Did Brazil's inflationary process change after the pandemic?

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In this report, we examine whether the pandemic has led to lasting changes in Brazil's inflationary process. The high inflation observed between 2020 and 2022 was accompanied by unusual price dynamics, such as more synchronized adjustments, broader dissemination of price increases, and heightened volatility. To assess the extent to which these changes have left lasting effects, we analyzed various aspects of price behavior before, during, and after the pandemic.

The results suggest that the most intense effects of the pandemic were largely temporary. While some dimensions still show signs of persistence, particularly in services, the indicators analyzed point to an inflationary dynamic that now more closely resembles the pre-2020 period than the one prevailing during the shock years.

Dimension	Question	Strategy
Synchronization	Have prices become more synchronized?	Share of variance explained by the first principal component
Diffusion	Has the relationship between the breadth of price increases and inflation changed?	Deviation of observed inflation from the inflation implied by diffusion based on the pre-pandemic relationship
Volatility	Has the inflation process become more volatile?	First principal component of subitem conditional volatilities

1. Have prices started to move more in tandem?

To assess the synchronization of adjustments, we calculated how much of the variation in subitem prices is captured by a common component[1]. This share increased from around 8% between 2012 and 2019 to nearly 15% between 2020 and 2022, returning to its previous level by 2026. The measure suggests that prices were more jointly affected during the pandemic but this trend weakened afterward.

Table 1: Share of Variance Explained by the 1st Principal Component (%)

	2012-19	2020-22	2023-set/26
Headline	7,9%	14,9%	7,9%
Market-set prices	8,3%	14,6%	8,2%
Services	14,5%	19,0%	13,2%
Industrials	10,4%	23,1%	7,3%

Source: IBGE, Bradesco

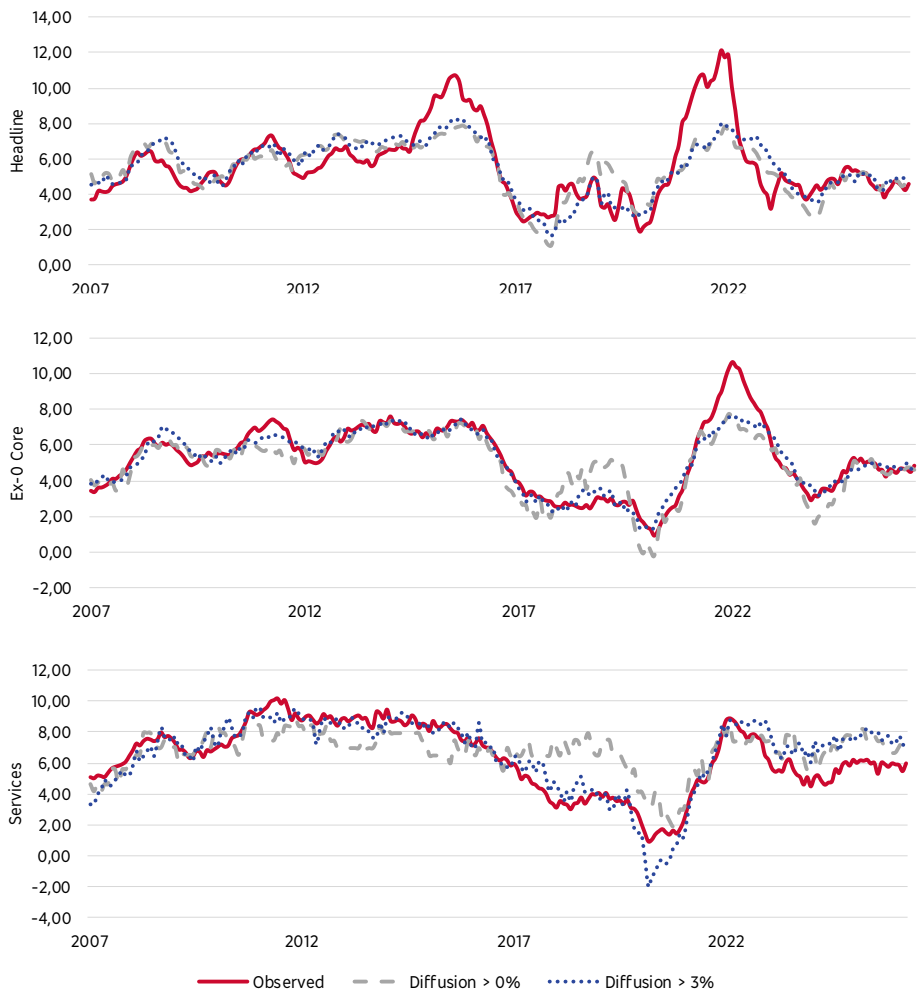
(1) We calculated the first principal component (PC1) from the monthly variations in subitem prices, after seasonal adjustment and standardization. PC1 is a combination of these series that captures the largest possible share of their joint variation. The share explained by PC1 is used here as an indicator of synchronization: the higher it is, the more the dynamics of the subitems can be summarized by a single component. Principal component analysis is conducted separately for each period, based on standardized monthly variations. The periods span 96, 36, and 45 months; in some cases, there are more subitems than observations, which may affect the explained share and limit comparability. As a verification step, we also calculated this measure using rolling windows of 36 months, maintaining the same number of observations and subitem sets within each group. The trajectory confirms an increase during the pandemic and a return, in the most recent window, to levels observed prior to it.

