

BRAZIL MACRO MACRO COMPASS

January 14, 2022

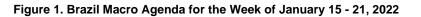
NOVEMBER RAIN (OF UPSIDE ACTIVITY SURPRISES)

Ana Paula Vescovi* and Brazil Macroeconomics Team anavescovi@santander.com.br +5511 3553 8567

- The USD/BRL pair closed the rolling week ended January 13 at 5.53 (implying a 2.8% gain) and stood among the top performers in a basket of 31 of the most liquid currencies in the world. In our view, the BRL benefited from the global USD weakening trend seen during the period, reflecting expectations of a less aggressive Fed and hopes for a less virulent omicron. On the domestic side, bothersome inflation data and a hawkish wording of the monetary authority (in an open letter to the Ministry of Economy) were the background for an even more pronounced inversion of the yield curve. The recent pattern in US Treasuries may have contributed to the movement (on the back end) as well.
- December's IPCA registered a 0.73% MoM change, in line with our forecast (0.70%), but above market consensus (0.64%). With that result, the year of 2021 ended with 10.06% IPCA inflation, much above the mid-target of 3.75% and the upper limit of 5.25%. The December reading and its composition reinforces our concerns on the inflation outlook.
- In the wake of the IPCA release, the Brazil Central Bank (BCB) published the letter submitted to the Ministry
 of Economy, as a legal requirement when (IPCA) inflation ends the calendar-year outside the tolerance
 interval. The BCB made a technical assessment and decomposition of main inflation pressures last year,
 citing the impact of large pandemic-related shocks, especially on imported inflation. We noted a hawkish
 tone, in line with the last formal communication in mid-December. The BCB kept the flight plan for another
 150-bp Selic rate hike (to 10.75%) in February Copom.
- Services sector's real revenue topped expectations in November, offsetting the previous drop. The headline index jumped 2.4% MoM-sa (market consensus at +0.1%), currently standing roughly 5% above the pre-pandemic mark. The recovery in mobility-related subsectors continues. Regarding retail activity, the broad index expanded 0.5% MoM-sa (consensus: -0.4%), with healthy figures seen both for income-led and credit-led segments. This result breaks a sequence of three declines in a row.
- For the coming week, on Monday (January 17) the BCB will release the IBC-Br (a monthly GDP proxy) capping the batch of economic activity indexes for November. We expect a monthly expansion of 0.8% MoM-sa, which would break a string of three declines in a row. Regarding 4Q21 GDP growth, we have updated our tracking to +0.2% QoQ-sa (from previously +0.1% QoQ-sa).
- While the recent batch of activity have been better than expected, limiting the downside risks for 4Q21, we continue to monitor factors that could dampen the GDP performance in 1Q22, such as the omicron impact on services recovery and the hit perpetrated by the Southern draught on farm output.

Most of the information in this report is up to the end of Thursday, January 13, 2022.

IMPORTANT DISCLOSURES/CERTIFICATIONS ARE IN THE "IMPORTANT DISCLOSURES" SECTION OF THIS REPORT. U.S. investors' inquiries should be directed to Santander Investment Securities Inc. at (212) 583-4629 / (212) 350-3918. * Employed by a non-US affiliate of Santander Investment Securities, Inc. and is not registered/qualified as a research analyst under FINRA rules.



Indicators / Events	Source	Reference	Date	Santander Estimate	Prior
Inflation: IGP-10 (% MoM)	FGV	Jan/22	Mon, 17-Jan		-0.14
IBC-Br Activity Index (% MoM)	BCB	Nov/21	Mon, 17-Jan	0.8	-0.4
IBC-Br Activity Index (% YoY)	BCB	Nov/21	Mon, 17-Jan	0.8	-1.48
Federal Tax Collection (BRL billion)	RFB	Dec/21	20 to 26-Jan		157.3

Sources: Bloomberg, IBGE, Santander.

For details on Santander's economic forecasts for Brazil, please refer to our last scenario review¹. Also refer to our Macro Propositions for Brazil in 2022².

