Santander

ECONOMICS May 12, 2016

BRAZIL – Fiscal Policy

The Clash of Titans — Desirable versus Feasible

Tatiana Pinheiro*
tatiana.pinheiro@santander.com.br
5511-3012-5179
Everton Gomes*
everton.gomes@santander.com.br
5511-3012-7677

- **In our view, there is no room to increase the tax burden; the recessionary environment drains economic taxable resources. The revenue dynamics and economic cycle are linked and the GDP contraction of 3.8% drained 1.9% of GDP in revenue, according to our analysis.**
- **Since 2014, the recession has drained at least 2% of GDP in revenue while federal spending has kept growing at 1.5% of GDP per year, leading to a primary deficit of 1% of GDP (excluding the fiscal maneuver payment).**
- **In our opinion, to build the bridge to a sustainable public debt ratio to GDP, a long-term agenda based on structural reforms is required. However, all long-term measures have a higher degree of difficulty in terms of gaining Congressional approval, and they do not produce an immediate impact on fiscal imbalance.**
- **Disengaging the social from the minimum wage adjustment policy might save around 1.6% of GDP in 20 years, according to our estimate (0.1% of GDP per year for each 2 p.p. difference in annual adjustment policy).**
- **With the increase in the minimum age for retirement and the equalization between men's and women's requirement age (e.g., to 65 years old), the savings would be around 2.0% of GDP also in 20 years.**
- **On the other hand, the short-term agenda seems to be more feasible to implement. Thus, we believe that the middle of the road solution will be adopted.**
- **We foresee that a feasible fiscal package could produce a savings of 0.7% of GDP in 2016, and given the low effectiveness of the short-term measures, long-term measures have to be proposed.**
- **A continuous fiscal adjustment from 2017 onwards stemming from the structural measures is required to stabilize the public debt ratio to GDP. We estimate that it is needed structural changes adding savings around 1% of GDP per year in the upcoming years, in order to raise the primary result to a surplus of 2% of GDP, and to reduce the interest rate to below 9%.Meanwhile, an almost neutral structural primary result in 2016 and a tight structural primary result in 2017, should help in the disinflation process, and generate an improvement process in the country risk premium.**
- **We are adjusting downward our forecast for the primary result in 2016 to a deficit of 1.8% of GDP, and we are revising upward our primary surplus expectation for 2017 to a surplus of 0.7% of GDP. We see the gross and net debt ratio to GDP declining from 2018 onwards; the gross debt ratio to GDP peaking at 75.9% of GDP and net debt to GDP ratio peaking 43.2% of GDP in 2017.**

Introduction

The consensus analysis (and ours) regarding the economic backdrop is that Brazil is in a vicious cycle. The public debt ratio to GDP remains in an upward trend, which, in turn, is not improving due to the economic recession, which, in turn, is not rebounding due to the worsening fiscal results, hence, crowding out private investment and consumption. The primary deficit is running at 2% of GDP, and economic activity is still contracting at 3.8%, as gauged by the Focus survey`s median of expectations.

There were two budget cuts announced in 1Q16. The first one, in February, barely guaranteed the meeting of the central government's primary surplus target for this year at 0.39% of GDP given unrealistic assumptions adopted for the federal revenues growth (positive 14.7% y/y in nominal terms, and around 7% in real terms), and for non-mandatory spending (negative 27.4% y/y in nominal terms). The second cut, in March, offered some escape clauses for 2016 fiscal results, unveiling

IMPORTANT DISCLOSURES/CERTIFICATIONS ARE IN THE "IMPORTANT DISCLOSURES" SECTION OF THIS REPORT.

U.S. investors' inquiries should be directed to Santander Investment at (212) 350-0707.
*Employed by a non-US affiliate of Santander Investment Securities Inc. and is not registered/qualified as a research analyst under FINRA rules.

more realistic assumptions for federal revenues and non-mandatory spending, but also revising the primary target downward, to a deficit of 1.55% of GDP, thereby maintaining the deterioration of the fiscal account for the fourth year in a row.

Looking ahead, we see the same story of the last fifty years (at least), with two options for fiscal policy: (a) a short-term agenda that reverses the current fiscal cycle, or (b) a long-term agenda that reverses the fiscal trend. Past governments opted for the short-term agenda, with rare albeit important exceptions as the approval the fiscal responsibility law in May 2000, and the mini reform of social security in December 2003 (adoption of a discounting factor on security benefits). **In this report, we will call these options "the old government conception" and "the new government conceptions".**

In our opinion, with a severe budget constraint and a poor international macro environment, the debate between these two conceptions is of the utmost importance. The clash between the old conception of raising taxes and cutting spending – historically at a ratio of70/30 – and the new conception of making meaningful structural changes.

