

BRAZIL MACRO

DATA ANALYSIS – INFLATION

A Significant Upward Surprise, but a Not-So-Unfavorable Reading

Daniel Karp* daniel.karp@santander.com.br +55 11 3553 9828

Felipe Kotinda* felipe.kotinda@santander.com.br +55 11 3553 8071

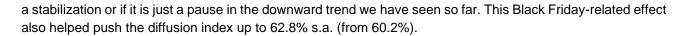
- IPCA for December registered a 0.62% MoM change, considerably above our call (0.40%) and the consensus forecast (0.45%). IPCA 2022 ended at 5.8%, a sizeable deceleration from the 10.1% inflation of 2021, but still markedly above the mid-target of 3.5% (and even above the upward tolerance band of 5.0%).
- Despite the upward surprise, we do not see the monthly reading as particularly unfavorable, as the bulk
 of the surprise was concentrated in the rebound in industrial goods prices after the Black Friday sales
 (and hence, in theory, was a one-off move).
- While temporary, this change affected some core gauges, and the average of cores stabilized at 5.1% 3MMA-saar in trend terms. Now we need to track whether it is indeed a stabilization or if it is just a pause in the downward trend we have seen so far.
- In trend terms, the bright side was services inflation, which decelerated, with its core also declining. On the other hand, the industrial goods trend rose, with its core also rising — both affected by the end of Black Friday sales. Food-at-home increased at the margin, while regulated prices continued to rebound as the downward effect of the recent tax cuts ended.
- All in all, despite the pause in the improvements in underlying inflation that we have seen recently, we continue to forecast a rapid deceleration in IPCA (both headline and core) to around 5.0%. However, we still believe the road from 4.0-5.0% to the 3.0% BCB mid-target could be bumpy, given another round of fiscal expansion that could keep demand hot. Our high-frequency tracking for IPCA 2023 is at 5.6% (from 5.5% previously) with risks reasonably balanced, but our tracking for IPCA 2024 is at 3.5% with upward risks.

IPCA for December registered a 0.62% MoM change, considerably above our call (0.40%) and the consensus forecast (0.45%). IPCA 2022 ended at 5.8%, a sizeable deceleration from the 10.1% inflation of 2021, but still markedly above the mid-target of 3.5% (and even above the upward bound of the tolerance band, at 5.0%). The trend (3MMA-saar) has been rebounding — reaching 4.8% 3MMA-saar (vs. 1.9% in November and a low of -3.4% in September) — and the next readings (without noise caused by tax changes) will be important for assessing the direction of the trend (although we could see more tax changes from March onward).

Despite the upward surprise, we do not see the monthly reading as particularly unfavorable, as the bulk of the surprise was concentrated in the rebound of industrial goods prices after the Black Friday sales (and hence, in theory, was a one-off move). The error in the forecast for industrial goods contributed +14 bps to the error of the headline forecast. Administered prices (+1 bp of error), food-at-home (+2 bps of error), and services (+3 bps of error) also contributed to the underestimation of headline inflation.

While temporary, this upward surprise in the wake of Black Friday affected some core gauges; in particular, the average of cores stabilized at 5.1% 3MMA-saar in trend terms. Now we need to track whether it is indeed

January 10, 2023



Regarding the core inflation outlook, in trend terms, the bright side was services inflation, which decelerated to 2.8% 3MMA-saar (from 3.7% in November and a peak of 12.8% in July), with its core also declining, to 4.9% 3MMA-saar (from 6.3% last month and a peak of 11.9% in July). The industrial goods trend, however, rose to 6.0% 3MMA-saar (from 2.8% last month and a peak of 15.5% in April), with its core also rising to 10.5% 3MMA-saar (from 7.5% in November) — both driven by the impact of the end of Black Friday sales. Food-at-home increased at the margin from 2.0% to 9.0% 3MMA-saar, while regulated prices continued to rebound as the downward effect of the recent tax cuts ended (3.0% 3MMA-saar vs. -2.0% in November).

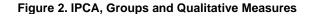
All in all, despite the pause in the improvements in underlying inflation that we have seen recently, we continue to forecast a rapid deceleration in IPCA (both headline and core) to around 5.0%. However, we still believe the road from 4.0-5.0% to the 3.0% BCB mid-target could be bumpy, given another round of fiscal expansion that could keep demand hot. Our high-frequency tracking for IPCA 2023 is at 5.6% (from 5.5%), with risks reasonably balanced, but our tracking for IPCA 2024 is at 3.5%, with upward risks.