¹ Santander Brazil - Macroeconomic Scenario: "Higher Fiscal (and Inflation) Risks Weigh on the Growth Outlook" – December 02, 2021-Available on: https://bit.ly/Std-scenreview-dec21

² Santander Brazil – Macro Propositions 2022: "Navigating the Uncertainties" – January 07, 2022- Available on: https://bit.ly/Std-Macroprop22

LOCAL MARKETS—FX

In the rolling week ended January 13, the USD/BRL pair reminded us of its highly volatile nature as it reversed the weakening of the previous week to close the period at 5.53 (a 2.8% gain), standing as the second-best performer in a basket of 31 of the most liquid currencies in the world. In our opinion, the move had to do with the global weakening registered by the USD during the period. Additionally, while worrisome figures related to the US CPI and the hawkish tone seen in the speech delivered by Mr. Jerome Powell in the US Senate reinforced the case for an imminent increase in the Fed Funds Target Rate, the recent communications from the US monetary authority reduced the likelihood of an immediate reduction in the Fed's balance sheet. Additionally, the brisk decline in omicron cases in some countries and the apparently lesser gravity of the new variant (in terms of hospitalizations and deaths) is suggesting lesser risks of a large and lasting economic impact. These factors seem to have generated some sort of a relief rally for a number of risky asset classes, such as EM FX. Additionally, technical conditions of the global FX market helped drive the USD the other way around, also favoring the BRL.

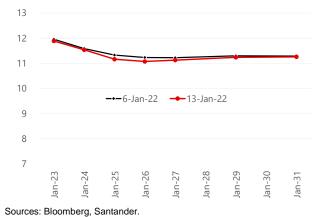
LOCAL MARKETS—Rates

In a highly volatile week—which began with a continuation of last week's sell-off and finished with a rally—the nominal yield curve saw a small downshift. Since last Thursday (January 6), the front end of the curve (Jan-24 DI future) fell 2 bps to 11.57%, while the back end of the curve (Jan-27 future) fell 9 bps 11.14%. As a result, the curve's steepness in this segment sank further by -7 bps to -44 bps, deeper into the negative territory (inversion). At the front end, it seems that the market had anticipated the result of December's IPCA during the sell-off of yields last week, given the limited effect of the upside surprise in the IPCA release (and with unfavorable qualitative measures; see more in the Inflation section). Thus, the short-end fell 9 bps. Moreover, in terms of Copom's market expectation, the curve continues to price in a 150 bps Selic hike for the next meeting and 100 bps for the following one. At the long end, the sell-off saw a pause, possibly influenced by the cool down in the 10-year US Treasury yields. However, we continue to see an environment of high uncertainties for the domestic economy, particularly regarding the fiscal consolidation process. Hence, we still see space for domestic long-end yields to go higher. As for the shape of the curve, we believe the flattening might continue in the short-term until it becomes clear that inflation has peaked and that the Selic cycle has finished. After that, the curve should start to steepen.

Figure 2. USD/BRL Intraday Trends

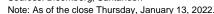


Figure 3. Brazilian Domestic Yield Curve (% p.a.)



Sources: Bloomberg, Santander.

Note 1: As of the close on Thursday, January 13, 2022. Note 2: For other currencies, we use USDBRL values as a base-index



COMMODITIES

USDA³ **cuts estimate for South America soybean output.** Production estimate of the oilseed in Brazil was cut to 139 million tons (below the expectation of 141.6 million tons), and down from 144 million tons in December's WASDE⁴ report. Taking Argentina and Paraguay together, the South America downward revision meant a 9.5 million reduction, a substantial revision since the USDA is typically conservative in its January report. Corn production estimate in Brazil was also revised down to 115 million tons (from 118 million tons). According to weather forecasts, rains could arrive next week in dry areas of South America. While a relief for these crops, we see risks increasing that the downward trajectory for grain prices will be softer than previously thought (as global stocks will take longer to replenish from previous years drawdown).

Iron ore at the highest level since October as heavy rains hit Brazilian operation regions. One of the world's second-largest iron producer halted some operations in the state of Minas Gerais, a region that represents 40% of its output. Adding to this supply concern, prospects for demand remain positive as China is expected to ease monetary policy. Latest data for domestic excavator sales continued to improve in December (10% MoM), a six-month-high, suggesting a positive momentum for infrastructure projects in the country.

Brent oil continues to rise, now already above pre-Omicron levels. Brent crude oil rose to \$85/bbl, reaching close to the recent high of October (\$86/bbl). We still see the oil market in deficit, as global inventories are low and producers (from OPEC+ members to independent US shale companies) struggle with underinvestment in previous years.

EIA⁵ **reported fourth decline in US crude stockpiles.** On Wednesday (January 12), the EIA reported that US crude inventories decreased by 4,553k barrels for the week ending January 7, well below the market expectation of a 1,620k barrels decrease. As a result, considering the last five years, inventories are already below the minimum level observed for this time of the year (total inventory was 413 million barrels, on January 7).

CFTC⁶ **reported a marginal decrease in speculative long positions in WTI crude oil.** Money managers decreased their net long WTI crude futures and options positions in the week ended January 4, the CFTC reported on Friday (January 7). The positions in futures and options decreased by 463 contracts to 266,377.