In order to build the bridge to a sustainable public debt ratio to GDP, "the old government conception" has proven itself insufficient. In 2015, two fiscal packages based on raising tax and cutting spending were proposed and partially implemented, and the primary deficit (discounting the payment of the 2014 fiscal maneuvers) widened to 1% in March 2016 from 0.6% of GDP registered at year-end 2014.

Government preference for the short-term agenda is understandable, in our view, as this is easier to implement since decrees and ordinary laws, which simply require a simple majority of congressional votes, can implement this agenda. Meanwhile, the long-term agenda is based on structural reforms that require, in general, constitutional amendments, which require a three-fifth majority of votes and have to be voted on twice in both the Lower House and Senate.

No country for an old government conception

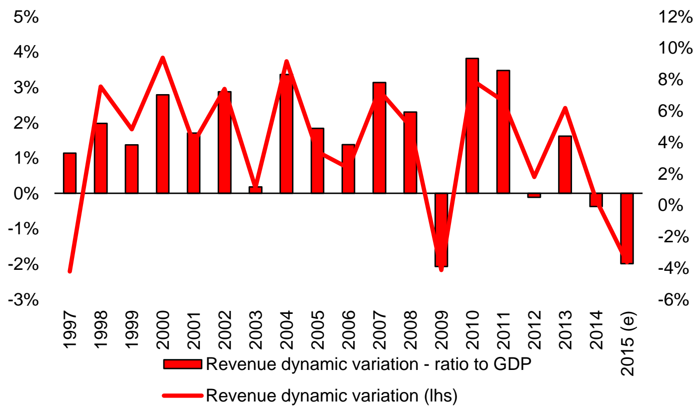
In our view, there is no room to increase the tax burden. The recessionary environment drains economic taxable resources.

In general, revenue growth slows during recessions and accelerates during expansions, and this elasticity is greater than 1.One can observe this evidence in the Brazilian data series. In the following charts, we deconstruct the tax collection between the revenue dynamic and the impact of real GDP growth. The chart on the right side shows the revenue dynamic and GDP growth behavior (very volatile), instead the relatively stable tax burden, which has hovered in the 33-34% range since 2002. Our deconstruction reveals the obvious relation between the tax burden and the economic cycle, but it also reveals the degree to which revenue dynamics and economic cycle are linked. .

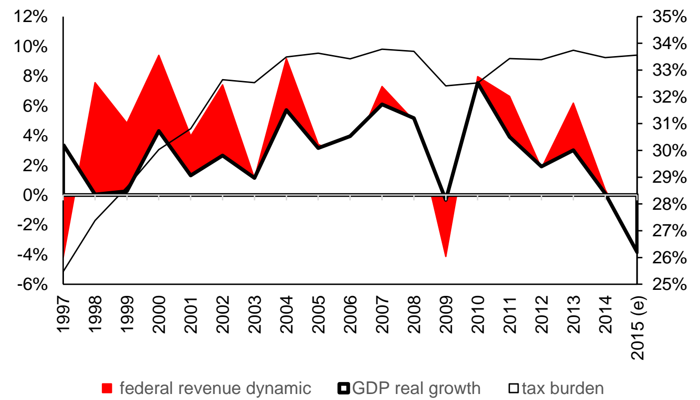
After the adoption of the free-floating exchange rate regime in January 1999, important moments of negative economic cycle resulted in revenue contraction (discounting the GDP real growth impact). In 2009, the revenue dynamic contracted to 2.1% of GDP, in 2014 it contracted to 0.4% of GDP; finally, we estimate that it contracted to 1.9% of GDP in 2015. In the first two instances, revenue contraction was higher than GDP contraction, which resulted in tax burden reductions. In the last, we estimate that the GDP contraction was slightly worse than revenue contraction; as such, we saw slight stability in the tax burden in 2015

We highlight that revenue dynamic in 2015 dropped, even with the hike of some tax rates implemented through the year — such as the IPI (tax on manufacturing good), CIDE (tax on gasoline price), and IOF (tax on loans for individuals), which amounted to a saving of 0.55% of GDP.