2. Is inflation more widespread?

We also examined whether the relationship between inflation and diffusion changed after the pandemic[2]. For the headline IPCA, the EX-0 core, and services, we estimated separate linear regressions using data from June 2007 to December 2019, employing two simple diffusion measures: the proportion of sub-items with 12-month accumulated inflation above 0% and, alternatively, above 3%. We applied each relationship to the diffusion observed from 2023 onward and compared the resulting inflation with the actual recorded figures. This allowed us to assess whether, for each month's diffusion, inflation remained close to the levels associated with it prior to the pandemic.

The chosen measure does not indicate a widespread and lasting change. From 2023 to September 2026, overall IPCA inflation averaged 0.3 percentage points below the value associated with diffusion based on the pre-pandemic relationship. In the EX-0 core, which excludes food at home and administered prices, the difference was only 0.08 percentage points.

Figure 1: Observed Inflation and Diffusion-Associated Inflation*



Source: IBGE, Bradesco

(2) In advanced economies, a recent Federal Reserve study identifies signs of a shift in the relationship between inflation and diffusion after the pandemic. The paper concludes that, although inflation has eased following the peaks of 2021-2022, it remains more widespread across various consumer items compared to the pre-pandemic period. See FEDS Notes "Is the Inflation Process in Advanced Economies Different After the Pandemic?" (Mar/26).

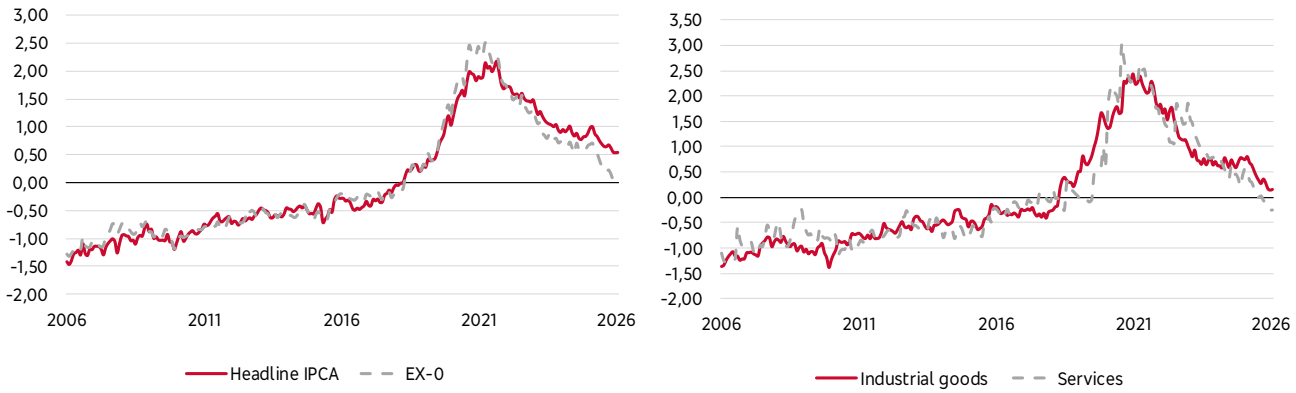
Services, however, exhibit a distinct pattern. Despite the disinflation observed in recent years, diffusion has remained elevated, close to levels seen during periods of higher inflation. Between 2023 and September 2026, on average, 83% of subitems recorded 12-month inflation above 3%, a proportion comparable to that observed when the group's average inflation was near 8%. This difference aligns with a moderation in more pronounced price increases: the share of subitems with inflation above 6% declined from 66% to 48% between the two periods. In other words, service inflation is lower, although price increases above 3% remain widespread.

