Why is inflation so high and volatile in Brazil? A primer

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Abstract

Inflation dynamics in Brazil are high and volatile. This short paper seeks to shed some light on the features of inflation in Brazil and provides a non-exhaustive list, in the way of a primer, of factors that are especially important. It also offers some suggestions for how monetary policy could deal with these factors to control inflation and bring interest rates closer to international levels.

Keywords: Inflation, determinants, monetary policy

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1. Introduction

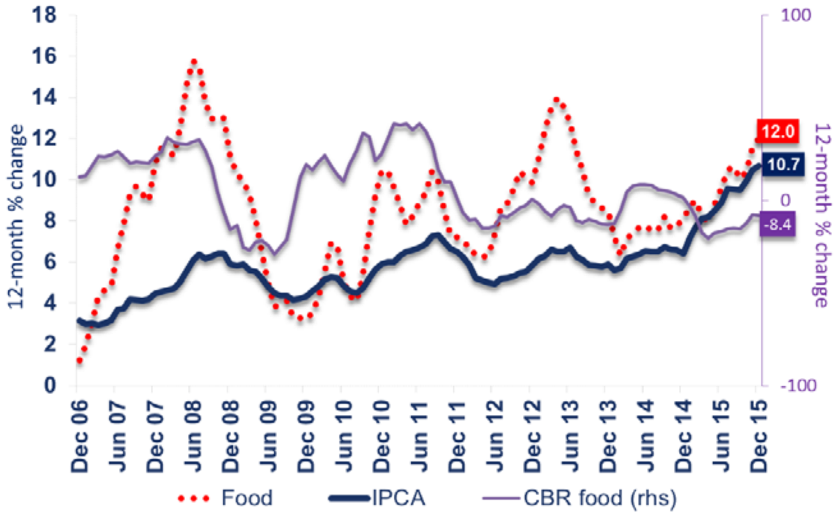
A question often asked is why inflation is so high and volatile in Brazil. The global experience with inflation these last few years should make us very humble in thinking we understand what determines inflation dynamics. Inflation is a complex social phenomenon with many causes and determinants that change in importance over time. This paper offers is a non-exhaustive list, in the way of a primer, of some of the factors that are important in Brazil, and makes some final remarks about how policy could deal with them to bring inflation – and interest rates – closer to international levels.

2. Brazil is a large, closed economy

Brazil is a large and closed economy. The country's land mass, at 8,515,767.05 km^2, makes it larger than continental Europe or the (contiguous) United States. Brazil is also a relatively closed economy: the export and import share to GDP is only 20.2% (as of November 2015).

This matters to inflation because lack of trade means that prices have to react more strongly to internal supply shocks. This is evident, for example, in the high and volatile levels of food prices in Brazil, which have been particularly high lately due to weather-related shocks. Graph 1 shows food price inflation in Brazil (and the lower overall inflation, IPCA) versus the food component of the CRB index for comparison. Notice that in general, there is a correlation between these indices, but there are periods – such as in 2013 – where the correlation breaks down. If Brazil were more open to trade, food imports could respond more rapidly to these shocks, reducing the level and volatility of this important component of inflation.

IPCA and food inflation — Graph 1

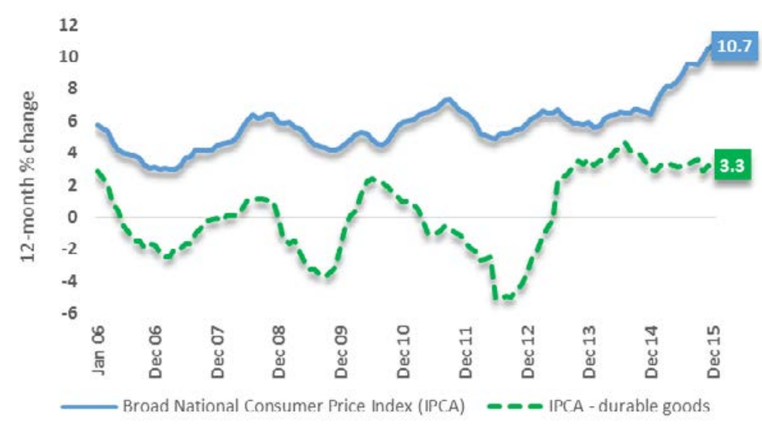


Sources: IBGE; Bloomberg.

