Equity Research

GERDAU

2Q23 Preview: Icarus' Wings Clipped

LatAm Metals & Mining

Main takeaways:

(i) We project volume to rise at Brazil BD, with upside in the external market more than offsetting downside in the domestic market; **(ii)** Increased exports will likely cause a pullback in realized price for Brazil BD; **(iii)** North America BD operating with price preference over volume; **(iv)** Special Steels with sales recovery, gaining traction; **(v)** We estimate marginal revenue decline, negatively pulled by North America; **(vi)** Scrap and coal creating pressure on costs, mainly at Brazil BD; **(viii)** We project EBITDA falling in low double digit; **(ix)** Brazil BD in stronger operational downturn, as consequences of impoverished cost dynamics, squeezing margin; **(x)** Positive highlight expected within Specialty Steels; **(xi)** Net income trending weaker, we project -37% decline Genial Est. **(xii)** We start to see the company no longer discounted. This means that, for now, **we are downgrading** the Gerdau's **rating to NEUTRAL**, with a **12M Target Price** of **R$32.00**, which implies a **narrower upside** of **+9.74%**.

Analysts

Igor Guedes
+55 (11) 3206-8286
igor.guedes@genial.com.vc

Lucas Bonventi
+55 (11) 3206-1455
lucas.bonventi@genial.com.vc

Renan Rossi
+55 (11) 3206-1457
renan.rossi@genial.com.vc

Company

GGBR4 BZ Equity
Neutral

Price: R$ 29.16 (01-Aug-2023)
Target Price 12M: R$ 32.00

Gerdau will release its 2Q23 results on 08TH of august, after market close. Our expectation is for a **worse result q/q**, suffering from costs momentarily in Brazil BD and North America BD, but with a **positive highlight for Special Steel division**, which should take advantage of the recovery of its sectors of exposure and help within the consolidated result.

Given the **recent rise in the share prices**, we believe that the **upside has basically been exhausted**, given that **we see no reason to be too optimistic**, after all, however much quality Gerdau has (and we recognize that is has), it is a cyclical company, and **we are still facing a bearish phase of the cycle**. Therefore, we are **downgrading the rating to Neutral**, as we further explore in more detail in the "Our Take" section at the end of the report.

2Q23 Preview

We expect ON Brazil with opposite dynamics between DM and FM for volume. Our expectation is that after a quarter of strong market share recovery with increased sales in the domestic market (DM), volume will fall back to 1,059kt Genial Est. (-2.6% q/q; -10.7% y/y), while in the foreign market (FM) we expect a recovery, seeking normalization to historical levels, to 272kt (+43.1% q/q; -20.8% y/y). Thus, consolidating a total volume for Brazil BD at 1.3Mt Genial Est., up +4.2% q/q, and down -13.0% y/y.

We believe the order backlog is still remaining resilient, with 60 days already contracted, according to a recent conversation we had with the Company. Despite the negative consensus sentiment towards the steel market, we believe that Gerdau is managing to maintain a level of sales stability in Brazil BD, without losing too much space to imported steel, something that we see occurring to a greater extent with peers.

Higher exports are likely to be reflected in a lower realized price at Brazil BD. Usually representing lower value-added products, as they are semi-finished, a relevant increase in exports in sales share should bring the realized price down, at R$5,270/t Genial Est. (-2.8% q/q; -15.9% y/y). Our analysis points to a deceleration of -2.3% q/q Genial Est. in the realized price in the domestic market for Brazil BD, causing the gap in domestic revenue per ton vs. the foreign market to shorten, as there is an impact on pricing from the cooling of the USD/BRL exchange rate.

North America BD operating with price preference over volume. With a total volume expectation of 1.0Mt Genial Est. (-8.1% q/q and -9.5% y/y), we project a high single digit decline, due to **(i)** positive price adjustments, which started to be incorporated in April, causing order anticipations for previous months and compromising subsequent ones, and due to **(ii)** customers operating with lower inventories, as they expect prices to fall further down the line, given that US mid-market sales values exceeded slightly higher scrap costs last quarter, leading to a relevant expansion in the metal spread.