Revenues dynamic



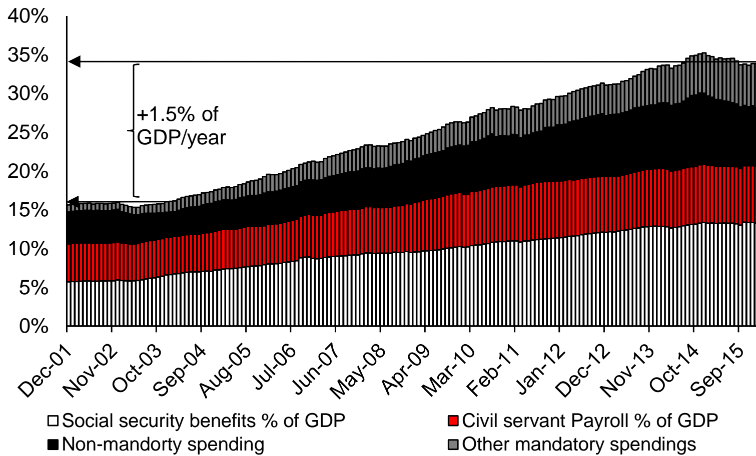
Revenue dynamic and Tax burden - % of GDP



Sources: Ministry of Finance and Santander estimate.

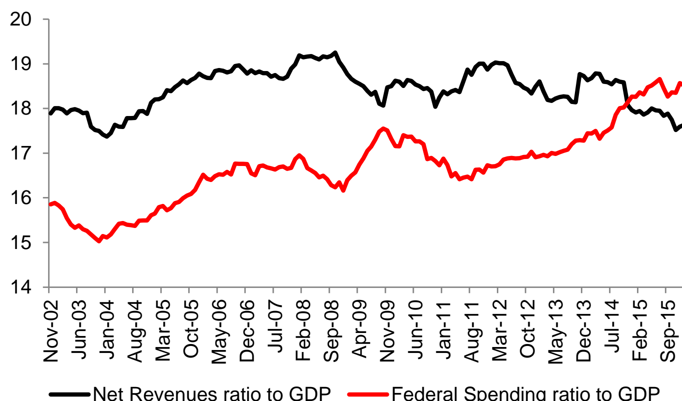
In particular, since 1999 up to 2013, federal revenue (discounting the economic cycle) increased an average of 1.8% of GDP per year, while federal spending (discounting the economic cycle) increased by approximately 1.5% of GDP per year (for further details, see our report, *The Fiscal Maze I: Origins*, published on August 6, 2015).

Revenues dynamic



Sources: Ministry of Finance and Santander estimate.

The pace of revenue growth higher than the spending pace explains the fiscal primary surplus of ~3% of GDP per year in this period. Since 2014, the recession has drained at least 2% of GDP in revenue, while federal spending has kept growing, leading to a primary deficit of 1% of GDP (excluding the fiscal maneuver payment).



Sources: Ministry of Finance and Santander estimate.

The Clash of Titans: Desirable versus Feasible

In order to build the bridge to a sustainable public debt ratio to GDP, a long-term agenda based on structural reforms is required. Given the recessive environment in the short term, none significant resource would come from tax increase, thus structural measures are needed to reverse the current fiscal trend, adjusting the spending growth pace to revenue growth pace, and then producing an improvement in the confidence in the sovereign debt sustainability.

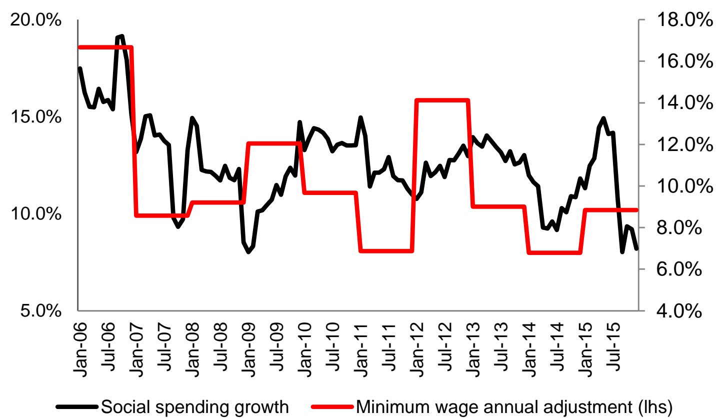
In our opinion, the following measures would point to a solid start to the process of addressing fiscal imbalances: (1) disengaging social spending from the minimum wage adjustment policy, which represents about 68% of mandatory spending; (2) simplifying the tax system (by unifying ICMS and reforming PIS/Cofins) would reduce overlap among tax rates; and (3) revising the systems of social security benefits (pensions and retirement benefits) and financing.

However, all long-term measures cited above have a higher degree of difficulty to be approved by Congress, except for the disengagement of social spending (see below for details), which requires only a simple majority to be approved. Furthermore, these long-term actions do not produce an immediate impact on fiscal imbalances, although they adjust the future trend of important federal expenditures.