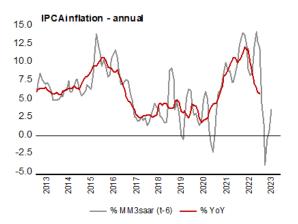
2

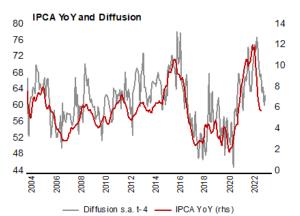
| | Dec-22 | | | | | | |
|--------------------|--------|-----------|-------|--------|--------|--------|--------|
| | Dec-22 | Santander | Desv. | Nov-22 | Dec-22 | Nov-22 | Dec-22 |
| IPCA | 0.62 | 0.40 | 0.22 | 5.9 | 5.8 | 1.9 | 4.8 |
| Food and beverage | 0.66 | 0.57 | 0.02 | 11.8 | 11.6 | | |
| Food-at-home | 0.71 | 0.57 | 0.02 | 13.3 | 13.2 | -0.4 | 6.0 |
| Food service | 0.51 | 0.55 | 0.00 | 8.0 | 7.5 | | |
| Housing | 0.20 | 0.24 | -0.01 | 0.6 | 0.1 | | |
| Electrical energy | 0.20 | 0.38 | -0.01 | -18.8 | -19.0 | | |
| Household articles | 0.64 | -0.13 | 0.03 | 8.7 | 7.9 | | |
| Apparel | 1.52 | 1.00 | 0.03 | 18.6 | 18.0 | | |
| Transportation | 0.21 | 0.10 | 0.02 | -0.9 | -1.3 | | |
| Airline tickets | 0.89 | 0.47 | 0.00 | 35.0 | 23.5 | | |
| Gasoline | -1.04 | -1.20 | 0.01 | -25.5 | -25.8 | | |
| Health and persona | 1.60 | 1.02 | 0.07 | 10.5 | 11.4 | | |
| Personal spending | 0.62 | 0.32 | 0.03 | 7.7 | 7.8 | | |
| Education | 0.19 | 0.02 | 0.01 | 7.3 | 7.5 | | |
| Communication | 0.50 | 0.31 | 0.01 | -1.2 | -1.0 | | |
| | | | | | | | |
| Administered | 0.27 | 0.21 | 0.01 | -4.0 | -3.8 | -1.6 | 3.8 |
| Free | 0.74 | 0.47 | 0.20 | 9.7 | 9.4 | | |
| Food-at-home | 0.71 | 0.57 | 0.02 | 13.3 | 13.2 | -0.4 | 6.0 |
| Industrial goods | 1.19 | 0.59 | 0.14 | 9.8 | 9.6 | 4.1 | 6.9 |
| Services | 0.44 | 0.34 | 0.03 | 8.0 | 7.6 | 5.1 | 3.6 |
| EX3 Core | 1.02 | 0.60 | 0.16 | 11.3 | 11.1 | 8.1 | 8.3 |
| Average of cores | 0.66 | - | - | 9.4 | 9.1 | 5.9 | 6.1 |

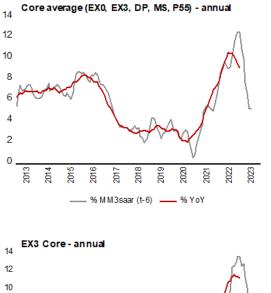
Figure 1. December's IPCA Details (%)

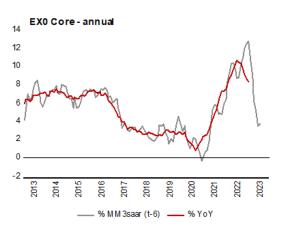
Sources: Brazilian Central Bank, IBGE, Santander.











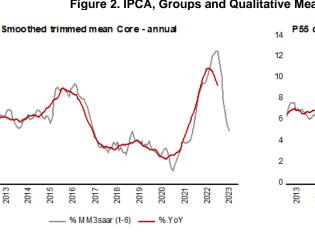
ğ

% M M 3saar (t-6) _____ % YoY

Double Weighted (DP) Core - annual



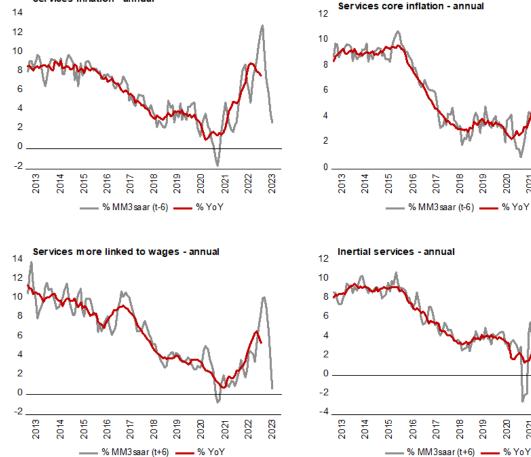
Sources for all charts: IBGE and Santander.