One can also note, for example, that durable price inflation, where this sector is much more open to imports, is generally lower than overall inflation, as seen in Graph 2. In short, more openness to trade would increase supply elasticity and so decrease price elasticity to shocks, making inflation lower and less volatile.

IPCA and durable goods inflation

Graph 2



Source: IBGE.

3. The impact of commodity prices/terms of trade on currency and inflation

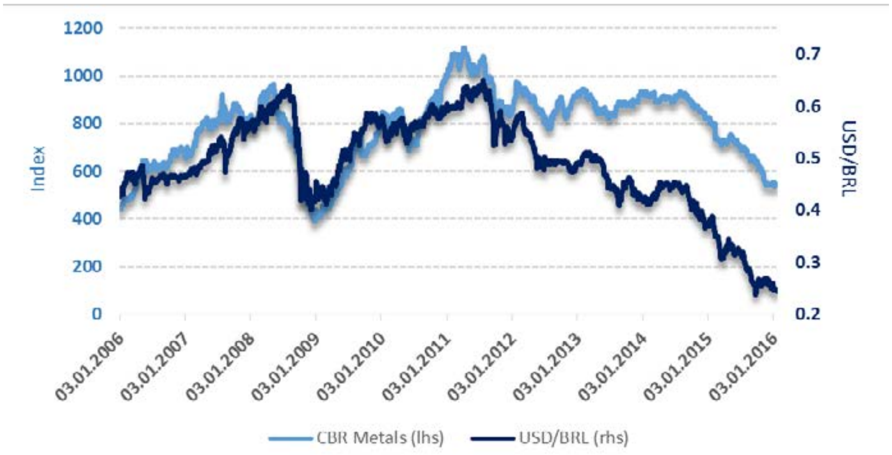
Besides the fact that Brazil is a large, relatively closed economy, two other facts, taken together, complicate its inflation dynamics. Brazil is a low savings economy whose export basket is heavily reliant on commodity exports. The average gross savings-to-GDP ratio over the last five years has been only 17.7% (2010–14).[2] In addition, commodities make up 47.4% of overall exports (December 2010–November 2015).

The interaction between these facts complicates inflation dynamics in the following way: being a low savings economy, periods of rapid growth generate pressure on the current account, demanding offsetting capital inflows. At the same time, the commodity-heavy export basket ties the level of the currency closely to internationally set commodity prices. We can see this, for example, in Graph 3, which plots the USD/BRL exchange rate against the CRB metals index – notice the very close correlation until 2013, after there is a "level" adjustment that still maintained the close correlation. Changes in global commodity prices will thus act as a procyclical shock to the economy, generating alternating periods of currency appreciation and high capital inflows and currency depreciation alongside low capital inflows. These cycles create special challenges for the control of inflation by conditioning the exchange rate, credit and capital market channels in opposite directions. Now, for example, Brazil needs to contend with disinflationary forces through wealth and credit channels versus inflationary forces through the exchange rate channel.

