Brazil – Inflation

Food for Thought

• Since 2011, Brazilian inflation has been substantially affected by intense relative price adjustments for food products. As this phenomenon is not happening globally and considering that domestic demand remains subdued, we believe the dynamic in Brazil is mostly attributable to FX behavior.

• We estimate that the pass-through from commodity prices in BRL to domestic inflation at approximately 4%, faster than the same effect on industrial goods.

• According to our scenario, food inflation will fall from 14.7% YoY in May 2016 to 9.5% YoY by year end, possibly approaching 6.0% YoY in 2017.

• We expect food product disinflation to result from: (1) lower degree of inertia in food inflation; (2) a 3.7% GDP contraction in 2016; and (3) the already experienced reduction in food commodity prices denominated in BRL (due to BRL appreciation).

• We believe that although inflation expectations imply as certain degree of risks for our YE2017 IPCA forecast, a credible and robust fiscal adjustment, coordinated with an improvement of monetary authority’s communication, will trigger another round of decrease of inflation expectations, in our view.
Why is food inflation so important?

Just after inflation started to consolidate a downward trend and fixed income markets incorporated Selic reductions as next monetary policy movements (instead of hikes, as prevailed in the beginning of the year), monthly IPCA (Brazilian official Consumer Price Index) readings started to surprise to the upside. At that time, the inflationary surprise even cooled down some expectations of interest rate cuts in 2Q16. And apart from methodological changes¹ and unexpected readjustments of administered prices², the main culprit for the disappointment has been the dynamic of food prices.

Actually, as shown by the chart on the left hand side, food prices have been growing significantly faster than average in 2011-12 and since mid-2015. The importance of this issue cannot be underestimated, considering that the weight of Food at Home inflation on IPCA is 17% (not counting the 9% of Food Away from Home, which we classified in this study as a component of services inflation even though it has an obvious relationship with food prices).

In our view, this phenomenon cannot be found elsewhere in the world. As following chart (right) show, there has been no meaningful decoupling of food vis a vis other prices in international markets. For instance, in the U.S., CPI Food inflation peaked in December 2014 and has fallen significantly since then. We believe that this indicates that we should look to local factors for a better understanding of the problem.

One hypothesis for this behavior, usually raised by analysts, is a sequence of supply shocks, associated with weather or other production disruptive factors. Another thesis favors the idea that recent price pressures have been due to increased costs faced by food producers, mainly with respect to electricity and water tariffs as well as fuel prices. In our view, both theories may play a role, particularly in the short term, but are not useful to understand the dynamics and build scenarios with a longer term horizon.

¹ According to IBGE (Brazilian Institute of Geography and Statistics), the new source of official labor market data is not long enough to provide reliable estimates of gain of wages (see Deterioration in the Labor Market: The Worst Consequence of the Economic Downturn, April 9, 2016). Because of that, the monthly variation of Housekeeper and Manpower, two important components of services inflation, is now constant at a rate linked to the minimum wage variation, which means both are not susceptible to downturns in the economic cycle. Those methodological changes put an upward pressure in our forecast for services inflation.

² Urban transportation, medicines and fines readjustments came out above our initial forecast. Moreover, May IPCA registered the end of a bonus program in water and sewage tariffs which added 10 bps to annual inflation.
In this piece, we propose that the recent domestic relative price adjustment of food products has been mostly related to the behavior of the exchange rate. While commodity prices, measured in foreign currency, have been on a downward trend after peaking in mid-2011, these same products have not always decreased when measured in BRL. Particularly in 2015, for a decrease of almost 10% of food commodities in USD, the measure denominated in Brazilian currency increased 35%.

First of all, a simple visual inspection seems to reinforce the idea. The following charts show the historical relationship between international food prices in BRL and domestic food inflation, both at the level of producers (left) and consumers (right). The figures clearly indicate that the decupling of food inflation in recent years should not be considered anomalous since it is fully aligned with the dynamic of increased prices of food denominated in BRL mostly generated by the BRL’s loss of value.

The sharp depreciation in 3Q15 seems to have had major impact on the first monthly IPCA readings of 2016, mainly through higher prices of imported goods. Wheat, a commodity with high relevance in Brazil’s import portfolio, exemplifies this, as we see domestic inflation for items such as flours, starches, pasta and bakery goods started a clear uptrend in late 2015.

But BRL depreciation may also have had effects on prices of exported goods: since the revenue of producers increased in BRL terms (assuming flat prices in USD), the domestic price has to accelerate in order to rebalance the opportunity cost. This may explain the recent sharp rise in prices for sugar and its byproducts.

