

2024 inflation decomposition

According to estimates from the Banco Central do Brasil's (BCB) semi-structural models, the key factors that led inflation in 2024 to exceed the target were the imported inflation, the inflation inertia from the previous year, the output gap, and inflation expectations. The decline of oil price contributed in the opposite direction.

This box shows the estimated decomposition of the deviation of the 2024 inflation rate, measured by the change in the Extended National Consumer Price Index (IPCA), in relation to the target set by the National Monetary Council (CMN).¹ The aim is to measure the contribution of the main key drivers of inflation using BCB's semi-structural models.²

The deviation of inflation from the target is decomposed into five components: (i) inertia from the previous year (deviation of the previous year's inflation from the target);³ (ii) expectations (difference between inflation expectations measured by the Focus survey and the inflation target); (iii) imported inflation (difference from the target); (iv) output gap; and (v) other factors.⁴ These estimates are approximations based on models and are therefore subject to the uncertainties inherent to the modeling and estimation process.

The estimation of components relies on a scenario in which all conditioning factors are neutral, i.e., they have no impact that would lead inflation to deviate from the target.⁵ The contribution of each factor to the deviation of the inflation rate from the target is obtained when these neutral conditioning factors are replaced by the values actually observed.

Inflation in 2024 was 4.83%, 1.83 p.p. above the 3.00% inflation target, and 0.33 p.p. above the tolerance interval set by the CMN, of plus or minus 1.50 p.p. (Figure 1 and Table 1). Inflation was 0.21 p.p. higher than the 4.62% recorded in 2023. Market prices inflation grew from 3.14% in 2023 to 4.89% in 2024, while administered prices inflation declined from 9.12% to 4.66%. Among market prices, services rose 4.77%, industrial goods increased 2.89%, and food-at-home rose 8.22%. Among administered prices, the contributions of gasoline, medicines, and health insurance stood out.

The main results of the decomposition are the following (Figure 2):

i. **Inflationary inertia impacted inflation in 2024.** Inflation in 2023 was 1.37 p.p. above the 3.25% inflation target, contributing with 0.52 p.p. to the inflation deviation from the target in 2024. As for market prices, past inflation means current cost pressure, arising both from other prices of goods and services used as inputs and from informal inertial wage indexation mechanisms. For example, adjustments in wage negotiations not only followed the past inflation trend but were also above inflation. Regarding administered prices, the emphasis is on institutional arrangements that link price adjustments to past inflation, especially health insurance and medicines;

1/ The 2024 inflation decomposition was presented previously in the Open Letter addressed by the BCB Governor to the Minister of Finance and CMN President on January 10, 2025. The inflation decomposition based on projection models was presented annually in the Inflation Report. See, for example, box [2023 inflation decomposition](#) in the March 2024 IR. Further details on methodological procedures in the box [2017 inflation decomposition](#) in the March 2018 IR and Cusinato et. al (2016).

2/ See boxes [Updating small-scale semi-structural models](#) in the June 2024 IR and [Revision of the medium-term projection models for administered prices](#) in the September 2017 IR.

3/ The component "inertia from the previous year" includes the effects of all the factors affecting inflation until December 2023.

4/ The item "Other factors" includes factors not considered in the previous items, such as specific conditioning factors of the administered prices models and the model's residual term.

5/ As for variables that exhibit seasonality, the neutral conditioning factors also include a seasonal component.

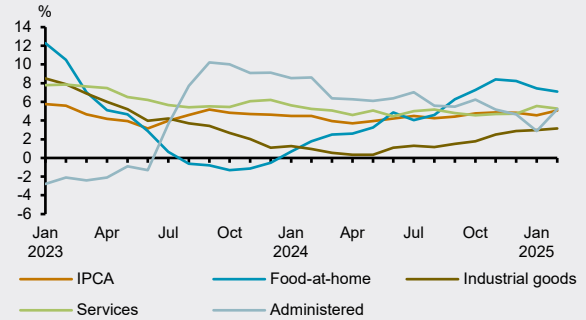
ii. **Inflation expectations deteriorated throughout 2024, thus increasing their deanchoring.** Its contribution for the inflation deviation from the target was 0.30 p.p. The rise in expectations reflected current and prospective inflationary pressures. According to the Focus survey, the median expectations for the 12-month-ahead inflation (smoothed) started 2024 at around 3.90% and declined until early May, when it reached 3.60%. It remained around this value until early July, when it began a rapid upward trajectory, ending the year at around 5.00% (Figure 3). The median expectations for 2024 followed a similar behavior. It started at around 3.90%, fell to 3.70% in April, but then began an upward trajectory, surpassing the upper limit of the tolerance interval of 4.50% in October;

Table 1 – Components of the IPCA in 2024

Selected components and items	Change (%)	Weight (%)	Contribution to IPCA change (p.p.)
Market prices	4.89	74.14	3.62
Food-at-home	8.22	15.26	1.26
Industrial goods	2.89	23.35	0.67
Services	4.77	35.52	1.70
Administered prices	4.66	25.86	1.21
IPCA	4.83	100.00	4.83