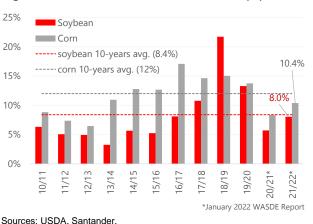
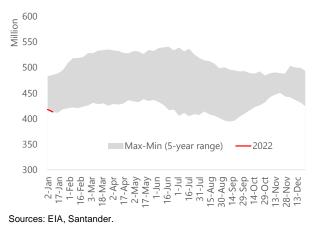


Figure 4. US: Stock-to-Use Ratio in Grains (%)

Figure 5. U.S. Crude Oil Inventories (Barrels)



³ United States Department of Agriculture.

⁴ World Agricultural Supply and Demand Estimates.

⁵ Energy Information Administration.

⁶ U.S. Commodity Futures Trading Commission.

INFLATION

December's IPCA registered a 0.73% MoM change, in line with our forecast (0.70%), but above the market's consensus (0.64%). With that result, 2021 ended with 10.06% of YoY inflation, still quite close to the highs of 4Q15-1Q16 and well above this year's target of 3.75% and its upper limit of 5.25%. Although this small annual relief can be seen as a peak, strictly speaking we believe inflation will continue hovering around 10% until April 2022, meaning a plateau rather than a clear peak. As for the trend at the margin, it decelerated from 13.1% 3MMA-saar to 11.0%. We believe the 3MMA-saar measure should continue to cool down until it reaches around 5.0%, but then it should remain at that hefty level for most of the year, suggesting that the disinflation process will be a sticky, difficult and risky one.

The major upside surprise came in industrial goods, due to a higher rebound in some Black Fridayrelated discounts. Industrial goods rose 1.41% MoM (vs. 1.00% expected), contributing +10 bps with the headline forecast error. Services came in line with expectations at 0.79% MoM, meaning its trend decelerated from 7.4% to 6.2% 3MMA-saar. However, core services actually accelerated from 6.1% to 6.8%, as the relief in the headline came more from volatile items. Food-at-home also came in line with expectations, rising 0.79% MoM and continuing its decelerating trend both in YoY and 3MMA-saar terms. Nevertheless, the food-at-home core gauge accelerated to 12.7% 3MMA-saar (from 9.3%). Finally, regulated prices surprised to the downside, rising 0.05% MoM (vs. 0.28% expected), contributing -6 bps to the headline forecast error.

In general, qualitative measures remained unfavorable. The average of the main core gauges rose 0.90% MoM and the trend remained basically stable at 8.9% 3MMA-saar (EX0, DP and P55 decelerated a bit, while EX3 and MS accelerated considerably). Moreover, the diffusion index—which had been cooling down during the last few readings—rebounded from 62.0% to 68.4% (seasonally adjusted), which is compatible with YoY inflation running around 9.0% a few months from now.

All in all, this reading reinforces our concerns about the inflation outlook. Despite some marginal reliefs, we think it is still too soon to be convinced that inflation is already at a consistent deceleration trend, especially because the qualitative measures are still quite unfavorable: services accelerating, while industrial goods remain under upward pressure (and surprising to the upside). The disinflation process afterwards should be a difficult and sticky one, and not a sharp deceleration.

Our IPCA 2022 high frequency tracking is at 6.0%, while for IPCA 2023 it is at 3.5%. Both numbers are above the target of the BCB (3.5% for 2022 and 3.25% for 2023, both with +/-1.5% tolerance band). See details in the link⁷.

Figure 6. December's IPCA Details (%)

		МоМ			YoY		
	Dec-21	Santander	Desv.	Nov-21	Dec-21		
IPCA	0.73	0.70	0.03	10.7	10.1		
Administered	0.05	0.28	-0.06	19.2	16.9		
Free	0.99	0.85	0.10	7.8	7.7		
Food-at-home	0.79	0.75	0.01	9.7	8.2		
Industrial goods	1.41	1.00	0.10	11.4	12.0		
Services	0.79	0.80	-0.01	4.8	4.8		
EX3 Core	1.22	0.94	0.10	6.5	7.1		

Sources: IBGE, Santander.

