

Brazil – Economic Activity

Substantial Challenges and Risks in the Global Outlook: How Do They Affect Brazil?

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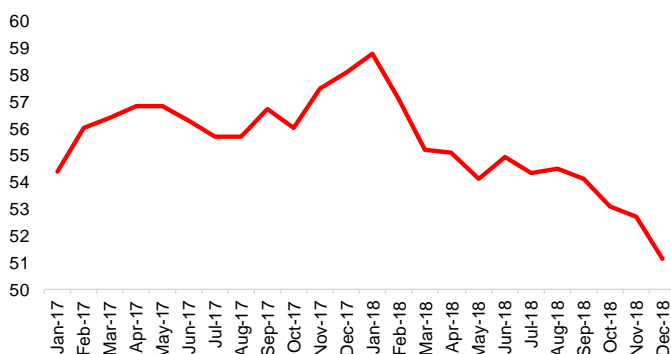
- Global economic growth seems to be a deceleration trajectory this year and next, in our view. We believe the main question is: will we observe a drastic loss of speed in global GDP growth (including risks of recession in important economies) or only a softening of its expansion?
- The Brazilian economy, after two years of timid growth, should experience a robust expansion in 2019 and 2020, in our view. Controlled inflation, low interest rates, balanced external accounts, and a recovery in confidence – in line with signs of progress in the fiscal agenda – support this expectation. However, will the worsening global environment hinder this recovery? If so, to what degree?
- Our baseline scenario forecasts a moderate slowdown in the global economy and, therefore, room for accelerated expansion in Brazilian GDP, 3% for the period 2019-2020 (on average).
- However, according to our simulations, a more adverse conjuncture for the global economy could reduce Brazilian GDP growth, in cumulative terms, by about 2 percentage points over the same period.
- Therefore, although not sufficient to reverse the acceleration trend, the worsening international framework could have a significant impact on domestic economic activity, in our view. In that event, the return of Brazil's GDP to pre-recession levels (beginning of 2014) would be even more distant.

Braving the Storm – International Economic Outlook

The balance of risks of the global economy has worsened recently. Significant uncertainties about the final decision involving the UK's possible exit from the European Union, the "trade war" between the US and China, and the migration crisis in Europe are just some of the factors that have been causing higher volatility in financial markets and affecting economic activity around the world.

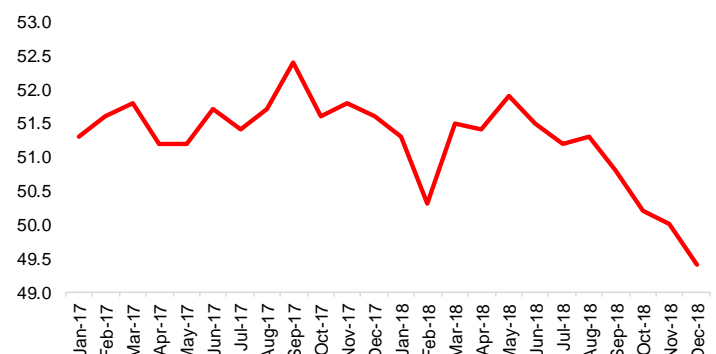
We believe the next few chapters of the international story will not be encouraging: global economic growth – a major theme in the current economic debate - seems to be a downward trend in the coming years. Thus, our analysis focuses on the magnitude of this likely slowdown: **will we observe a drastic deceleration in global GDP growth (with risks of recession in major economies) or only a softening of its dynamics?**

PMI Composite - Eurozone



Source: Markit

PMI Manufacturing - China



Source: Markit



However, Brazil is on the other end of the global economic cycle, in our view. It is worth noting that, over the last few years (officially between mid-2014 and the end of 2016), the Brazilian economy experienced one of the deepest and longest recessions of its documented history, at a time of synchronized global economic growth. After the recession, benefiting from the relatively broad liquidity and increased global appetite for emerging assets (low risk aversion), Brazil has been successful in several adjustments to its economy, and we believe that after two years of tepid growth, Brazil should be ready for a consistent and robust expansion in the coming years. However, the benign interregnum in the international environment is over, in our view, and, at the domestic level, advances in the fiscal adjustment agenda are necessary conditions for the materialization of a positive outlook.