We anticipate that the addition in ferrous scrap shipments that has occurred recently will eventually lead to a subsequent price reduction, or at least provide more resistance to further increases, in an attempt to narrow the metal spread after a few months with the gap open. Therefore, we have a projection for realized prices to be at R$7,020/t Genial Est. (vs. R$7,050 1Q23), practically flat q/q after the last positive price adjustment of +US$50/t, which should be fully consumed in the P&L by the fall in the USD/BRL exchange rate. New price adjustments from here on may be more difficult, on the other hand, we project for 3Q23 a rise (albeit superficial) in the exchange rate, so that we should see stable prices or very mild upward trends in the coming months.

Special Steel BD gaining traction. In addition, we have a sequential improvement projection in both Special Steel main geographical regions, coming in at a volume of 385kt Genial Est. (+8.3% q/q; -11.5% y/y), along with a stable realized price q/q of ~R$8,300/t Genial Est. In the unit. We highlight an improving scenario for the US market, with a breakthrough in the regional chip chain (semi-conductors), causing a higher pace of inventory rebuilding for large commercial vehicles, specifically.

While in Brazil, despite our continued pessimism regarding the automotive segment, we see the harvest plan as the potential escape route to find something to cheer about. Recently released, with a scope for several agricultural producers, the R$364bn (+27% y/y) development package will be aimed at rural credit, with lower interest rates for financing machinery used in farming (called green line). Gerdau has an interesting exposure to this type of segment. In addition, we see solar energy projects bringing growing demand, which although still representing a relatively low percentage of sales penetration, has an expanding appetite.

We estimate revenue with a marginal decline. From the above dynamics, we expect revenue to be R$18.5bn Genial Est., (-2.1% q/q; -19.6% y/y). In the short term, the dynamics are different for each unit, with Brazil BD and Special Steel standing out positively, with expectations respectively of R$7.0bn Genial Est. (+1.3% q/q; -26.8% y/y), and R$3.1bn Genial Est. (+7.5% q/q; -13.3% y/y), both reflecting an estimate of sequential increases in volumes. In addition, North America BD should reach R$7.1bn Genial Est., (-8.6% q/q; -16.9% y/y), suffering in volume after the readjustments given to its clients' base, and the movement of delay in the recomposition of inventories by the downstream steel segments, which are waiting for the metal spread to cool it off so they can start to buy again.

Table 1. Net Revenue Gerdau (2Q23 Genial Est.)

(R$ millions)	2Q23E Genial Est.	1Q23 Reported	% q/q	2Q22 Reported	% y/y
Net Revenue	**18.477**	**18.872**	**-2,1%**	**22.968**	**-19,6%**
Brazil	7.014	6.925	1,3%	9.588	-26,8%
North America	7.123	7.793	-8,6%	8.573	-16,9%
South America	1.572	1.617	-2,8%	1.894	-17,0%
Special Steel	3.170	2.948	7,5%	3.657	-13,3%
Eliminations	(402)	(411)	-2,1%	(744)	-45,9%

Soure: Gerdau, Genial Investimentos

Scrap and coal creating cost pressure at Brazil and North America BDs. Despite the volume growth, the expectation for Brazil BD is that the higher dilution capacity will not be enough to reduce the cost level, given pressures both in the coal part (~30% of production) and in the scrap part (~70% of production), reaching R$4,850/t Genial Est. (+2.6% q/q; -0.9% y/y).

In addition, ON North America should also present a higher COGS/t, given a lower dilution of costs with weaker volumes, in addition to the more expensive scrap being passed through its P&L, applied its due delay of 120 days to the spot price, reaching R$5,500/t Genial Est. (+4.1% q/q; +1.0% y/y).

Product mix should cool Special Steel' COGS/t. We expect similar costs per ton in South America BD as last quarter, but with a positive dynamic within Special Steel division, through the change in product mix creating a cooling effect on COGS/t, which should reach R$6,800/t Genial Est. (-4.3% q/q; +5.0% y/y).

Flat nominal consolidated COGS. We arrive at a nominal consolidated cost of R$15.4bn (+1.0% q/q; -9.8% y/y), without major sequential increases. Within the two main BDs, we see a performance with opposite trends, given the estimates for Brazil BD at R$6.4bn, up +6.7% q/q due to the increase in volume, with North America BD at R$5.5bn, down -5.4% q/q due to the loss of volume.

Table 2. COGS Gerdau (2Q23 Genial Est.)