2 From the World Bank's World Development Indicators.

BRL and CRB Metals

Graph 3



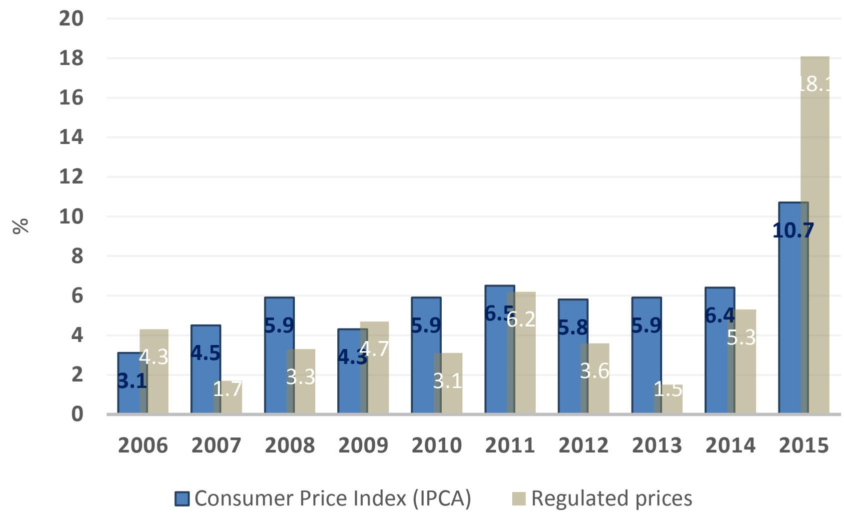
Sources: Central Bank of Brazil; Bloomberg.

4. The role of regulated prices

A large part (23.8%) of Brazil´s CPI basket is composed of prices set by contract or by the government, so-called "regulated" prices. These have created problems for inflation dynamics in two ways, both of which have manifested lately. First, many of these prices are not set according to fixed, transparent formulas. Thus, they may go through long periods being below or, like now, far above overall inflation, as we can see in Graph 4. They may also be used to try to make up for shortfalls in tax revenues. Needless to say, these prices respond much less to changes in monetary policy and can add greatly to inflation inertia.

IPCA and regulated prices

Graph 4



Source: Central Bank of Brazil.

5. Wage indexation

Wages, especially the minimum wage, are presently indexed to past inflation and GDP growth. Given that around 30% of Brazilian workers make something close to the minimum wage, changes to the minimum wage have an impact on the general level of wages in the economy. Whatever its other merits as a point of social policy, the indexation of wages increases inflation inertia and may create additional cost pressures – especially in the labour-intensive service sector – if wages rise above labour productivity, which is what has been happening recently, as seen in Table 1.

The minimum wage, prices and productivity — Table 1

Percentage change	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Minimum wage	16.7	8.6	9.2	12.0	9.7	6.9	14.1	9.0	6.8	8.8
Consumer Price Index	3.1	4.5	5.9	4.3	5.9	6.5	5.8	5.9	6.4	10.7
Service Inflation	5.5	5.2	6.4	6.4	7.6	9.0	8.7	8.7	8.3	8.1
Labour Productivity*	1.7	3.4	2.0	-1.5	4.5	2.6	-1.1	3.5	0.6	-

* GDP/ employed person

Source: Central Bank of Brazil.

6. Bifurcation of credit markets and subsidised credit

In Brazil, a growing portion of credit is extended through "directed" channels, such as state-owned banks, and receives some sort of subsidy. This type of credit reached 49.2% of overall credit as of November 2015 (Graph 5). Directed credit is much less responsive to monetary policy.