In short, the so-far calm waters abroad are now troubled, and we see a storm on the horizon that may either intensify or pass quickly. Therefore, our objective in the present study is to measure and evaluate how different scenarios for the global economy could affect the recovery of the Brazilian economy this year and next.

Scenarios – “The Foolish”, “The Boring”, and “The Good”

The economies of the U.S., Europe, and China together accounted for approximately 65% of total world GDP in 2017. Therefore, we used data from these economies to create a proxy for global GDP, having evaluated them as quite representative for the purpose of this study. In addition to our baseline scenario (that is, the one to which we assign the highest probability), we present a stressed / pessimistic and an optimistic scenario, always aiming at assessing the impact on Brazilian GDP growth.

As Ariano Suassuna, a famous Brazilian playwright and author, once said: "The optimist is a fool. The pessimist, a boring one. The good is to be a hopeful realist."

1) “THE GOOD”. Our base scenario contemplates a moderate slowdown in global GDP growth in 2019 and 2020.

Regarding the U.S. economy, on the one hand we expect a continued reduction of monetary stimuli; on the other hand, we expect some agreement with China to resolve the “trade war.” Combining these elements, this scenario projects a smooth and gradual deceleration in US GDP growth in the period under analysis (+2.6% in 2019 and +2.0% in 2020). Looking at the Chinese economy, we see as the most likely scenario an economic growth rate only slightly below the government’s target (China’s GDP growing at 6%) defined for this year and next. Finally, with regard to Europe, we expect some cooling of political tensions and a resolution the decision as to whether the UK exits the EU, with moderate impact, (rather than a chaotic departure or even a reversal of the exit decision), after a sharp rise in short-term volatility. Under this scenario, we forecast euro zone GDP to grow around 1.5% in both 2019 and 2020.

2) “THE FOOLISH”. Our optimistic scenario projects accelerated growth in global GDP over the next two years.

In this case, the US would succeed in maintaining its current economic growth trend, in addition to extending the trade truce with China; there would be a reduction in protectionist rhetoric and a faster pace of global trade growth. In Europe, a UK exit from the EU would occur fairly smoothly and gradually, without significant worsening of asset values and confidence indicators. Moreover, European countries would reverse the downward trend seen in their GDP over the past few quarters and show higher economic growth.

3) “THE BORING”. US stock markets have already begun to react to worsening financial conditions and, in our pessimistic scenario,

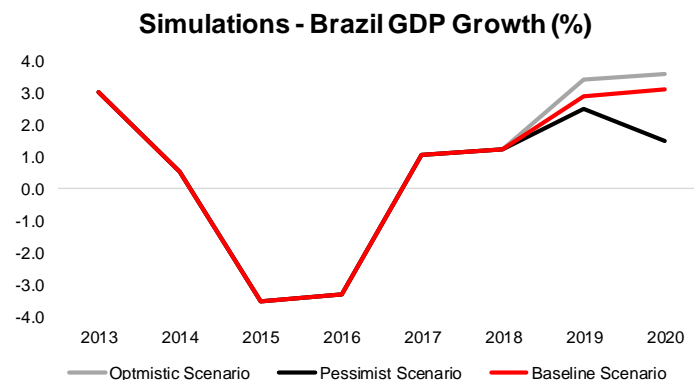
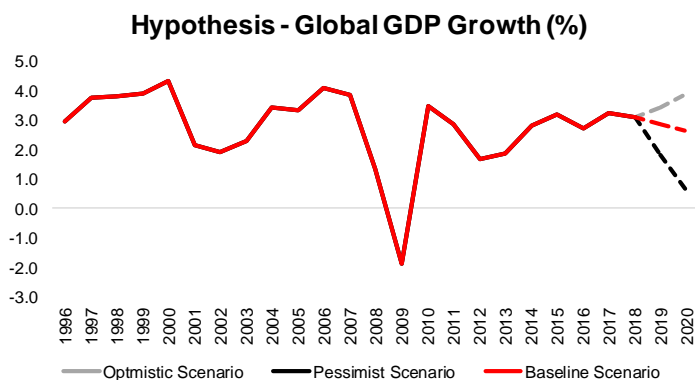
there would be substantial deleveraging of businesses and households as well as an intensification of the “trade war” with China, leading the world’s largest economy to a recession in 2020. In the meantime, looking at Europe, the UK’s exit from the EU would occur chaotically (without effective UK-EU negotiations), the fiscal and credit crunch would deepen in Italy, and other large countries (Germany, France, Spain) would have depressed levels of private consumption and investments. Finally, China’s government stimulus of local activity (e.g., corporate credit expansion) would have no significant effect, protectionist measures (and subsequent contraction of global trade) would drastically reduce the country’s exports, and the expansion of its GDP would present the so-called *hard landing* (i.e., a sharp reduction in domestic growth). **Does this negative scenario seem unlikely? We still think so, but there are those who consider it quite possible.**