(R$ millions)	2Q23E Genial Est.	1Q23 Reported	% q/q	2Q22 Reported	% y/y
COGS	**(15.393)**	**(15.244)**	**1,0%**	**(17.065)**	**-9,8%**
Brazil	(6.434)	(6.031)	6,7%	(7.481)	-14,0%
North America	(5.533)	(5.848)	-5,4%	(6.121)	-9,6%
South America	(1.220)	(1.244)	-2,0%	(1.375)	-11,3%
Special Steel	(2.608)	(2.519)	3,6%	(2.808)	-7,1%
Eliminations	402	399	0,8%	720	-44,1%

Soure: Gerdau, Genial Investimentos

We project EBITDA to fall in low double digit. We project Adjusted EBITDA of R$3.7bn Genial Est. (-13.8% q/q; -44.3% y/y), suffering retraction in 3 of the 4 business units, in which Brazil BD can be negatively highlighted, coming in with a projected EBITDA of R$688mn, in a more challenging macroeconomic environment, taking our margin expectation to 9.8% (-5.60p.p q/q), given the higher pressure on costs, disproportionately to the slight contraction in revenues. Although we expect a q/q contraction, North America BD should increase its share in Gerdau's total EBITDA (~55% of the total), while we expect a slightly less damaging operating result than in Brazil BD, from the R$2.0bn Genial Est. (-12.2% q/q; -27.1% y/y), implying a margin of 29.0% (-1.2p.p q/q), feeling much less on the margin as well.

Winning the positive highlight, Special Steel division should reach R$630bn Genial Est. (+26.8% q/q; -32.1% y/y), with an EBITDA margin of 20.0% due to the improving economic scenario for the sectors and geographies in which the unit is exposed. However, South America BD is expected to be R$403mn Genial Est. (-17.5% t/t; -45.5% y/y), down sequentially.

Table 3. EBITDA Gerdau (2Q23 vs. Genial Est.)

(R$ millions)	2Q23E Genial Est.	1Q23 Reported	% q/q	2Q22 Reported	% y/y
Adjuted EBITDA	**3.724**	**4.322**	**-13,8%**	**6.680**	**-44,3%**
Brazil	688	1.064	-35,4%	2.288	-69,9%
North America	2.068	2.355	-12,2%	2.836	-27,1%
South America	403	489	-17,5%	740	-45,5%
Special Steel	630	497	26,8%	928	-32,1%
Eliminations	(66)	(77)	-14,7%	(111)	-41,1%

Soure: Gerdau, Genial Investimentos

Net profit trending down by -37% q/q. With an expectation of a financial result of -R$165mn, our assumptions result in a net profit of R$2.0bn Genial Est., falling -37.5% q/q due to worse numbers in most operating divisions, but also due to a non-recurring operating revenue of R$853mn that happened in the previous quarter, which creates a base difference that is harder to beat, in addition to a stronger drop of -53.3% y/y, due to the very unfavorable situation that the steel market is going through today compared to a year ago. We expect net margin to contract in the period, reaching 10.9% (-6.17p.p. q/q; -7.84p.p. y/y).

Table 4. Income Statement Gerdau (1Q23 vs. Genial Est.)

(R$ millions)	2Q23E Genial Est.	1Q23 Reported	% q/q	2Q22 Reported	% y/y
Net Revenue	**18.477**	**18.872**	**-2,1%**	**22.968**	**-19,6%**
COGS	(15.393)	(15.244)	1,0%	(17.065)	-9,8%
Adjusted EBITDA	**3.724**	**4.322**	**-13,8%**	**6.680**	**-44,3%**
EBITDA Margin (%)	20,2%	22,9%	-2,75p.p	29,1%	-8,93p.p
EBIT	**2.815**	**4.292**	**-34,4%**	**5.791**	**-51,4%**
EBIT Margin (%)	15,2%	22,7%	-7,51p.p	25,2%	-9,98p.p
D&A	(714)	(715)	-0,1%	(701)	1,8%
Financial Result	(165)	(50)	229,0%	(361)	-54,4%
Net income	**2.008**	**3.215**	**-37,5%**	**4.298**	**-53,3%**
Net margin (%)	10,9%	17,0%	-6,17p.p	18,7%	-7,84p.p

Soure: Gerdau, Genial Investimentos

Our Take on Gerdau

We expect a slower 2Q23 result from Gerdau, suffering in its main BDs, but mainly losing margin in Brazil, due to a drop in realized price (-2.3% q/q Genial Est.) catalyzed by a rise in COGS/t (+2.6% q/q Genial Est.), with the passage though the P&L of a **(i)** metallic scrap cost and a **(ii)** coal coke cost higher than seen in the spot curve, by the 120-day delay. This dynamic is likely to reverse in the coming quarters as the cooling of the current coal price level reaches the P&L, reflecting in relatively lower costs in 2H23.