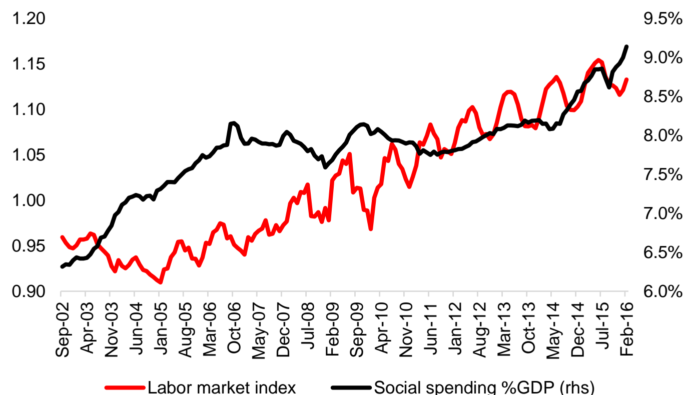
(1) **Disengaging social spending** (social security benefits + unemployment insurance + non-contributory social assistance) from the minimum wage adjustment policy (real GDP growth two years ago + consumer inflation one year ago) **could save around 1.6% of GDP from 2020 until 2040, according to our estimate**. This measure could be implemented by Ordinary law, which requires a simple majority in a single round, in both houses (Lower House and Senate).

In the following chart on the left side, we see that the minimum wage adjustment has influenced social spending growth; nonetheless, we cannot explain the total expansion of social spending since 2006. In addition, the chart on the right side shows that labor market conditions have influenced social growth, especially from 2011 onward. In order to capture the labor market condition effect on social spending, we constructed an index combining formal job and the unemployment rate, variables that influence the demand for social assistance.

Social spending growth versus Minimum wage annual adjustment

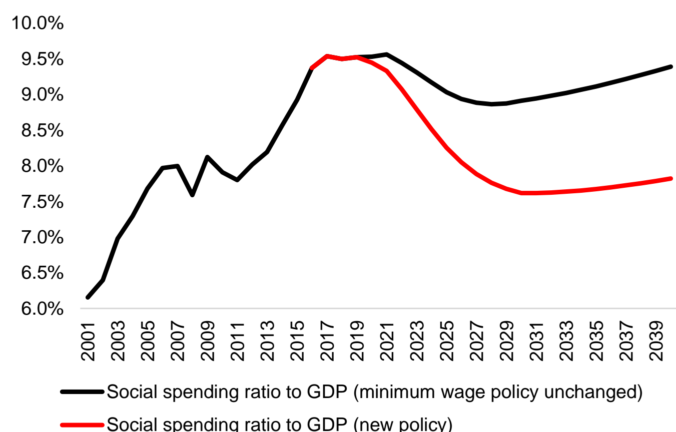


Social spending Ratio to GDP and Labor market



Sources: Ministry of Finance, IBGE and Santander estimate.

Therefore, we estimate the social spending ratio to GDP based on three explanatory variables: spending ratio to GDP lagged 1-year; index of labor market; and minimum age or “new rule” for annual adjustment. The chart on the left side shows two trends for social spending ratio to GDP. First, the black line represents the social spending ratio to GDP, if current social spending remains linked to the current minimum wage policy, which will mean an annual adjustment around 8% from 2020 to 2040. The red line represents the social spending ratio to GDP if the social spending adjustment policy is changed, for example to productivity growth plus inflation from 2019 onward, which would mean an annual adjustment of around 6% (productivity growth at 1-2% range and inflation at 4.5%). This untying would give more predictability to social spending growth (an important share of mandatory spending), which, in turn, would make budget programming easier and more transparent. It is important to highlight that we considered the impact of our labor market scenario on the social spending in these exercises. The weakness of labor market in the short term would push the social spending up; also, the expected economic recovery from 2018 onward would push social spending down.



Sources: Ministry of Finance and Santander estimate.

The impact of this measure does not have an immediate impact; we estimate that the saving is 0.7% of GDP in the first 5 years; it reaches 1.2% of GDP in 10 years after implementation; and up to 2040, savings would reach 1.6% of GDP**, suggesting savings of 0.1% of GDP per year (for the upcoming 20 years) for each 2 p.p. difference in the annual adjustment policy.** Moreover, the change of social spending adjustment policy adjusts the amount of social spending with a more restricted budget reality.

(2) **Simplifying the tax system.** For instance, in 2015 the government's plan was to unify the ICMS (state consumption tax on goods and services), which would have unified the legal framework and significantly reduced the number of different tax rates for the same product, depending on the state. This measure **would reduce the distortion created by the tax war among regional governments, optimizing the production chain, once the producer will set up the companies plants based on the logistic condition and best economic resources, instead the taxation.** This measure could have been implemented by a Senate bill, which requires simple majority in a single round, only in the Senate, or via Ordinary law, which requires a simple majority in a single round, in both houses (Lower House and Senate), and thus setting up compensation accounts for states (state debt renegotiation).