Figure 7. Core Inflation EX3 (%)



⁷ Santander Brazil – Inflation: "December's IPCA: Ending 2021 at 10.06% YoY, 631 bps above the Mid-Target" – January 11, 2022- Available on: http://bit.ly/Std-IPCA-dec21

ECONOMIC ACTIVITY

Services sector's real revenue topped expectations in November, offsetting the previous drops. The headline index jumped 2.4% MoM-sa (+10.0% YoY), well above market consensus of +0.1% MoM-sa (+6.7% YoY) and our estimate of +0.2% MoM-sa (+7.0% YoY). This result fully offsets the previous declines (-0.6% and -1.6% in September and October) and places the index 4.5% above the pre-pandemic mark (Februrary-2020). Zooming in on the details, growth was widespread, with Information services (+5.4% MoM-sa) fully giving back the previous drop and with Transportation printing a healthy figure (+1.8% MoM-sa). Services to Families continued to strengthen (+2.8% MoM-sa), marking the eighth gain in a row. This segment still shows wide idleness compared to the pre-pandemic mark (down 11.8%), which leaves room for positive contributions from the services sector to overall activity in 4Q21 and 2022. Professional and Administrative services decreased slightly (-0.3% MoM-sa), marking the fourth decline in a row. Among services activities, the biggest positive contribution came from Information technology (+0.78 p.p.). Telecommunication (+0.26 p.p.), Air Transport (+0.21 p.p.), and Food services (+0.19 p.p.) also printed healthy figures, and only Professional services contributed negatively (-0.13 p.p.), with the diffusion index reaching 92% (vs. 33% in October). Seven of 12 services activities remain below the pre-pandemic mark. In guarterly terms, November's headline result implies a -0.3% QoQ-sa carryover to 4Q21. However, for the Services to Families segment, we calculate a 6.4% carryover. In our view, this segment is the best metric to capture the rebound of the services sector currently, on the heels of the increase in mobility. Indeed, although Services to Families accounts for nearly 10% of the IBGE's monthly survey, it highly correlates with segments that account for nearly 30% of GDP (e.g., Other Services and Public Services) and that still show wide idleness relative to the pre-pandemic mark. We expect these segments to contribute to sequential increases for the services sector in 4Q21 and 1H22. See details in the link[®].

Regarding retail activity, the broad index expanded 0.5% MoM-sa (market consensus at -0.4%) in November. This result broke a string of three declines in a row and the details indicate healthy figures both for income-led and credit-led segments. Core index (which excludes building materials and vehicle sales) expanded 0.6% MoM-sa (market consensus at 0%). See details in the link⁹.

For the coming week, on Monday (January 17) the BCB will release the IBC-Br capping the batch of economic activity indexes for November. We expect a monthly expansion of 0.8% MoM-sa, which would break a string of three declines in a row. Regarding 4Q21 GDP growth, we have updated our tracking to +0.2% QoQ-sa (from previously +0.1% QoQ-sa). For details on Santander's activity outlook, please refer to our last chartbook¹⁰.

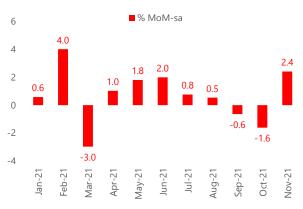
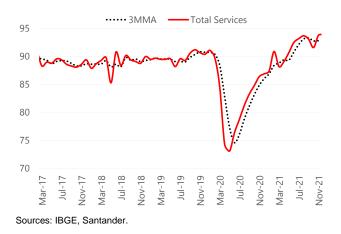


Figure 8. Total Services (sa, % MoM)

Sources: IBGE, Santander.

Figure 9. Total Services (sa, 2014=100)



⁸ Santander Brazil Economic Activity - "Services Output Jumps, Offsetting Previous Drops" – January 13, 2022 – Available on: https://bit.ly/Std-econact-011322

⁹ Santander Brazil Economic Activity - "A Positive Surprise for Retail Activity" – January 14, 2022 – Available on: https://bit.ly/Std-econact-011422 (the file will be available in the link at @3 pm ET)

¹⁰ Santander Brazil Economic Activity - "Chartbook – Lowering (Again) Our GDP Estimates" – December 8, 2021 – Available on: https://bit.ly/Std-chart-econact-dec21