Cyclical Recovery Under Way in Brazil, but the Impact from the Global Economy Could Be Negative

In order to estimate the impact of the three global economic scenarios presented above on Brazilian economic growth, we ran a Vector Autoregressive (VAR) model with the following variables: (i) Brazil’s GDP (source: National Accounts - IBGE); (ii) Real exchange rate (source: Bloomberg); (iii) *Ex-ante* real interest rate – DI-Pre 1year swap rate discounted to inflation expectations for 12 months ahead (source: Central Bank); (iv) Commodity Price Index – CRB (source: Thomson Reuters); (v) Consumer confidence indicator (source: FGV); and (vi) Proxy for Global GDP, as detailed in the previous section (sources: IMF, Bloomberg, and Santander calculation).



The last variable (Global GDP) was treated as exogenous in our modeling and assumed different values in the simulations for the baseline, optimistic, and pessimistic scenarios. The other variables were treated as endogenous in the econometric specification (see Appendix). We used YoY changes of the data series (without seasonal adjustment) on a quarterly basis. The estimation of the VAR model also considered two lag periods, selected by the Hannan-Quinn information criterion method.



Source: Santander Estimates

Source: IBGE and Santander Estimates

Looking at the results of the simulations (see table below), the first highlight is in regard to the likely strengthening of the cyclical recovery (already under way) in the Brazilian economy this year and next. Despite a gradual slowdown in the world economy, as we see in our baseline scenario, we expect Brazil's GDP to grow 3% in 2019 and 2020 (on average). As a main assumption, this framework contemplates the approval of pension reform this year, among other measures aimed at balancing the public accounts (e.g., change in the rule of minimum wage adjustment and reversal of some subsidies and tax exemptions). In our assessment, the new government's fiscal and reformist austerity stance tends to reinforce the confidence of businesspeople, investors, and consumers, boosting the domestic credit and labor markets. Moreover, we point out the benign behavior of Brazilian inflation (core measures are comfortably below target), which we think should maintain the expansionary monetary policy for an extended period, and the robustness of the external accounts.

Scenarios	Average Change % (2019-2020)	
	Global GDP	Brazil GDP
Baseline	2.8	3.0
Pessimist	1.2	2.1
Optimistic	3.7	3.5

Source: Santander Estimates

Concerning the alternative scenarios, we highlight in this report the results in the event of an adverse international environment. That's because we consider the probability of the pessimistic scenario higher than that linked to the optimistic one. Indeed, as mentioned above, one of the main topics in the current economic debate is the risk of a sharp worsening of the global outlook, with some analysts pointing, for example, to a rising likelihood of recession in the US and expansion of protectionist measures.