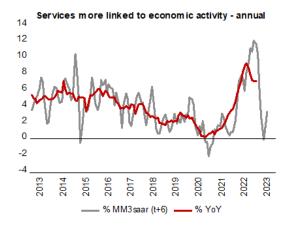




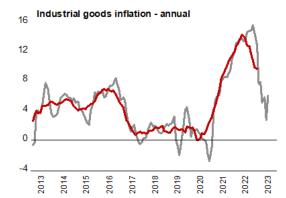
Sources for all charts: IBGE and Santander.



Figure 2. IPCA, Groups and Qualitative Measures (continued)





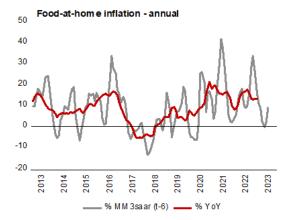


% M M 3saar (t-6)

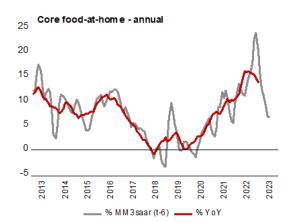
% Y oY



Core industrials - annual







Sources for all charts: IBGE and Santander.



CONTACTS / IMPORTANT DISCLOSURES

| Brazil Macro Research | | | | | | |
|--------------------------|---|---|-----------------|--|--|--|
| Ana Paula Vescovi* | Chief Economist | anavescovi@santander.com.br | 5511-3553-8567 | | | |
| Mauricio Oreng* | Head of Macro Research | mauricio.oreng@santander.com.br | 5511-3553-5404 | | | |
| Jankiel Santos* | Economist – External Sector | jankiel.santos@santander.com.br | 5511-3012-5726 | | | |
| Ítalo Franca* | Economist – Fiscal Policy | italo.franca@santander.com.br | 5511-3553-5235 | | | |
| Daniel Karp Vasquez* | Economist – Inflation | daniel.karp@santander.com.br | 5511-3553-9828 | | | |
| Tomas Urani* | Economist – Global Economics | tomas.urani@santander.com.br | 5511-3553-9520 | | | |
| Lucas Maynard* | Economist – Economic Activity | lucas.maynard.da.silva@santander.com.br | 5511-3553-7495 | | | |
| Felipe Kotinda* | Economist – Commodities | felipe.kotinda@santander.com.br | 5511-3553-8071 | | | |
| Gabriel Couto* | Economist – Special Projects | gabriel.couto@santander.com.br | 5511-3553-8487 | | | |
| Fabiana Moreira* | Economist – Credit | fabiana.de.oliveira@santander.com.br | 5511-3553-6120 | | | |
| Gilmar Lima* | Economist – Modeling | gilmar.lima@santander.com.br | 5511-3553-6327 | | | |
| Global Macro Rese | | | | | | |
| Maciej Reluga* | Head Macro, Rates & FX Strategy – CEE | maciej.reluga@santander.pl | 48-22-534-1888 | | | |
| Rodrigo Park * | Economist – Argentina | rpark@santander.com.ar | 54-11-4341-1272 | | | |
| Ana Paula Vescovi* | Economist – Brazil | anavescovi@santander.com.br | 5511-3553-8567 | | | |
| Juan Pablo Cabrera* | Economist – Chile | jcabrera@santander.cl | 562-2320-3778 | | | |
| Guillermo Aboumrad* | Economist – Mexico | gjaboumrad@santander.com.mx | 5255-5257-8170 | | | |
| Piotr Bielski* | Economist – Poland | piotr.bielski@santander.pl | 48-22-534-1888 | | | |
| Mike Moran | Head of Macro Research, US | mike.moran@santander.us | 212-350-3500 | | | |
| Fixed Income Rese | earch | | | | | |
| Juan Arranz* | Chief Rates & FX Strategist – Argentina | jarranz@santanderrio.com.ar | 5411-4341-1065 | | | |
| Mauricio Oreng* | Senior Economist/Strategist – Brazil | mauricio.oreng@santander.com.br | 5511-3553-5404 | | | |
| Juan Pablo Cabrera* | Chief Rates & FX Strategist - Chile | jcabrera@santander.cl | 562-2320-3778 | | | |
| Equity Research | | | | | | |
| Miguel Machado* | Head Equity Research Americas | mmachado@santander.com.mx | 5255 5269 2228 | | | |
| Alan Alanis* | Head, Mexico | aalanis@santander.com.mx | 5552-5269-2103 | | | |
| Andres Soto | Head, Andean | asoto@santander.us | 212-407-0976 | | | |
| Walter Chiarvesio* | Head, Argentina | wchiarvesio@santanderrio.com.ar | 5411-4341-1564 | | | |
| Mariana Cahen Margulies* | Head, Brazil | mmargulies@santander.com.br | 5511-3553-1684 | | | |
| Electronic | | | | | | |