In addition, attempts to readjust prices end up limiting volumes in North America, while in Brazil the premium level of domestic vs. imported steel remains high, at ~25% for flat and ~10% for long steel, increasing the opportunity cost of downstream segments to opt for domestic product in the face of volumes exported by China penetrating in the Apparent Steel Use (ASU). While Gerdau shows more resilience than peers to this deteriorating dynamic for domestic sales in Brazil, the scenario is not easy for the market as a whole, and this will be reflected in the lack of appetite by the Company's clients to accept price increases or even price maintenance. As mentioned, we expect a pullback in the realized price for Brazil BD in low single digit.

Still, we see some trends that should interfere with the progression of sequential results as partially non-recurring, given an expectation of improved volume in North America going forward, supported by the US$1.2 trillion infrastructure package, Chips Act and Inflation Reduct Act. Nevertheless, the macroeconomic backdrop continues to show signs of improvement, with the recessionary picture being continually pushed forward in the US.

In Brazil, we expect the gap in the price parity between imported steel and the domestic product to begin to narrow, through stimulus linked to the interest rate in China and some other changes that the government is implementing due to the need to reactivate the country's growth. Although the measures are still timid, we believe that the government recognizes that it will need to find a way to equate expectations for growth with the real economy's demand for durable goods, which is still weak at the top-end.

We also emphasize that Gerdau is more exposed to long steel sales, and although the premium level for this type of steel is also above historical levels, the situation is not as complicated as that of other peers, more exposed to flat steel, of which the gap is considerably larger.

Therefore, we understand that although we still expect the short-term scenario to hamper Gerdau's numbers, we see that its geographically diversified exposure should make a big difference, with the market in the US and Mexico still resilient, despite the higher COGS. As such, we **slightly adjust our assumptions** for a narrowing in the long steel price parity gap in 2H23, which with the effect of cost delay entering the P&L in a more cooling manner, should mildly expand the metal spread at Brazil BD, **leading to a 12M Target Price slight increase to R$32.00** vs. R$31.00 previously.

Icarus' Wings Clipped. While we have slightly raised our Target Price, we do not believe that the stock prices can evolve much more consistently going forward in the short term. We believe that **investors are likely to react negatively to the result after its release**, with sequential losses in relevant levels of EBITDA, margin and profit.

We are seeing the stock currently trading at an **EV/EBITDA 23E** of **3.5x**, starting to **move further away from the 2.3x level seen in 2021**, when the Company's shares were in the R$22-34 range during 1H21, in its best year of stock market performance since 2012. This spectacular appreciation performance occurred, among other factors, due to the entry on bullish cycle for steel, unlike the current situation, where **we see a clear bearish cycle of commodity prices**. In 2021, Gerdau's EBITDA expanded in such an extent that it compressed the multiple, even in the face of a very robust EV appreciation. What **we are seeing now is an EBITDA struggling to gain traction**, **but EV continues to rise**. In the last 30 days Gerdau shares have performed quite prominently, up +12%. We like the Company's investment thesis a lot, and it is certainly a more protected company in bearish cycle than other domestic peers. However, **we cannot see reasons in the short term that justify the stock reaching a level close to what was seen in 2021** (R$34.00 all-time high of the last 10 years vs. R$29.16 today). That was a year with completely different dynamics than today.

We believed that Gerdau's shares, until recently, were undervalued, running at ~**2.8x EV/EBITDA** near the **date of disclosure of the 1Q23 result**. However, in the face of noise correlated to China's news flow, which took over market movements linked to commodity stocks, the stock seems to have basically exhausted all the upside we saw in terms of fundamentals, and the **multiple stretched to 3.5x nowadays**.