In order to understand how global economic growth affects Brazilian GDP, we evaluated the following transmission channels in our model: (i) Trade and (ii) Financial. On the trade side, the weakening of the BRL, observed in the adverse scenario, results in an increase in imported products prices, especially affecting the levels of investment in Brazil (through a decline in capital goods consumption). In addition, the pace of expansion of global demand significantly affects Brazilian exports; in our pessimistic scenario, for example, worsening world GDP growth (thus, a lower volume of international trade) depresses international commodity prices (which represent almost 60% of Brazilian exports) and leads to a negative impact on Brazil's external sales. To sum up, weak dynamics for global trade mean a loss of contribution from the external sector to total GDP. It is worth noting that – according to our calculations – devaluation of the real exchange rate negatively affects Brazilian GDP (and vice versa).

Regarding the financial channel, the escalation of trade tensions and a slowdown in world growth – as appears in our pessimistic scenario – lead to the increase of global risk aversion, causing international financial conditions to deteriorate. This deterioration affects factors such as real interest rates and confidence levels of households in Brazil (effects also captured in our modeling). Consequently, the dynamics of consumption and investments weaken, which means lower GDP growth. It should be noted that, in addition to the aforementioned worsening of the real exchange rate (devaluation) and



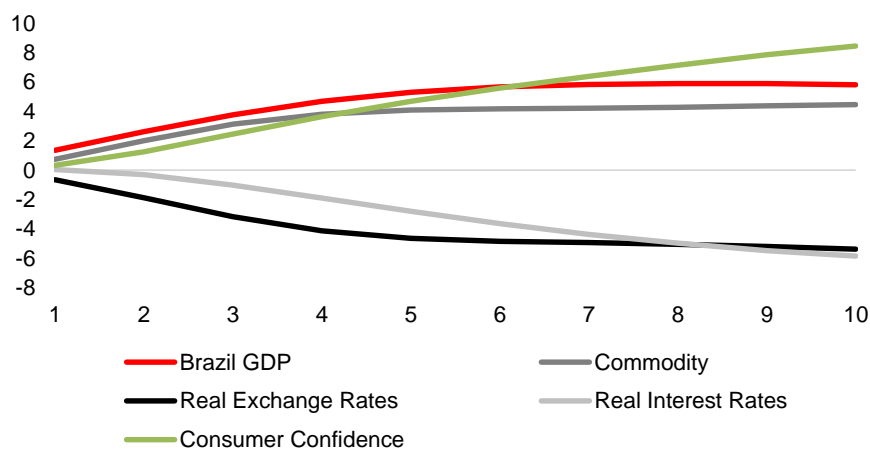
commodity prices, our simulations for the adverse global scenario show declining confidence indicators and higher interest rates.

All in all, according to our estimates, the pessimistic scenario for the global economy would reduce Brazilian GDP growth, in cumulative terms, by about 2 percentage points in 2019 and 2020. Therefore, although not sufficient to reverse the accelerating growth trend, under this scenario, the stressed international outlook would have a significant impact on domestic economic activity. That is, a return of Brazil's GDP to pre-recession levels (beginning of 2014) would be even more distant.

APPENDIX

Econometric Model – Vector Autoregressive (VAR) model

Impulse Response - Brazil GDP



Variance Decomposition for Brazil GDP					
Period (Quarters)	Brazil GDP	Commodities Prices	Real Exchange Rates	Real Interest Rates	Consumer Confidence
1	100.00	0.00	0.00	0.00	0.00
2	83.19	10.72	4.00	0.77	1.32
3	71.63	11.69	8.71	4.74	3.23
4	63.64	9.38	10.20	11.33	5.45
5	56.76	7.87	9.53	18.03	7.81
6	51.16	7.13	8.55	22.96	10.19
7	47.15	6.59	7.86	25.84	12.56
8	44.42	6.22	7.44	27.13	14.79
9	42.54	6.08	7.27	27.44	16.68
10	41.30	6.07	7.25	27.28	18.10

Source: Santander Estimates



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