(3) **Social security reform**. There are several points to be tackled when addressing social security reform: such as adjusting the minimum age of retirement to account for increased life expectancy; equalizing the rules that govern men and women's retirement age; increasing the contribution base for rural retirement; and closing loopholes for fraud in pensions and social assistance programs, among others. This measure could be implemented by Constitutional Amendment (PEC), which means a three-fifths majority votes is required and the bill have to be voted on twice in both the Lower House and Senate. For instance, **the increase of minimum age for retirement and the equalization between men and women requirement age, for instance to 65 years-old, would save around 2.0% of GDP up to 2040.**

The social security deficit is at 1.5% of GDP and it would achieve the 5.1% of GDP mark in 2040 if the current system for private sector workers (under the General Regime of Social Security - RGPS) is maintained, i.e. if the rule of progressive ratio to retirement (85/95) is maintained. According to this rule, we estimate that women might be retired as of 53 years old, receiving full benefit in RGPS, and men might be retired as of 58 years old, receiving full benefits[1] in RGPS. According to the Ministry of Labor's statistics bureau, in 2015, women's average age of retirement was 57 years old in RGPS, and men's average age of retirement was 59 years old in RGPS. The average ages are higher than estimated in the 85/95 rule, because until 2015 social security was used to apply a discounting factor on the benefits, which inhibits early retirement. According this discounting factor, women started to receive full benefits as of 61 years old and more than 30 years of contribution, and men started to receive full benefits as of 64 years old and more than 35 years of contribution. Nonethelessm also according to the Ministry of labor statistic bureau, women used to retire as of 48 years old, which meant that around 8% of women working retired before 53 years old; also men used to retire as of 48 years old, which meant that up 22% of men working retired before

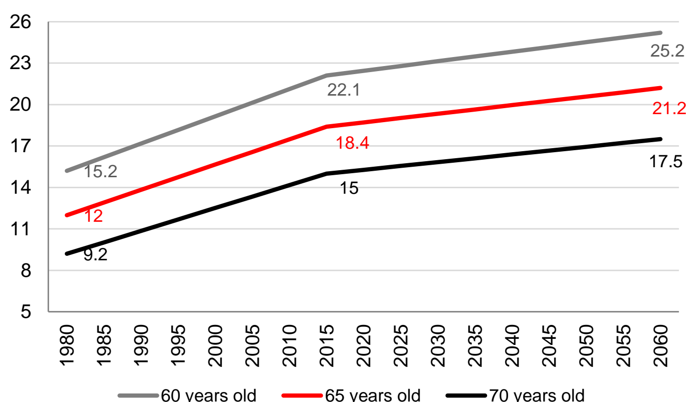
[1] Simulation for men: started to work at 20 years old, and after 38 years of contribution and 58 years old achieve the 95 factor (age + years of contribution).

58 years old, which explains the current age averages of 57 for women and 59 for men.

The law 13,183 approved by the Congress in November 2015 introduces the rule of progressive ratio to retirement (85/95), the early retirement for women would be extended by ~5 years, while early retirement for men would be extended by ~10 years. This is incontrast to the former system (discounting factor on the benefits), where by 8% of women and 22% of men opt for early retirement, with partial benefits. However, at the same time, the rule of progressive ratio to retirement (85/95) provides incentives for women to retire at 53 years and 58 years for men, with full benefits. The net effect adds 0.5% of GDP to the social security deficit by the end of 2040, according to our model. **According to our models, the social security deficit would achieve 4.6% of GDP until 2040 in the former social security rules (w/ discounting factor), while the social security deficit will reach 5.1% of GDP until 2040 in the actual social security rules (progressive ratio to retirement of 85/95). That said, in our view, the new progressive rule worsened the imbalance of the social security system.**

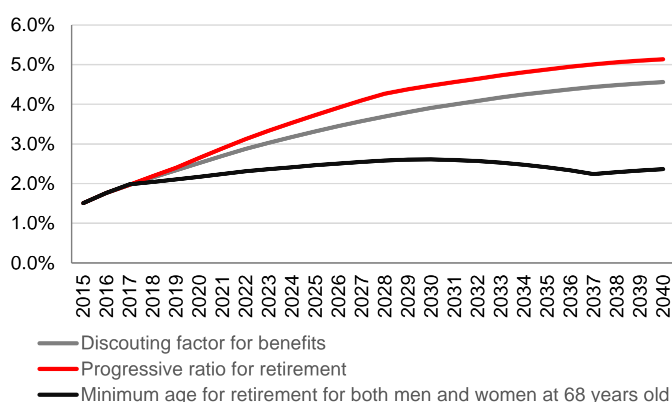
In this subject, there are so many problems in so many levels, starting by how far the age averages of retirement (in both rules) are from the Brazilian life expectancy, which is 22 years for population that was 60 years old in 2015, according the IBGE (Brazilian Statistic Bureau). We estimate that the increase of minimum age for retirement and the equalization between men and women requirement age, for instance to 65 years-old, would save something around 2.0% of GDP until 2040. According to our model, the social security deficit will be 2.4% of GDP in 2040. In other words, it is possible to stabilize the social security deficit at 2.0% level, only adjusting the minimum age of retirement to account for increased life expectancy and equalizing the rules that govern men and women's retirement age.

