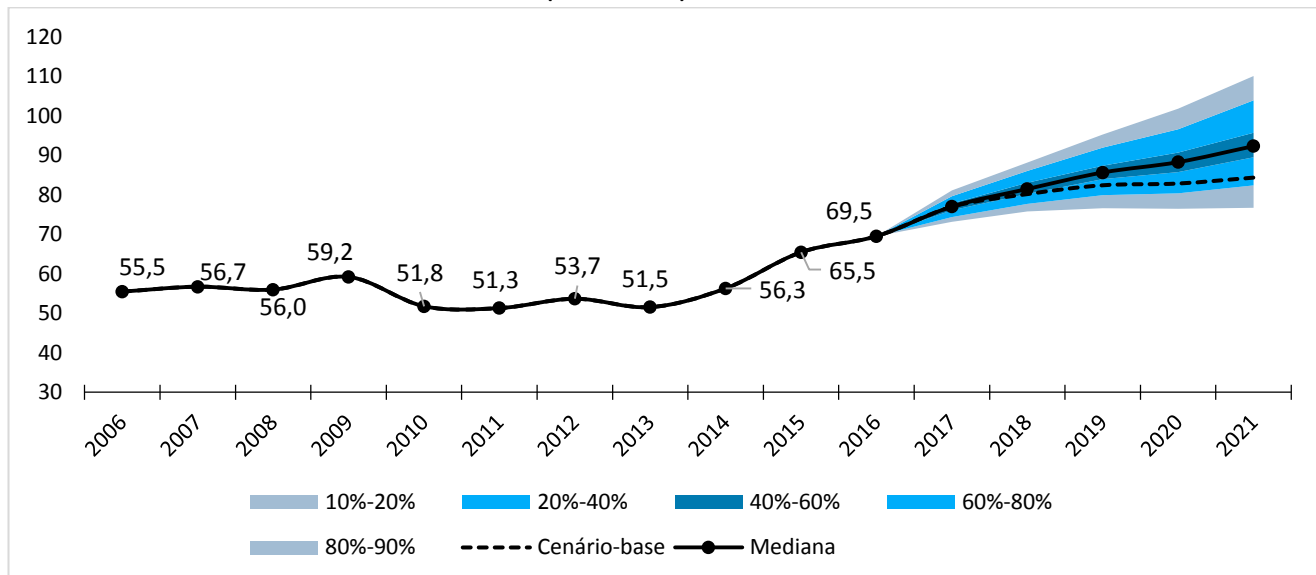
One of the ways to overcome this limitation is by drafting several possible scenarios for the debt based on the past performance of macroeconomic variables that affect indebtedness.¹³

This approach allows a broad set of possible underlying macroeconomic conditions to be reflected in the expected behavior of the debt.

Besides, this kind of analysis has the additional advantage of allowing confidence intervals to be obtained around our baseline scenario, and it is possible to assign probabilities to different debt levels over the period in which the forecasts are made.

Using this methodology, a thousand possible trends for the DBGG were obtained in the period from 2017 to 2021, the results of which are presented in the following fan chart.

GRAPH 10 DISTRIBUTION OF POSSIBLE DBGG TRENDS (IN % OF GDP)



Source: Central Bank. Prepared by: IFI - Brazilian Independent Fiscal Institution

¹³The methodology adopted here was inspired in Di Giovanni and Gardner (2008), Beynet and Paviot (2012), and Berti (2013).

In the fan chart, the debt evolution under the hypotheses of the basic scenario is shown by the dashed line, while the solid line represents the median of the forecasts. The cone covers 80% of all results for the DBGG after simulation of a thousand possible behaviors of GDP, interest rate, inflation and primary result in the projected period. The upper and lower lines delimit the 10th and 90th percentiles of the distribution respectively. The shaded areas represent different portions of the distribution, according to the specified percentiles.

Forecasts stress that, even under the assumption of a fiscal adjustment, in particular an adjustment based on primary expenditure growth control, there is a very low probability that gross debt will reverse its upward trend in the coming years.

There is a 97.6% probability that in 2021 DBGG, as a percentage of GDP, will be higher than the level of December 2016. Besides, there is a 28.9% probability that it exceeds 100% of GDP in that period of time.

IFI Forecasts

	2014	2015	2016	Forecasts				
				2017	2018	2019	2020	2021
GDP - real growth (% per year)	0.50	-3.77	-3.49	0.46	1.93	2.38	2.21	2.21
IPCA - acum. (% in the year)	6.41	10.67	6.29	4.50	4.50	4.50	4.00	4.00
Selic rate - end-of-period (% per year)	11.75	14.25	13.75	9.00	8.50	8.50	8.00	7.50
Real interest rate (% p. a.)	6.67	7.18	7.33	6.58	4.07	3.83	4.09	3.61
Public Sector Consolidated Primary Result (% of GDP)	-0.56	-1.85	-2.47	-2.81	-2.41	-1.94	-1.60	-1.18
d/q Central Government	-0.35	-1.94	-2.53	-2.74	-2.35	-1.89	-1.55	-1.14
Net Nominal Interests (% of GDP)	-5.39	-8.36	-6.46	-6.04	-5.35	-5.33	-5.25	-5.15
Nominal Result (% of GDP)	-5.95	-10.22	-8.93	-8.84	-7.76	-7.27	-6.85	-6.33
Government General Gross Debt (% of GDP)	56.28	65.45	69.49	76.94	80.16	82.39	82.84	84.33

BOX 2: PROBABILITIES ASSOCIATED TO DBGG FORECASTS IN % OF GDP

Debt in 2016 (% of GDP)	Government General Gross Debt in 2021		
	Median forecast	Probability that the debt will be higher in 2021 than in 2016 (%)	Probability that in 2021 the debt will be higher than 100% of GDP (%)
69.5	92.3	97.6	28.9

Thus, the analysis based on uncertainty only confirms the recommendation for caution regarding the near and long term effects of the recently implemented fiscal adjustment. Even under the effect of the new fiscal rule, which controls the growth of primary expenditures, we should not expect a reversal of the debt to historical levels in the next few years. Moreover, there is a considerable probability that gross indebtedness as a percentage of GDP exceeds 100 % of GDP.

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Revised by Miguel Araujo de Matos

Federal Senate Translation Service – SETRIN/SGIDOC

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