Santander

ECONOMICS March 9, 2018

Brazil—Inflation

Food (Inflation) for Thought (2): Forecasts

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- **We recently discussed the importance of commodities prices (denominated in BRL) to the dynamic of food-to-core relative prices (*Food (Inflation) for Thought: Relative Prices*, March 7, 2018).**
- **One important conclusion is that the recent performance of the CRB Food index, measured in BRL, suggests food inflation will likely be close to core inflation in the short term.**
- **In this report, we summarize the outcome of our econometric models aimed at estimating the future path of the food-to-core ratio based on a set of hypotheses for the evolution of specific commodities prices, as well as for the BRL.**
- **In our view, the food deflation experienced since 2017 has been mostly related to drastic price reductions in important commodities such as soybeans (-4.8%), corn (-15.4%), sugar (-23%), orange juice (-28%), coffee (-12%), cocoa (-16%) and pinto beans (-27%).**
- **We expect most of those prices to recover some ground in 2018 due to still-strong demand worldwide, as well as adverse weather at the beginning of the year in the U.S. and Argentina.**
- **The following chart and table illustrate expected dynamics for the prices of specific commodities, as well as the impact on our forecast for relative prices.**
- **Although it may be tempting to extrapolate the first quarter's very low food inflation (likely around 0.2%) to the following periods, we believe it may be more helpful to focus on the expected evolution of fundamentals.**
- **We forecast non-negligible price increases of corn, wheat and beans, as well as moderate (but still positive) variations for soybeans, sugar and coffee. This would likely lead to food inflation at around 4% in 2018.**
- **Our forecast for the IPCA in 2018 is 3.5%, in spite of ongoing favorable readings for food inflation.**

Figure 1. Relative Prices (Food / Core) and Model Outputs

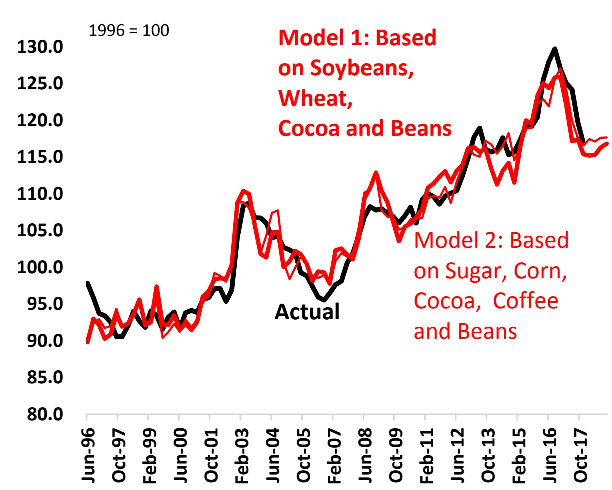


Figure 2. Hypotheses for Main Variables and Model Output

		2016	2017	2018	17/16	18/17
International Prices						
Cocoa	(US$ per tonn NY)	2,263	1,906	2,100	-15.8%	10.2%
Coffee	(ICE USc per lb)	139	122	133	-11.9%	9.1%
Corn	(CBOT US$ per buschel)	3.50	3.45	4.15	-1.5%	20.4%
Soybeans	(CBOT US$ per buschel)	10.21	9.72	10.50	-4.8%	8.0%
Sugar	(ICE, Usc per lb)	19	14	15	-23.4%	4.0%
Wheat	(CBOT USD per buschel)	3.97	4.11	4.75	3.4%	15.6%
Local Prices						
Corn	(BRL / Bag 60kg)	38	32	39	-15.4%	20.0%
Beans	(BRL / Bag 60kg)	153	112	123	-27.0%	10.0%
Output						
Food / Core	Model 1					1.3%
Food / Core	Model 2					1.0%
Food Inflation	Model 1					4.4%
Food Inflation	Model 2					4.0%

Sources: IBGE, Bloomberg and Santander.

The Models

We used two different models to estimate the relative value between food and core prices. The main difference is that the first model includes, as exogenous variables, the international prices of soybeans and wheat, while the second model is based on sugar, corn and coffee. Both models consider the prices of cocoa measured in USD and the BRL; the prices of pinto beans negotiated locally; and the U.S. real exchange rate (USD vis-a-vis a basket of currencies, estimated by the Federal Reserve of St. Louis).