Expected survival by age group (number of years)



Source: IBGE.

Simulation of Social security deficit ratio to GDP



Sources: IBGE, Ministry of Social Security, and Santander estimates.

Conclusion

The short-term agenda seems to be more feasible to implement, in our view, given the recent political environment and the difficult of promote fiscal adjustment in a recessive scenario, as mentioned before. Mainly because it can be implemented by decrees and ordinary laws, which requires the simple majority of the Congressional votes. Reminding, the recessionary environment reduces the saving that could stem from tax increase. Thus, the short term measures might be sufficient to reverse the fiscal cycle, bringing primary result to surplus side in the short term, but it will not be sufficient to stabilize the public debt ratio to GDP.

The following table shows what we forecast as a feasible fiscal package that would save 0.7% of GDP in 2016; involving some tax increase, representing a saving of 0.3% of GDP, and some spending cuts, representing a saving of 0.4% of GDP.

Short-term fiscal measures for 2016

Tax increase measures (alternative)	BRL bn	2016 (% GDP)	Implementation	Probability
Tax on Repatriated assets (extraordinary revenues)	30.0	0.50%	Simple Majority	already approved
CIDE (tax on fuel prices)	11.8	0.20%	gov't decision	high
IPI (tax on manufacturing good prices)	2.0	0.03%	gov't decision	high
IOF (tax on financial operations)	3.7	0.06%	gov't decision	high
Royalties on mining	0.5	0.01%	gov't decision	high
Sending cut measures (alternative)	**BRL bn**	**2016**	**Implementation**	**Probability**
Removing the additional escape clause to public health spending	2.0	0.03%	gov't decision	
Removing the additional escape clause to high priority investment	3.5	0.06%	gov't decision	
Cutting investments	15.0	0.25%	gov't decision	
Death pension - Payment depend on the age expectancy: 50% of the total amount is paid. Young widow(er) will not receive.	5.0	0.04%	Simple Majority (MP)	medium
Cutting the unemployment insurance to fishermen	2.0	0.02%	Simple Majority (MP)	high
Total		**0.70%**		

Source: Santander estimates.

We are revising our primary deficit forecast to 1.8% of GDP from 1% of GDP in 2016. Assuming (1) the impact of GDP contraction is already embedded in this current primary result; (2) a remnant of fiscal package effect implemented in 2015 around 0.5% of GDP; (3) an eventual fiscal package this year of 0.7% of GD; and (4) non-recurring revenues stemming from repatriation asset, which should amount BRL70 bn (BRL50 bn higher than expected in the 2016 budget, which means additional revenue of 0.8% of GDP). Without short-term measures, the primary deficit would continue around 2.5% of GDP in 2016, decline to 1.5% of deficit in 2017, according to our estimates.

For 2017, we are revising our call for primary result to a surplus of 0.7% of GDP, previously it was 0% of GDP. Assuming (1) the impact of GDP recovery and the positive impact on revenues and spending; (2) additional measures (new fiscal package) effect implemented in 2017 around 0.8% of GDP; and 3) non-recurring revenues stemming from repatriation asset (0.2% of GDP) plus revenues from asset sales (0.3% of GDP).

However, even with the better primary result in 2017, the primary result will continue far from the primary surplus required to stabilize the public debt ratio to GDP, which we estimate between 2% -3% of GDP range, depending on the real GDP growth level and interest rate in the steady-state assumption **(for further details, see our report, *The Fiscal Maze III: Insurgent*, published on October 28, 2015)** .

That said, to stabilize the public debt ratio to GDP, we conclude that with our new forecasts for primary result for the upcoming years shows that a continuous fiscal adjustment from 2017 onwards stemming from the structural measures, such as the disengaging of social spending, and short-term measures, is required. We estimate that it is needed structural changes adding1% of GDP per year in the upcoming years in order to raise the primary result to a surplus of 2% of GDP, and to reduce the interest rate to below 9%.