3. Has the inflationary process become more volatile?

To assess whether the increase in volatility observed during the pandemic has left persistent effects, we estimated conditional volatilities for the subcomponents of the IPCA and summarized their dynamics using the first principal component, an exercise inspired by the methodology of the Central Bank of Chile[3]. Conditional volatility is estimated using a model that accounts for the past evolution of shocks and volatility itself.

The indicators rose sharply during the pandemic and declined in the following years. By September 2026, the main components of volatility in services, industrial goods, and EX-0 were already within the range observed prior to 2020, while the headline remained above that level, albeit converging toward it. The results thus suggest an ongoing normalization across various groups.

Figure 2: Principal Component of Estimated Volatilities (Standardized Score)



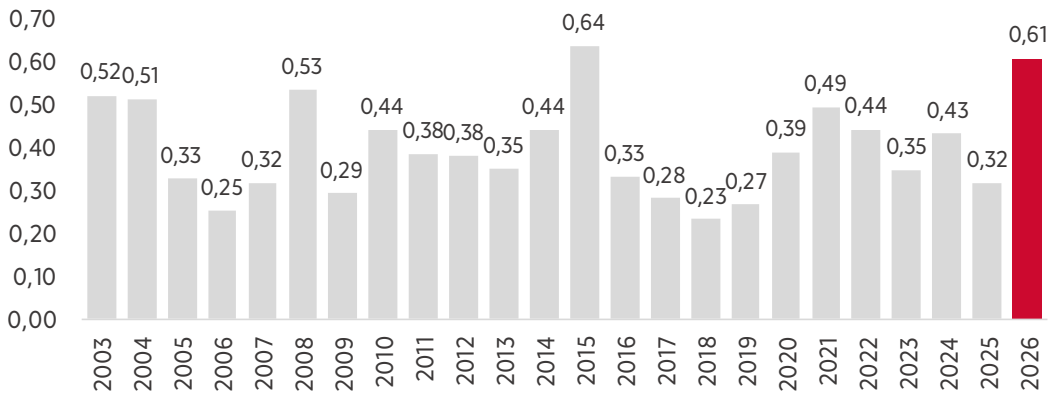
Source: IBGE, Bradesco

(3) The Central Bank of Chile employs GARCH models to estimate the conditional volatilities of CPI components and summarizes their dynamics through the first principal component. The authors identify a marked increase in the volatility of goods prices since 2019, in contrast to the relatively more stable behavior of services. See Monetary Policy Report "Recent Behavior of Goods Prices" (Dec/25).

4. And what about expectations?

Figure 3 shows the standard deviation of Focus survey projections for the following year's IPCA in November of each year. The indicator had been declining in the years following the pandemic, but this normalization was interrupted at the margin. From November 1 to 19, 2026, the average standard deviation of projections for 2027 stood at 0.61 percentage points, compared to 0.32 points during the same period in 2025. In our sample, only 2002 and 2015 recorded higher averages for the comparable period. We believe this trend reflects uncertainties surrounding multiple expected shocks in the coming months, such as changes to working hours, relative price adjustments stemming from tax reform, climate risks, and the recent currency depreciation. The difficulty in quantifying all these shocks, as well as assessing the prevailing economic conditions, contributes to a lower consensus among current projections.

Figure 3: Dispersion of Focus Projections for the IPCA*



(*) Standard deviation of the projection available in November of each year for the following calendar year

Source: BCB, Bradesco

In summary, the analyses point to a similar conclusion. The pandemic temporarily increased the synchronization of price adjustments, broadened the spread of inflationary pressures, and heightened price volatility. In subsequent years, however, these effects diminished: synchronization returned to pre-pandemic levels, the relationship between inflation and diffusion approached historical norms, and volatility indicators declined to levels close to those observed before 2020. The main signs of persistence are evident in services, where diffusion remains relatively high even with lower inflation. Nonetheless, taken together, the results suggest that the pandemic's effects on inflation dynamics were relevant but largely transitory. Regarding expectations, the normalization of inflation dynamics did not prevent an increase in the dispersion of future inflation forecasts.

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