MONETARY POLICY

On Tuesday (January 11), the BCB published the letter¹¹ submitted to the Ministry of Economy, as a legal requirement whenever (IPCA) inflation ends the calendar-year outside the tolerance interval (for 2021, the interval ranged from 2.25% to 5.25%, with mid target of 3.75% and actual reading of 10.1%). The BCB made a technical assessment and decomposition of the main inflation pressures last year, citing the impact of large pandemic-related shocks affecting inflation (both via supply and demand) on a global scale, particularly in Brazil. Idiosyncratic factors such as the FX depreciation, the fiscal risks (read de-anchoring of expectations) and weather-related electricity shocks were included. The BCB also took the opportunity to see in hindsight the effects of the fluid and volatile macro conditions and expectations on the monetary policy response. Last (but not least), we sense that the BCB maintained a hawkish tone about the risks generated on the fiscal side as per the anchoring of inflation expectations, as the BCB maintains the flight plan to deliver another 150-bp hike (to 10.75%) in the Selic rate for the February Copom policy meeting. Looking at the details, in the document the authority pointed to a few key aspects explaining the inflation deviation: (i) the spike in tradable goods (mainly commodities) in BRL terms; (ii) the electricity price shock generated by the draught, leading to extra-charges in electricity bills (via the "hydrological scarcity tariff flag"); and (iii) supply-demand mismatches in inputs markets and bottlenecks in global supply chains. Items (i) and (iii) are associated with changes in consumer behavior because of the pandemic, the effects of which were exacerbated by supply constraints (labor, inputs, logistics), which the BCB sees as a global phenomenon. Using its inflation decomposition method (usually presented in Q1 inflation reports each year), the BCB broke down the 6.3 p.p. IPCA deviation from the mid-target into the following contributions: (i) imported inflation, accounting for 4.4 p.p. (~70% of the deviation), most of that associated with oil prices (~3.0 p.p.), but with the FX rate also contributing (0.4 p.p.); (ii) inertia (from 2020 IPCA) accounts for 1.2 p.p.; and (iii) electricity tariff flag added 0.7 p.p. The output gap (seen by the BCB as still open, with the economy running below potential) is estimated to have helped reduce the (upward) inflation deviation from the center target in about 1.2 p.p. Lastly, inflation expectations only added 0.25 p.p. to the deviation, according to the BCB. As per the strategy to bring inflation back to the target, the authority referred to the recalibration of the Selic policy rate. The letter mentioned the significant tightening in interest rate, as the authority highlighted that the increase in the Selic rate topped the rise in inflation expectations. The BCB pointed to the change in the policy stance (to contractionary from accommodative) and stressed that "increase in the real rate in this cycle is the largest that occurred during the inflation targeting regime." Despite the BCB's actions on the monetary policy front, the central bank once again claimed that "questions about the future of the fiscal framework" result in increase in risk premiums and raise the risk of de-anchoring inflation expectations. This implies attributing greater probability to alternative scenarios that consider higher neutral interest rate". The BCB also took the opportunity to reaffirm the recent policy message and signals. The letter indicated that "given the increase in its projections and the risk of de-anchoring expectations for longer terms, it is appropriate that the tightening cycle monetary advance significantly in contractionary territory". The document also claimed that the authority will persevere the strategy not only to seek a disinflation in the economy, but also to put inflation expectations at the mid-target. The BCB also reaffirmed its plan to deliver another Selic hike of 150bps form the next meeting (February 1-2). We continue project terminal Selic rate of 12.25% as of March 2022 (i.e., two hikes of 150bps) and cuts only in 2023.

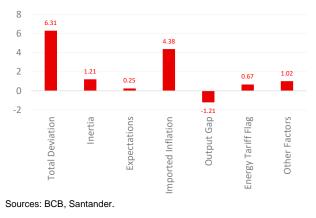
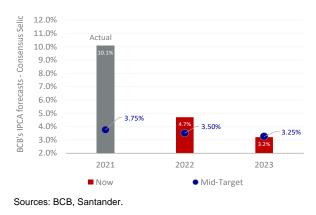


Figure 10. Contributions for IPCA Deviation 2021





¹¹ For details, please refer to the letter in the following link:

 $https://www.bcb.gov.br/content/controleinflacao/controleinflacao_docs/carta_aberta/OF_CIO_823_2022_BCB_SECRE_01.pdf$

CONTACTS / IMPORTANT DISCLOSURES

Brazil Macro Resea	arch		
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 Economist – Commodities	lucas.maynard.da.silva@santander.com.br	5511-3553-7495
Felipe Kotinda* Gabriel Couto*	Economist – Commodules Economist – Special Projects	felipe.kotinda@santander.com.br gabriel.couto@santander.com.br	5511-3553-8071 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		ginnar.inna e santandor.soni.si	0011 0000 0021
Maciej Reluga*	Head Macro, Rates & FX Strategy – CEE	maciej.reluga@santander.pl	48-22-534-1888
Juan Cerruti *	Senior Economist – Argentina	jcerruti@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	arch		
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
Claudia Benavente*	Head, Chile	claudia.benavente@santander.cl	562-2336-3361
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: Ana Paula Vescovi*.

*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.

© 2022 by Santander Investment Securities Inc. All Rights Reserved.