Sources: IBGE and BCB

Figure 1 – Inflation: IPCA and components
YoY inflation



Sources: IBGE and BCB

Figure 2 – Contributions to the inflation deviation from the target in 2024

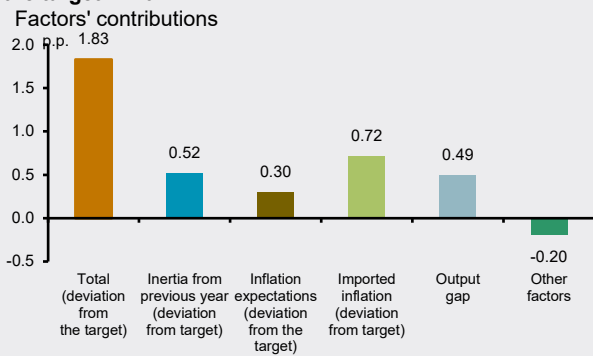


Figure 3 – 12-month-ahead inflation expectations (smoothed) – Focus survey



iii. **Imported inflation (as deviation from the target) was the factor with the largest contribution to the inflation deviation from the target, 0.72 p.p.** Within this group, the main contribution came from the exchange rate depreciation (a 1.21 p.p. effect), followed by commodities in general, measured by the Commodities Index – Brazil (IC-Br) (a 0.10 p.p. effect), which more than offset the estimated effect of the international oil price decline (a -0.59 p.p. effect). (Figures 4 to 6);

Figure 4 – IC-Br (index in USD)

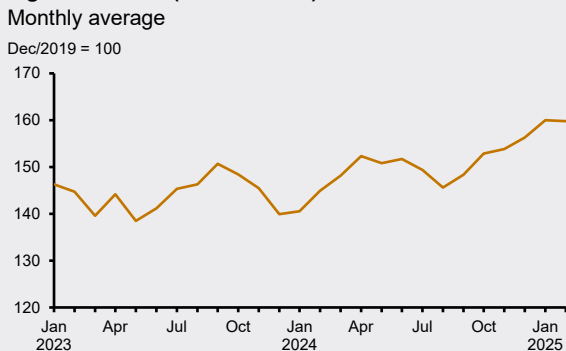
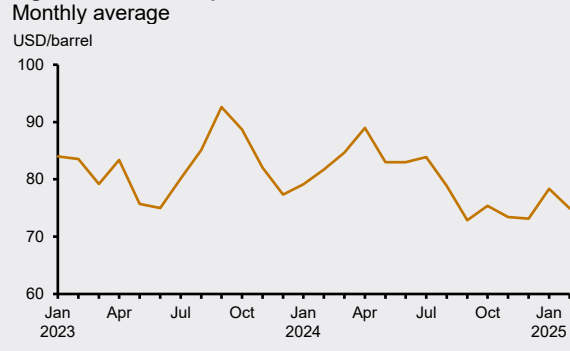


Figure 5 – Brent oil price

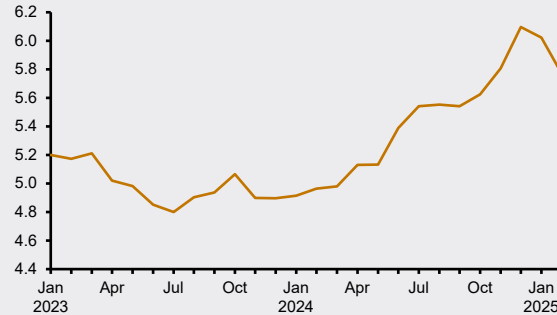


Sources: Bloomberg and BCB

Figure 6 – Nominal exchange rate

Monthly average

BRL/USD



iv. **The output gap contribution to the deviation of inflation from the target was 0.49 p.p.** In 2024, economic activity growth was strong, surprising upwards throughout the year. Gross Domestic Product (GDP) grew 3.40% in 2024, and the average unemployment rate fell from 8.00% in 2023 to 6.90% in 2024. Net formal job openings measured by the New General Registry of Employed and Unemployed Persons (New Caged) rose from 1.5 million in 2023 to 1.6 million in 2024, while the Level of Capacity Utilization (Nuci), calculated by the Getulio Vargas Foundation (FGV), grew from average values of 80.3% in 2023 to 82.1% in 2024. Therefore, the estimated output gap for 2024 was higher than that of 2023, contributing to inflation in the period.

v. **Lastly, the other factors contributed with -0.20 p.p. to the deviation of inflation from the target in 2024.** The latter item includes factors not considered in the previous ones – mainly specific factors conditioning administered prices, the effect of climate anomalies, and tax measures – and a part not explained by the model, represented by shocks in the Phillips curve of market prices and in the equations of administered prices. These estimates are approximations built based on models and are therefore subject to the uncertainties inherent to the modeling and estimation process.

Summing up, according to the decomposition presented in this box, the key factors that led inflation in 2024 to exceed the inflation target were the imported inflation (given by the exchange rate depreciation and increased commodity prices in general), the inertia from the 2023 inflation, the output gap, and inflation expectations. The decline of oil price contributed to the opposite direction.

References

CUSINATO, R. T., FIGUEIREDO, F. M. R., MACHADO, V. G., MELLO, E. P. G. and PEREZ, L. P. (2016). “*Decomposição de Inflação: revisão da metodologia e resultados para 2012 a 2014*”, Banco Central do Brasil, Working Paper 440.