

**Brazil—Inflation**
**Food (Inflation) for Thought: Relative Prices**

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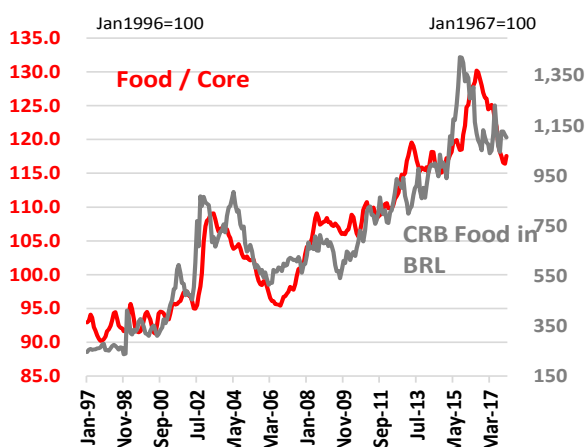
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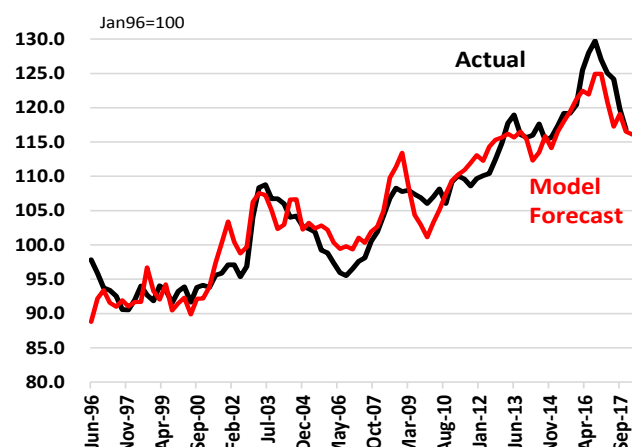
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- Inflation in Brazil is positively surprising once again, due to favorable service and food price dynamics.
- Considering the recent substantial variations in inflation (+10% in 2016 and -5% in 2017), as well as the importance of the food component in headline inflation (with a weight of 17%), we believe a closer look is merited in order to assess the near-term outlook.
- In this report, we study the issue of relative prices (i.e., food prices vs. core prices), concluding that the relative price of food vis a vis other prices (proxied here by core prices, ex food and controlled price inflation) tends to closely follow the evolution of agricultural commodities denominated in BRL.
- At first glance, we see no distortions between local relative prices and fundamentals, meaning that there is no repressed adjustment to be unloaded and thus suggesting that food is currently either cheap or expensive compared to the core index.
- Moreover, the recent behavior of agricultural commodities and the BRL suggests, in our view, that the evolution of food prices in the first half of the year will probably not differ significantly from the expected evolution of other prices (i.e., core prices).
- As for food inflation expected for the second half of the year, we believe that this will depend upon medium-term forecasts for FX and key food commodities.
- Therefore, although we recognize that still extremely low food inflation in the first half of the year will probably further drag down 2018 expectations in the coming weeks, our inflation forecast for the year remains unchanged at 4% (slightly higher than the core).

**Chart 1. Evolution of Relative Prices\* and CRB Food Commodities Measured in BRL**  
(\*Relative Prices = Food Prices / Core)



**Chart 2. Evolution of Relative Prices\* and Model Based on CRB Food Measured in BRL**



Sources: IBGE and Bloomberg.