In any case, this suggests that as long as the exchange rate remains reasonably stable, as suggested by our forecasts, the prospects for late-2016 and 2017 are favorable. As detailed in the following paragraphs, we estimate pass-through effects to be faster in food inflation compared with industrial goods inflation. In other words, the impact of BRL depreciation on food prices will fade sooner. Moreover, the lower degree of inertia suggests a non-negligible probability of food inflation below average in 2017.
Pass-through of BRL variation to prices

Apart from previous illustrations, an econometric analysis is also useful in reinforcing our analysis. In our research, we have usually sustained the pass-through of exchange rate variation to market prices of IPCA at ~5%, mostly incorporated after nine months (see *The Unbearable Heaviness of Inflation, July 16, 2015*). However, we believe that it is reasonable to suppose that those effects are not similar for the different components of IPCA.

In order to quantify those disaggregated relationships, we estimated three Phillips curves; one for each component of IPCA market prices: services, industrial goods and food at home. After controlling for some measure of economic activity (real income or output gap), we arrived at the following results for estimated coefficients.

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*From the estimated coefficients, we can extract some conclusions. The pass-through for food is calculated at ~4%, while the one relative to industrial goods is lower, at ~2%. It is worth noting that, unlike the most common estimations of pass-through effects that use the exchange rate variation as an explanatory variable, in this study we choose to use the CRB Index (CRB Foodstuff for Food at Home equation and CRB Raw Industrials for Industrials Goods equation). Therefore, the estimated coefficient could be contaminated with the CRB fluctuations in USD and is not directly comparable with the others studies.*

Other points to be highlighted in our model are: (1) when choosing the lags of independent variables, a simple correlation between the two CRB indexes and the correspondent inflation component data series unveils that the food inflation tends to have a faster dissipation of shocks in commodity prices and (2) as aforementioned, food inflation has the lowest degree of inertia while services inflation has the highest. This is in-line with the economic intuition and corroborates with our expectations (presented in the next section) of a sharp disinflation in food prices.

**Forecasts and associated risks**

Based on the estimated model, we present our forecast for food inflation. In our view, the recent BRL appreciation and the 3.7% contraction of GDP of 2016 will spur significant disinflation in food prices, driving the component variation from 14.7% YoY (registered in May IPCA) to 9.5% YoY by year-end 2016 (while general index variation is expected to be ~7%). As illustrated by the following chart, the already started steep downtrend should last until 2Q17, according to our projections. From then on, food prices should show a less intense deceleration, reflecting our expectation of a moderate economic recovery in 2017 (GDP growth of 2%). For year-end 2017, our forecast for food inflation is 6.2% YoY.
Digressing on how exogenous variables can affect our forecast, we see little room for a sharp rise of CRB Index in BRL in the medium term. In The External Factor, May 25, 2016, we simulated four distinct paths for prices of commodities in USD and exchange rate, depending on how domestic and external economic outlook would evolve. Unless another (favorable or adverse) internal shock drives the exchange rate, the significant and negative correlation we found for these two variables implies one will likely offset, at least partially, the movement of the other.

Hence, in our view, the recent increase in food commodity prices in USD should not be a concern for domestic inflation. Virtually all the sharp acceleration of producer price index in May 2016 was due to the rise of soy prices, which have high weight on the indicator. And since the goods basket considered on IPCA is different, we believe these price increase will have limited effect on consumer inflation.

Regarding the output gap, we do not see it as the most important driver for food inflation. Although the current economic recession can provide a relief for market prices as whole, the demand for food is, in our view, less sensible to income fluctuations – a major part can be classified as necessity goods. We could see migration of demand to cheaper substitute goods but not an aggregated significant reduction of consumption.

It is important to emphasize that the fiscal tightening built into our scenario is likely to start helping inflation, through the direct channel of lower economic activity, only in 2018 onwards. According to our estimation of a structural fiscal balance, fiscal policy will remain in negative territory at least until year-end 2017 (see Match Point, June 14, 2016).

Through the indirect channel of inflation expectations, however, the announcement of measures of fiscal tightening could accelerate the relief on inflation. In our view, a credible and robust fiscal package, coordinated with an improvement of monetary authority’s communication with the market, can trigger another round of decrease of inflation expectations – currently, year-end 2017 and 2018, medium market expectations for IPCA are at 5.50% and 5.00%, according to last Focus survey. But if the new government fails to bring any improvement, which is, in our opinion, very unlikely, an increase in inflation expectations (that, according to the model, affect all inflation components) could compromise our prediction of IPCA at 5.2% in 2017.