Bloomberg

Reuters

SIEQ <GO>

Pages SISEMA through SISEMZ

This report has been prepared by Santander Investment Securities Inc. ("SIS"; SIS is a subsidiary of Santander Holdings USA, Inc. which is wholly owned by Banco Santander, S.A. "Santander"), on behalf of itself and its affiliates (collectively, Grupo Santander) and is provided for information purposes only. This document must not be considered as an offer to sell or a solicitation of an offer to buy any relevant securities (i.e., securities mentioned herein or of the same issuer and/or options, warrants, or rights with respect to or interests in any such securities). Any decision by the recipient to buy or to sell should be based on publicly available information on the related security and, where appropriate, should take into account the content of the related prospectus filed with and available from the entity governing the related market and the company issuing the security. This report is issued in Spain by Santander Investment Bolsa, Sociedad de Valores, S.A. ("Santander Investment Bolsa"), and in the United Kingdom by Banco Santander, S.A., London Branch. Santander London is authorized by the Bank of Spain. This report is not being issued to private customers. SIS. Santander London and Santander Investment Bolsa are members of Grupo Santander, ANALYST CERTIFICATION: The following analysts hereby certify that their views about the companies and their securities discussed in this report are accurately expressed, that their recommendations reflect solely and exclusively their personal opinions, and that such opinions were prepared in an independent and autonomous manner, including as regards the institution to which they are linked, and that they have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report, since their compensation and the compensation system applying to Grupo Santander and any of its affiliates is not pegged to the pricing of any of the securities issued by the companies evaluated in the report, or to the income arising from the businesses and financial transactions carried out by Grupo Santander and any of its affiliates: Daniel Karp*, Felipe Kotinda* *Employed by a non-US affiliate of Santander Investment Securities Inc. and not registered/qualified as a research analyst under FINRA rules, and is not an associated person of the member firm, and, therefore, may not be subject to the FINRA Rule 2242 and Incorporated NYSE Rule 472 restrictions on communications with a subject company, public appearances, and trading securities held by a research analyst account. The information contained herein has been compiled from sources believed to be reliable, but, although all reasonable care has been taken to ensure that the information contained herein is not untrue or misleading, we make no representation that it is accurate or complete and it should not be relied upon as such. All opinions and estimates included herein constitute our judgment as at the date of this report and are subject to change without notice. Any U.S. recipient of this report (other than a registered broker-dealer or a bank acting in a broker-dealer capacity) that would like to effect any transaction in any security discussed herein should contact and place orders in the United States with SIS, which, without in any way limiting the foregoing, accepts responsibility (solely for purposes of and within the meaning of Rule 15a-6 under the U.S. Securities Exchange Act of 1934) for this report and its dissemination in the United States. Hong Kong (HK): This report is distributed in Hong Kong by Banco Santander, S.A. (a public limited liability company incorporated in Spain) which has a branch in Hong Kong. Banco Santander, S.A., Hong Kong Branch is regulated as a Registered Institution by the Hong Kong Monetary Authority for the conduct of Advising and Dealing in Securities (Regulated Activity Type 4 and 1 respectively) under the Securities and Futures Ordinance. This report is not intended for distribution to any persons other than professional investors. Banco Santander, S.A. or its affiliates may have a holding in any of the securities discussed in this report; for securities where the holding is greater than 1%, the specific holding is disclosed in the Important Disclosures section above. The recipient of this report must not distribute it to any person without the prior written consent of Banco Santander, S.A. Singapore (SG): This report is distributed in Singapore by Banco Santander, S.A. which has a branch in Singapore. It is not intended for distribution to any persons other than institutional investors, accredited investors and expert investors (each as defined in the Securities and Futures Act 2001 of Singapore). Recipients of this report should contact Banco Santander, S.A., Singapore Branch at researchsingapore@gruposantander.com for matters arising from, or in connection with, this report. Mainland China (CN): This report is being distributed in Mainland China by Banco Santander, S.A. which has two branches in Mainland China, being Shanghai Branch and Beijing Branch ("Santander China"). Santander China is regulated by China Banking and Insurance Regulatory Commission. Banco Santander, S.A., Shanghai Branch is licensed for foreign currency business, RMB business and derivative business. Banco Santander, S.A., Beijing Branch is licensed with foreign currency business. The recipient of this report must not distribute it to any person without the prior written consent of Banco Santander, S.A.. © 2023 by Santander Investment Securities Inc. All Rights Reserved.