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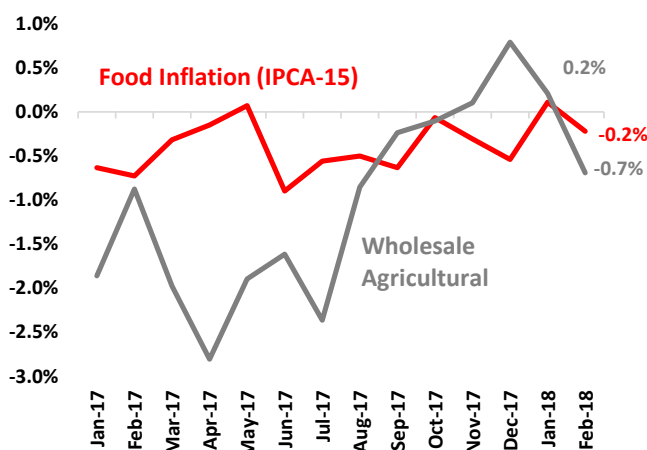
## Method in this Madness

Analysts and investors, particularly those not very familiar with the micro dynamics of inflation in Brazil, have been astonished by the **huge food price movements of recent years**, especially considering that these variations have been unlike anything observed in other economies.

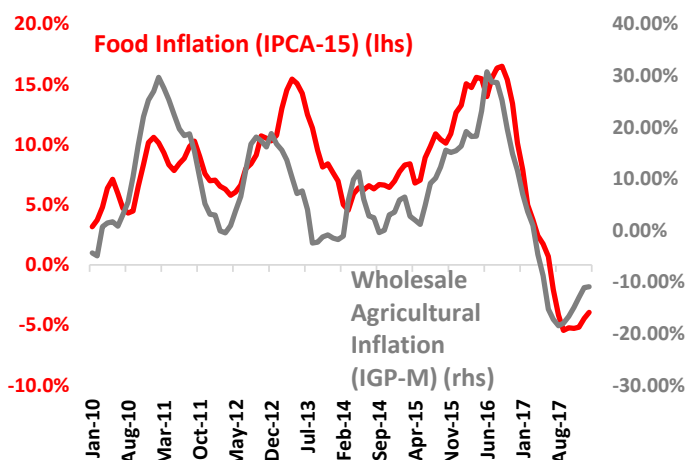
**Recent inflation readings have added further doubts regarding expected food inflation dynamics for 2018.** After 2017's substantial deflation, food prices were expected to recover in the following cycle, particularly given that wholesale agricultural inflation went into the positive territory as early as 4Q17. However, January and February readings surprised to the downside again, suggesting further room for downward food relative price adjustments (see Charts 3 and 4).

The lower for longer food inflation thesis may be also reinforced by seasonality. According to our estimations, the bulk of food inflation usually happens in the first and fourth quarters of the year. Considering that recent indicators suggest food inflation will probably be close to 0.2% between January and March, this could lead some analysts to forecast food inflation below 1% for the year.

**Chart 3. Food Inflation and Wholesale Agricultural Inflation (% MoM)**



**Chart 4. Food Inflation and Wholesale Agricultural Inflation (% YoY)**



Sources: IBGE and Bloomberg

A deeper analysis of relative prices dynamics, however, suggests that it may be too early to conclude food inflation will be, once again, lower than the headline and core measures. We determine that the evolution of the aforementioned relative prices in Brazil over the last 20 years have not been very different than those observed abroad, adjusted by the **FX rate**. Chart 1 on previous page compares the evolution of relative prices in Brazil with the CRB food (a proxy of international relative price adjustment between food and other prices abroad), as measured in BRL. Chart 2, also on previous page illustrates the same relationship, but this time adjusting the exchange rate and commodity prices by coefficients deriving from an econometric model.

Our conclusions are straightforward:

- 1) There is **no indication of distortions** between local relative prices and fundamentals, meaning there does not appear to exist repressed adjustments that need to be unloaded, either suggesting that food is currently cheap or expensive when compared to the core index.
- 2) The recent behavior of agricultural commodities and the BRL suggest the evolution of **food prices** in the first half of the year will **probably not differ much** from that expected for **other prices** (the core).
- 3) **Food inflation expected for the second half of the year is far from certain.** It will be defined by the behavior of the exchange rate and by what is going to happen with key agricultural commodities in the second half of the year (an issue we intend to monitor).
- 4) Therefore, although we recognize that a still **extremely low food inflation in the first half of the year will probably drag down further expectations for 2018 in the coming weeks**, our forecasts for the year remains unchanged at **4%** (slightly higher than the core).



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