Another important feature of our models is that we used quarterly averages for exogenous variables, with lags of one period. This means that the evolution of food prices for consumers in future quarters depends mostly on readings from the previous quarter.

The Hypothesis

In our previous publication (*Food (Inflation) for Thought: Relative Prices*, March 7, 2018), we discussed the recent performance of food prices, which have returned to negative territory after a moderate recovery at the end of last year and in January 2018. **Although it may be tempting to extrapolate the first quarter's very low food inflation (likely around 0.2%) to the following periods, we believe it may be more helpful to focus on the expected evolution of fundamentals**.

On this issue, it is worthwhile highlighting the following:

1) Demand for commodities, in general, is expected to remains strong as global growth continues to accelerate, while supply will likely not be as favorable due to adverse weather in the U.S. and Argentina at the beginning of this year, which may have an impact on the supply of corn and soybeans.
2) Prices for the vast majority of agricultural commodities are currently below their five-year moving averages, toward which they tend to converge.
3) Specifically in Brazil, the collapse of pinto bean and corn prices last year will lead to smaller harvests in 2018.
4) It is already possible to observe delays in corn seeding for the midyear harvest and price increases locally (see Figure 3).
5) As for pinto beans, in spite of significant volatility, prices tend to converge toward the mean (Figure 4), which implies stable to positive variations expected for 2018.

Figure 3. Corn Prices (CBOT in USD / Buschel and Esalque BMF Bovespa USD / Bag 60 kg)

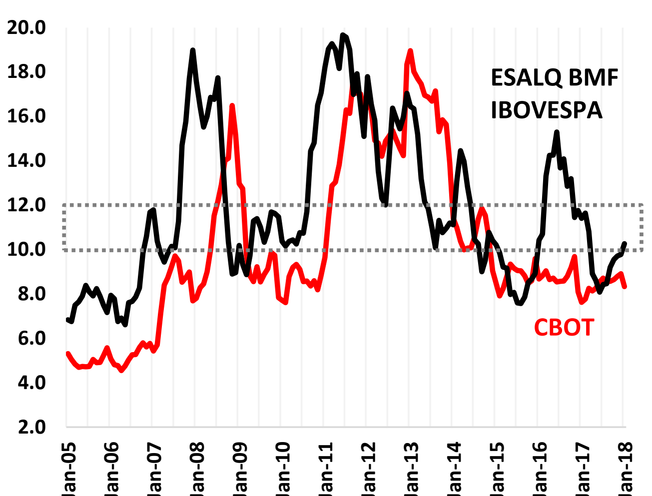
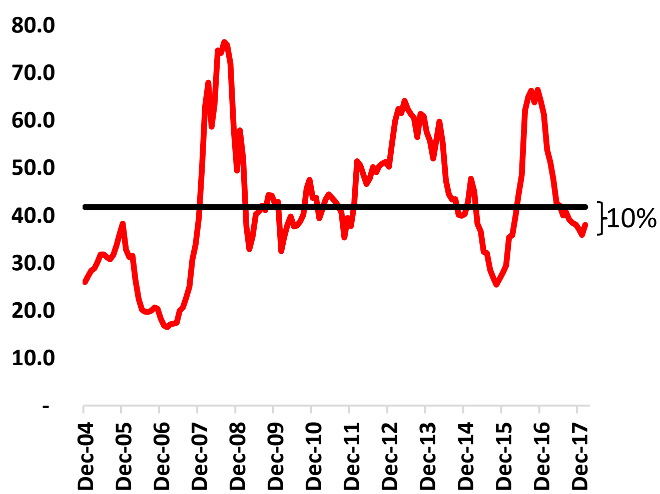


Figure 4. Pinto Bean Prices (Locally, USD / Bag 60 kg)



Sources: IPEA, Agrolink, ESALQ (BMF Bovespa) and CBOT.

Conclusion

We see the fundamentals for the main commodities that usually drive Brazilian food prices as biased toward an increase in 2018. Our forecasts for each of them and the translation of those projections into an outlook for food inflation in Brazil are summarized in Figures 1 and 2 (previous page).

We forecast non-negligible price increases for corn, cocoa, wheat and pinto beans, as well as moderate (but still positive) variations for soybeans, sugar and coffee. This would likely lead to food inflation at around 4% in 2018.

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