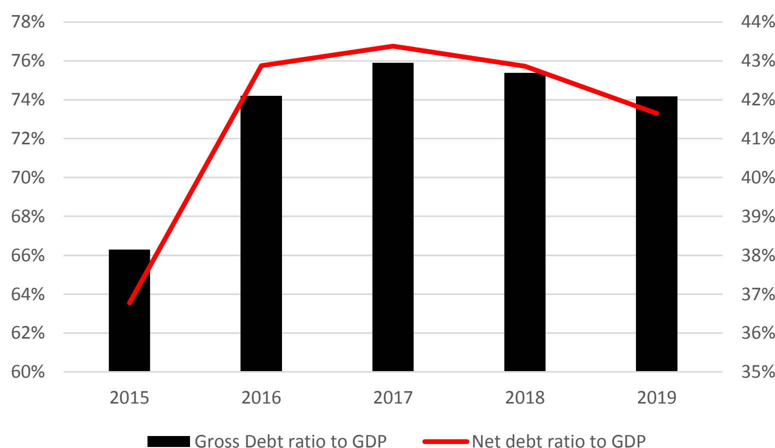
Assuming that the government will adopted the middle of the road solution, implementing short-term measures and proposing structural changes, we foresee the gross and net debt ratio to GDP declining from 2018 onwards (see chart on the right). We foresee the gross debt ratio to GDP peaking 75.9% of GDP and net debt ratio to GDP peaking 43.2% of GDP in 2017.

Breakdown Factor for Primary result

2015 Primary Surplus	(1.9)
Non Recurring revenues and expenditures	1.6
Impact of the Economic Cycle	(1.9)
Spending Growth	(0.8)
2015 Fiscal Package (remanant I	0.5
New Fiscal Package	0.7
2016 Primary Surplus	(1.8)
Non Recurring revenues a	0.5
Impact of the Economic Cycle	0.6
Spending Growth	0.6
New Fiscal Package	0.8
2017 Primary Surplus	0.7

Source: Santander estimates.

Simulation of Net and Gross debt ratio to GDP



Source: Santander estimates.

What for?

According to our models, all the fiscal effort that we are expecting will result in a structural primary result (adjusted by the economic cycle) that will be slightly loose throughout 2016, becoming tight in 2017 (see chart below), given the recessionary environment. Although, in the next two years the improvement of the primary result is not sufficient to stabilize the public debt ratio to GDP, it should help in the disinflation process that started this year. We would expect to see well-behaved service inflation this year due to the almost neutral primary result in 2016, and we would expect a relevant service inflation decline in 2017 due to the tight stance of fiscal policy.

Additional, the proposal of a long-term fiscal agenda should generate an improvement process of country risk premium, and consequently, which in turn will create more room for easing cycle, which in turn would potentiate the economic recovery. Last year, the lax revision of fiscal target announced in end-July had negative impact on macro variables expectation. In the same way, we would expect a positive impact (with the same magnitude) on expectation as a result of fiscal austerity announcements.

Consensus expectations for IPCA, BRL and GDP

	2015 IPCA	2016 IPCA	Monthly differential	2015 BRL/USD	2016 BRL/USD	Monthly differential	2015 GDP growth	2016 real GDP growth	Monthly differential
May-15	8.39	5.50		3.20	3.30		-1.27	1.00	
Jun-15	9.01	5.50	0.31	3.22	3.40	0.06	-1.50	0.50	(0.37)
Jul-15	9.25	5.40	0.07	3.35	3.49	0.11	-1.80	0.20	(0.30)
Aug-15	**9.28**	**5.51**	**0.07**	**3.55**	**3.70**	**0.21**	**-2.31**	**-0.50**	**(0.61)**
Sep-15	**9.49**	**5.89**	**0.30**	**3.98**	**4.00**	**0.37**	**-2.82**	**-1.00**	**(0.51)**
Oct-15	9.91	6.29	0.41	4.00	4.20	0.11	-3.05	-1.51	(0.37)
Nov-15	10.39	6.64	0.42	3.95	4.20	(0.02)	-3.20	-2.04	(0.34)
Dec-15	10.72	6.87	0.28		4.21	0.01	-3.71	-2.95	(0.71)
Jan-16		7.26	0.39		4.35	0.14	-3.78	-3.01	(0.06)
Feb-16		7.57	0.31		4.34	(0.01)	-3.82	-3.45	(0.24)
Mar-16		7.29	(0.28)		4.00	(0.34)		-3.71	(0.26)
Apr-16		6.94	(0.35)		3.72	(0.28)		-3.89	(0.18)
May-16		7.00	0.06		3.70	(0.02)		-3.86	0.03

Source: Focus Survey of consensus expectations.