Certainly, **better quality-fundamental companies move faster and more intensely in the face of potentially positive news flow**, however we believe the move is (in parts) speculative. There is nothing materially confirmed that is really driving significant demand for steel in China in the near term, and the Company is likely to have worse results in 2Q23. So, **from both a macro and micro perspective, there would be no reason for over-optimism**. We are still living a bearish cycle for steel. Given the level of EBITDA that we are projecting for 2023, **we are starting to see the company no longer being discounted**. This means that, for now, **we are downgrading** the Company **to Neutral rating**, with a **12M Target Price of R$32.00**, which implies a **narrower upside** of **+9.74%**.

Appendix: Gerdau

Figure 1. Gerdau – Income Statement in US$ Millions (Genial Est. 2023-2028)

Income Statement	2023E	2024E	2025E	2026E	2027E	2028E
Net Revenue	**72.109**	**72.460**	**74.248**	**76.365**	**78.384**	**80.106**
(-) COGS	(59.434)	(58.522)	(60.235)	(61.955)	(63.381)	(66.068)
Gross Profit	**12.675**	**13.938**	**14.012**	**14.410**	**15.003**	**14.039**
(-) Expenses	(113)	(1.062)	(1.041)	(1.071)	(1.067)	(1.104)
Adjusted EBITDA	**15.159**	**16.454**	**16.742**	**17.284**	**18.032**	**17.182**
(-) D&A	(2.886)	(3.073)	(3.254)	(3.423)	(3.580)	(3.727)
EBIT	**12.561**	**12.876**	**12.972**	**13.339**	**13.936**	**12.935**
(+/-) Financial Result	(765)	(828)	(819)	(813)	(811)	(842)
(-) Taxes	(2.856)	(2.916)	(2.942)	(3.032)	(3.177)	(2.927)
Net income	**8.940**	**9.131**	**9.211**	**9.493**	**9.948**	**9.165**
Profitability						
Net margin (%)	12,40%	12,60%	12,41%	12,43%	12,69%	11,44%

Figure 2. Gerdau– Cash Flow in US$ Million (Genial Est. 2023-2028)

Cash Flow (FCFF)	2023E	2024E	2025E	2026E	2027E	2028E
Net Revenue	**72.109**	**72.460**	**74.248**	**76.365**	**78.384**	**80.106**
(-) COGS	(59.434)	(58.522)	(60.235)	(61.955)	(63.381)	(66.068)
Adjusted EBITDA	**15.159**	**16.454**	**16.742**	**17.284**	**18.032**	**17.182**
EBIT	**12.561**	**12.876**	**12.972**	**13.339**	**13.936**	**12.935**
(-) Taxes	(2.856)	(2.916)	(2.942)	(3.032)	(3.177)	(2.927)
(+) D&A	2.886	3.073	3.254	3.423	3.580	3.727
(+/-) Δ WK	1.427	(877)	(261)	(412)	(451)	(453)
(-) Capex	(5.135)	(5.180)	(5.221)	(5.265)	(5.290)	(5.302)
FCFF	**8.884**	**6.975**	**7.802**	**8.053**	**8.599**	**7.979**

Disclaimer

This report has been produced by the research department ("Genial Institucional Research") of Genial Institucional Corretora de Câmbio, Títulos e Valores Mobiliários S.A. ("Genial Institucional CCTVM"). Genial Institucional is a brand name of Genial Institucional CCTVM.

Genial Rating

	Definition	Coverage
Buy	Expected return above +10% in relation to the Company's sector average	**46%**
Neutral	Expected return between +10% and -10% relative to the Company's industry average	**44%**
Sell	Expected return below -10% in relation to the Company's sector average	**5%**
under Review	Under review	**5%**

This report may not be reproduced, retransmitted, displayed or re-published to any other person, in whole or in part, for any purpose, without the prior written consent of Genial Institucional CCTVM, which consent may be sought by contacting the principal analyst, who is going to be responsible for obtaining the Control Room´s approval. Genial Institucional CCTVM accepts no liability whatsoever for the actions of third parties in this respect.

This research report is for distribution only under such circumstances as may be permitted by applicable law. This research report is not tailored to the specific investment objectives, financial situation or particular needs of any specific recipient, even if sent only to a single recipient. This research report is not guaranteed to be a complete statement or summary of any securities, markets, reports or developments referred to in this research report. Neither Genial Institucional CCTVM nor any of its directors, officers, employees or agents shall have any liability, however arising, for any error, inaccuracy or incompleteness of fact or opinion contained in this research report or lack of care in this research report's preparation or publication, or any losses or damages which may arise from the use of this research report.