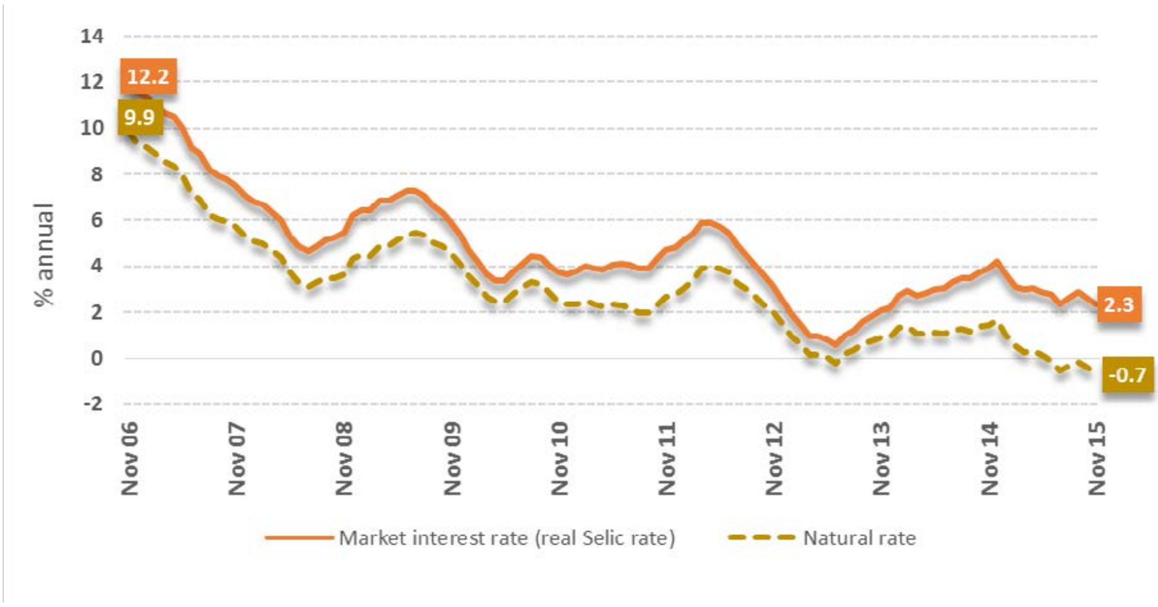
Earmarked Credit/Total Credit — Graph 5

Source: BCB.

Regarding the role of directed and subsidised credit, policy lending rates also affect the composition of the economy's "natural" rate, in the sense given by Wicksell. I would argue that the policy equivalent of the natural rate in Brazil is a weighted average of the Selic monetary policy rate and the many other policy rates. Graph 6 offers a rough estimate of what the real policy rate has been in Brazil by showing a weighted average of the Selic rate and the TJLP lending rate used by the Brazilian Development Bank (BNDES), with the weights being the share of directed versus market-set, or "free" credit, discounted by CPI. The graph also shows the real level of the Selic rate for comparison purposes. Despite the recent monetary policy tightening cycle and adjustments to the TJLP, the recent inflation surge has pushed this ex post weighted average real rate into negative territory.

Selic rate and "natural" rate of interest

Graph 6



Note: Twelve-month cumulative, ex post.

Deflated by IPCA.

Source: Central Bank of Brazil.

As in the case of mandated wage indexation, whatever its merits as a tool of industrial policy, directed credit poses problems for the transmission and efficacy of monetary policy through the credit channel, and by forcing the policy-set Selic nominal rate to be, generally speaking, higher to compensate for lower levels of the many policy rates.

7. Brazilian inflation: a combination of factors

What is the combined impact of these factors? First, some of the structural features of the economy naturally propagate exogenous shocks, which affects the volatility of inflation. More volatile inflation leads to more volatility in the policy rate, and all this can contribute to a higher level of the "neutral" real rate because of the demand for a risk premium. Other factors seem to diminish the potency of monetary policy through a variety of channels, especially the credit channel. Others generate higher levels of inflation inertia and increase the incentive to index prices and wages.

8. Conclusion

Addressing all these factors can and should be topics of debate and policy. It is important when addressing some of these issues to realise that changes to make monetary policy more effective do not necessarily have to come at the cost of other policy objectives. For example, financial support for industrial policy goals could come through tax grants instead of loans at subsidised policy rates. In many cases, what may cause problems for monetary policy and inflation outcomes is not the policies themselves, but the way they are implemented. We do not have to sacrifice monetary policy goals to achieve other policy ends.

One final point: none of the above factors impedes the proper functioning of the present inflation targeting regime. The Central Bank of Brazil still has all the necessary tools to deliver inflation at its target. Nonetheless, these factors do make inflation control more difficult and generate costs to society by causing inflation and interest rates to be, in general, higher and more volatile than necessary.