CONTACTS / IMPORTANT DISCLOSURES

Macro Research			
Maciej Reluga*	Head Macro, Rates & FX Strategy – CEE	maciej.reluga@bzwbk.pl	48-22-534-1888
Sergio Galván*	Economist – Argentina	sgalvan@santanderrio.com.ar	54-11-4341-1728
Maurício Molan*	Economist – Brazil	mmolan@santander.com.br	5511-3012-5724
Juan Pablo Cabrera*	Economist – Chile	jcabrera@santander.cl	562-2320-3778
Brendan Hurley	Economist - Colombia	bhurley@santander.us	212-350-0733
David Franco*	Economist – Mexico	dafranco@santander.com.mx	5255 5269-1932
Tatiana Pinheiro*	Economist – Peru	tatiana.pinheiro@santander.com.br	5511-3012-5179
Piotr Bielski*	Economist – Poland	piotr.bielski@bzwbk.pl	48-22-534-1888
Marcela Bensión*	Economist – Uruguay	mbension@santander.com.uy	5982-1747-5537
Fixed Income Research			
David Duong	Macro, Rates & FX Strategy – Brazil, Peru	dduong@santander.us	212-407-0979
Brendan Hurley	Macro, Rates & FX Strategy – Colombia, Mexico	bhurley@santander.us	212-350-0733
Juan Pablo Cabrera*	Chief Rates & FX Strategist – Chile	jcabrera@santander.cl	562-2320-3778
Nicolas Kohn*	Macro, Rates & FX Strategy - LatAm	nicolas.kohn@santandergbm.com	4420-7756-6633
Aaron Holsberg	Head of Credit Research	aholsberg@santander.us	212-407-0978
Equity Research			
Christian Audi	Head LatAm Equity Research	caudi@santander.us	212-350-3991
Andres Soto	Head, Andean	asoto@santander.us	212-407-0976
Walter Chiarvesio*	Head, Argentina	wchiarvesio@santanderrio.com.ar	5411-4341-1564
Valder Nogueira*	Head, Brazil	jvalder@santander.com.br	5511-3012-5747
Pedro Balcao Reis*	Head, Mexico	pbalcao@santander.com.mx	5255-5269-2264
Electronic Media			
Bloomberg		SIEQ <GO>	
Reuters		Pages SISEMA through SISEMZ	

This report has been prepared by Santander Investment Securities Inc. (“SIS”) (a subsidiary of Santander Investment I S.A., which is wholly owned by Banco Santander, S.A. (“Santander”), on behalf of itself and its affiliates (collectively, Grupo Santander) and is provided for information purposes only. This document must not be considered as an offer to sell or a solicitation of an offer to buy any relevant securities (i.e., securities mentioned herein or of the same issuer and/or options, warrants, or rights with respect to or interests in any such securities). Any decision by the recipient to buy or to sell should be based on publicly available information on the related security and, where appropriate, should take into account the content of the related prospectus filed with and available from the entity governing the related market and the company issuing the security. This report is issued in Spain by Santander Investment Bolsa, Sociedad de Valores, S.A. (“Santander Investment Bolsa”), and in the United Kingdom by Banco Santander, S.A., London Branch. Santander London is authorized by the Bank of Spain. This report is not being issued to private customers. SIS, Santander London and Santander Investment Bolsa are members of Grupo Santander.

ANALYST CERTIFICATION: The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed, that their recommendations reflect solely and exclusively their personal opinions, and that such opinions were prepared in an independent and autonomous manner, including as regards the institution to which they are linked, and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report, since their compensation and the compensation system applying to Grupo Santander and any of its affiliates is not pegged to the pricing of any of the securities issued by the companies evaluated in the report, or to the income arising from the businesses and financial transactions carried out by Grupo Santander and any of its affiliates: Tatiana Pinheiro*, Everton Gomes*

*Employed by a non-US affiliate of Santander Investment Securities Inc. and not registered/qualified as a research analyst under FINRA rules, and is not an associated person of the member firm, and, therefore, may not be subject to the FINRA Rule 2242 and Incorporated NYSE Rule 472 restrictions on communications with a subject company, public appearances, and trading securities held by a research analyst account.

The information contained herein has been compiled from sources believed to be reliable, but, although all reasonable care has been taken to ensure that the information contained herein is not untrue or misleading, we make no representation that it is accurate or complete and it should not be relied upon as such. All opinions and estimates included herein constitute our judgment as at the date of this report and are subject to change without notice.

Any U.S. recipient of this report (other than a registered broker-dealer or a bank acting in a broker-dealer capacity) that would like to effect any transaction in any security discussed herein should contact and place orders in the United States with SIS, which, without in any way limiting the foregoing, accepts responsibility (solely for purposes of and within the meaning of Rule 15a-6 under the U.S. Securities Exchange Act of 1934) for this report and its dissemination in the United States.

© 2016 by Santander Investment Securities Inc. All Rights Reserved.