Genial Institucional CCTVM may rely on information barriers, such as "Chinese Walls" to control the flow of information within the areas, units, divisions, groups, or affiliates of Genial Institucional CCTVM

Investing in any of the non-U.S. securities or related financial instruments (including ADRs) discussed in this research report may present certain risks. Non-US securities mentioned, recommended, offered, or sold by Genial Institucional CCTVM or its affiliates are not insured by the Federal Deposit Insurance Corporation and are subject to investment risks, including the possible loss of the entire principal amount invested. The securities of non-U.S. issuers may not be registered with, or be subject to the regulations of, the U.S. Securities and Exchange Commission. Information on such non-U.S. securities or related financial instruments may be limited. Foreign companies may not be subject to audit and reporting standards and regulatory requirements comparable to those in effect within the United States

The value of any investment or income from any securities or related financial instruments discussed in this research report denominated in a currency other than U.S. dollars is subject to exchange rate fluctuations that may have a positive or adverse effect on the value of or income from such securities or related financial instruments.

ANALYST(S) DISCLOSURES AND CERTIFICATION

The analysts hereby certify that the views expressed in this research report accurately reflect their personal views about the subject securities or issuers and it was prepared in an independent manner, including with respect to the person and to Genial Institucional.

The analyst's compensation is, directly or indirectly, determined by income from Genial Institucional´s business and financial operations.

In addition, the analysts certify that no part of their compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

The compensation of the analyst who prepared this report is determined by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues, however, compensation may derive from the business and financial operations revenues of Genial Institucional CCTVM, its affiliates, parent companies and/ or subsidiaries as a whole, of which investment banking, sales and trading are a part. Compensation paid to analysts is the sole responsibility of Genial Institucional CCTVM.

The analysts **Igor Guedes, Lucas Bonventi and Renan Rossi** are the responsible for the content of this report and for meeting the requirements of Securities and Exchange Commission of Brazil (CVM) Instruction 598/2018.

Unless otherwise stated, the individuals listed on the cover page of this report are research analysts.

IMPORTANT DISCLOSURES FOR U.S. PERSONS

This research report was prepared by Genial Institucional CCTVM, a company authorized to engage in securities activities in Brazil. Genial Institucional CCTVM is not a registered broker-dealer in the United States (U.S.) and, therefore, is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts. This research report is provided for distribution to "major U.S. institutional investors" in reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act.) Genial Institucional CCTVM distributes such reports in the U.S. pursuant to Rule 15a-6 and in this context the chaperoning party (Brasil Plural Securities LLC) and in certain instances such distribution is part (or viewed) as part of a soft dollar arrangement established and maintained by Brasil Plural Securities LLC. Genial Institucional CCTVM does not provide this report (or any research) to U.S. persons pursuant to any express or implied understanding that those U.S. persons will direct commission income to Genial Institucional CCTVM.

Any U.S. recipient of this research report wishing to effect any transaction to buy or sell securities or related financial instruments based on the information provided in this research report should do so only through Brasil Plural Securities LLC, a registered broker dealer in the United States with an office at 545 Madison Ave., New York, NY 10022, (212) 388-5600. Under no circumstances should any recipient of this research report effect any transaction to buy or sell securities or related financial instruments directly through Genial Institucional CCTVM.

Brasil Plural Securities LLC accepts responsibility for the content of this research report, subject to the terms set out below, to the extent that it is delivered to a U.S. person other than a major U.S. institutional investor.

The analyst whose name appears in this research report is not registered or qualified as a research analyst with the Financial Industry Regulatory Authority ("FINRA") and may not be an associated person of Brasil Plural Securities LLC and, therefore, may not be subject to applicable restrictions under FINRA Rules on communications with a subject company, public appearances and trading securities held by a research analyst account.

The disclosures contained in research reports produced by Genial Institucional CCTVM and distributed by Brasil Plural Securities LLC in the U.S. shall be governed by and construed in accordance with U.S. law. Additional information relative to the financial instruments discussed in this report is available upon request.

Copyright 2023 Genial Institucional CCTVM and/or its affiliates or parent companies. All rights reserved.