

Box 3

How to explain the increase in inflation between July 2014 and June 2016 by looking at the different CPI components?

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One way to explain the rise in inflation from 2.89% in July 2014 to 8.60% in June 2016 is to analyze the contribution from each component of the CPI. This period was selected because it was when the peso began to depreciate sharply against the dollar. During that period the exchange rate increased from COP 1,858.5 per dollar in July 2014 to COP 3,357.5 in February 2016, followed by a decline to COP 2,991.7 in June. However, it is important to point out that this method is a partial analysis, as it does not consider second round effects. It cannot be interpreted as a cause-effect approximation..

The impact of depreciation has been felt in first place in the tradable component of the CPI, in non-tradable goods via rising costs because of a more expensive dollar, and in the domestic price of gasoline. However, the impact on gasoline was more than offset by the plunge in international oil prices.

In chorus with depreciation, the strong bout of El Niño weather had a sharp negative impact on yields in the agricultural sector and on decisions about new planting. El Niño also caused fee hikes in public utilities.

Meanwhile, high inflation last year and the increase in the minimum wage triggered indexation in some segments of the basket, generating upward pressure on consumer inflation. Also, higher inflation expectations and the possibility that they might become unanchored from the target (3.0%) would be having undesirable second round effects on inflation via, for example, the minimum wage hike in 2016.

Table B3.1 shows to what extent the main baskets in the CPI contributed to the increase in inflation. In order to break up inflationary pressures during the period of analysis, the CPI basket of goods and services is divided between the food CPI (comprised of a tradable subgroup and a non-tradable subgroup) and the non-food CPI. The latter, in turn, was divided into regulated items (public utilities, fuel and transportation), tradables and non-tradables (comprised of leases, indexed items, those affected by the exchange rate, and all others).

The following conclusions can be drawn:

1. The increase in inflation during the period in question is explained mainly by the food CPI (55.7%), and secondly by the non-food CPI (44.3%).
2. Tradables are the group in the non-food CPI that contributed the most to inflation rise during the period under consideration, accounting for 25.7%. This may be associated, in large part, with the pass-through of accumulated depreciation on consumer prices.
3. All the CPI items that might be affected more clearly by depreciation (tradables excluding food and regulated items, non-tradables affected by the exchange rate, and tradable foods) account, on the whole, for somewhat less than 53.0% of the upsurge in inflation.
4. Non-tradables excluding food and regulated items are responsible for slightly more than 10.0% of the increase in headline inflation during the period in question. The major contribution within the group came from indexed items and leases; their combined share amounts to about 6.4%. This proportion might be associated with the contribution to the acceleration in inflation that comes from indexation.
5. In the non-food CPI, regulated items were the segment that contributed the least. This group explains about 8.50% of the inflation acceleration.
6. However, public utilities contributed the most to price increases inside regulated items sub-basket, with 8.36%. This was due mostly to the impact of El Niño on utility rates, especially those for natural gas and electricity. In addition, the Guatapé hydroelectric power plant was out of operation between February and mid-year, and there was relatively less of a supply of natural gas, given the bottlenecks in the transport system in that sector. In the case of water and sewage rates, the automatic price increase mechanism was reactivated during

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the first quarter of 2016, after accumulated consumer inflation reached 3.0%.

7. As for the regulated CPI, fuel was the only component of the basket that helped to slowdown annual inflation.

The drop in international oil prices explains this behavior.

8. For food inflation (which accounted for nearly 56% of the increase in inflation during the period in question), the biggest contribution came from non-tradable food; this item accounted for 30.3% of the increase in inflation. Tradable foods contributed slightly less than 26.0% to the boost in inflation. In the case of tradable foods, depreciation of the peso offset the decline in international food prices, pushing up prices, especially for cereals, oils and fats.

9. Finally, the segment of non-tradable food that was affected by the weather was the one that most explains the change in inflation during the period under study (with 16.2%). This food subgroup had the highest cumulative inflation (36.9%) between July 2014 and June 2016; however, its contribution to the acceleration in inflation was not the biggest one, because of its low weight in the CPI basket (4.22%). Eating out items were the second

component of the non-tradable food sub-basket that contributed to higher inflation, with 7.26%. Prices of this subgroup have risen considerably in recent months, thanks to increasing food prices, higher rates for public utilities, and the hike in the minimum wage. The rest of the non-tradable food group (especially meats) contributed less than eating out, accounting for 6.8% of the upsurge in inflation between July 2014 and June 2016.

10. In summary, 53.0% of the acceleration in inflation between July 2014 and June 2016 is associated with price hikes in the CPI sub-baskets that were severely affected by depreciation. Slightly more than 6.4% of this increase is associated with the baskets that were seriously affected by indexation. Nearly 25.0% would be explained by the items that were influenced directly or indirectly by El Niño, public utilities, and non-tradable foods affected primarily by the weather. The remaining 15.6% of the increase in inflation during the period in question would be associated with other factors, such as adjustments in prices for some shows or events (such as soccer games), rate increases for urban transportation in certain cities, and the impact the reduced-slaughter phase has on beef prices.

Table B3.1
Inflation and Contributions to Inflation between July 2014 and June 2016

Description	Weight	Inflation Jun-16/Jul-14	Percentage point contribution to the acceleration in inflation between Jul-14 and Jun/16	Percent share of the acceleration between Jul/14 and Jun/16
Total	100.00	13.40	5.71	100.00
Non-food	71.79	10.27	2.53	44.27
Tradables	26.00	12.40	1.47	25.71
Non-tradables	30.52	9.14	0.58	10.09
Rent	18.59	7.58	0.19	3.24
Indexed items	8.14	10.93	0.18	3.18
Affected by the exchange rate	2.29	10.05	0.10	1.80
All others	1.51	16.66	0.11	1.87
Regulated items	15.26	9.43	0.48	8.47
Public utilities	6.31	14.03	0.48	8.36
Fuel	2.91	(4.67)	(0.12)	(2.09)
Transportation	6.04	4.54	0.13	2.20
Food	28.21	21.36	3.18	55.73
Tradable food	12.10	22.48	1.45	25.46
Non-tradable food	16.11	20.62	1.73	30.28
Non-tradables – affected by weather	4.22	36.93	0.93	16.23
Non-tradables – all others		18.82	0.39	6.79
Non-tradables – Eating out	8.07	12.92	0.41	7.26

Source: DANE, Banco de la República's calculations