# Metals & Mining Straight out of the Blast Furnace: Week 4, July 2024

#### LatAm Metals & Mining

genial

Equity Research

#### Main takeaways on China:

www.bancogenial.com

(i) Macroeconomics: On July 21, China cut its LPRs. The 1-Y LPR was reduced to 3.35% (-0.10p.p.), and the 5-Y LPR also fell to 3.85% (-0.10p.p.); (ii) The 7-day reverse REPO were also cut to 1.7% (-0.10p.p.); (iii) Since mid-May, the PBoC has allowed provincial governments to set mortgage rates freely, leading to a mismatch with 5-Y LPR. Therefore, we believe that 5-Y LPR was reduced for that reason; (iv) The cut in the 7-day reverse REPO rate is likely to further ease funding costs, helping to alleviate pressure on commercial banks' net interest margins (NII) amid the LPR adjustments; (v) More cuts ahead? We anticipate a -0.10p.p. reduction in the reserve requirement ratio (RRR) still in 3Q24; (vi) We believe in a deliberate reduction of the RMB/USD to counter tax measures on Chinese products; (vii) Consumer confidence is at its lowest levels since 2016; (viii) China initiated its 3rd plenary. So far, key highlights include social housing and a fiscal rebalancing between central and local governments; (ix) Real Estate: Changes in mortgage rates are not expected to have lasting effects; (x) The mortgage rate for second homes dropped more significantly to 3.9% (-1p.p vs. 2023), indicating a shift towards more lenient regulations; (xii) Local governments are releasing subsidized credit for commercial banks to lend to developers. However, we understand that credit support to whitelists may not reduce the inventory of unfinished houses; (xiii) Credit lines are not a guarantee of funding release. For example, Country Garden secured support for only ¥1.7bn (~US\$233mn) in financing vs. ¥604bn (~US\$83bn) of unfinished houses; (xiv) Iron Ore: Prices fell further, as anticipated, with the 62% Fe spot closing at US\$104.2/t (-4.5% w/w). September futures contracts on Dalian (DCE) slowed to US\$110/t (-3.8% w/w); (xv) Port inventories halted last week's decline and rose again, reaching 131.4Mt (+0.98% w/w). If mining majors do not maintain a higher gap between production and sales in 3Q24 and shipments continue at this strong pace with still weak domestic consumption, the spot iron ore price tends to approach ~US\$95/t; (xvi) Steel: Chinese BFs mills recorded a recovery in capacity utilization, rising to 89.2% (+0.50p.p w/w); (xvii) Rebar production hit its lowest level in the last 3M, with mills increasingly shifting production to flat steels; (xviii) HRC output remains at satisfactory levels, driven by exports. We identified a reduction of 83.5% (-1.14p.p w/w), but still well above the 2023 level (+5.12p.p y/y).

We present another edition of our weekly Metals & Mining report (Vale, CMIN, Gerdau, CSN and Usiminas), covering week 4 of July 2024. This report is based on data collected over the week prior the publication, specifically from July 13-19. We continue to give updates on important indicators for monitoring steel supply and demand fundamentals in China, and consequently, iron ore in the seaborne system. We also highlight the chapter on Brazil, showing the dynamics of the domestic steel premium for both long and flat steel references vs. imported prices.

#### Analysts

Igor Guedes +55 (11) 99464-8234 igor.guedes@genial.com.vc

Rafael Chamadoira +55 (11) 99464-8236 rafael.chamadoira@genial.com.vc

**lago Souza** +55 (11) 99464-8235 iago.souza@genial.com.vc

#### Companies

VALE US Equity Buy

Price: US\$ 10.70 (24-Jul-2024) Target Price 12M: US\$ 14.50 (NYSE)

VALE3 BZ Equity Target Price 12M: R\$ 78.50 (B3)

CMIN3 BZ Equity Buy

Price: R\$ 4.98 (24-Jul-2024) Target Price 12M: R\$ 6.00

GGBR4 BZ Equity Buy

Price: R\$ 17.82 (24-Jul-2024) Target Price 12M: R\$ 23.40

CSNA3 BZ Equity Neutral

Price: R\$ 11.96 (24-Jul-2024) Target Price 12M: R\$ 15.50

USIM5 BZ Equity Neutral

Price: R\$ 8.07 (24-Jul-2024) Target Price 12M: R\$ 8.70

# genial Research

# China

# Macroeconomics

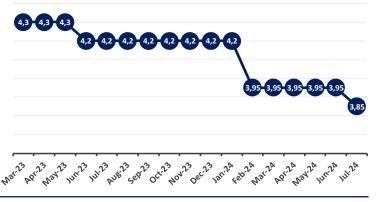
**The big news of the week: China cuts interest rates.** At the beginning of this week, on July 21, China cut its benchmark loan prime rates (LPRs) after a surprising reduction in the main policy rate used by the People's Bank of China (PBoC). The 1-year LPR was reduced to 3.35% (-0.10p.p.), and the 5-Y LPR also fell to 3.85% (-0.10p.p.). Consensus expectations were for rates to remain unchanged, although we had noted in our week 4 June report that inflation data still indicated potential cuts by the PBoC, and that a less contractionary monetary policy should be adopted in 2H24. This can be seen in the attached report (Straight out of the Blast Furnace: Week 3, July 2024).





Source: Bloomberg, Genial Investimentos

### Graph 2. LPR 5-Years (%)



Source: Bloomberg, Genial Investimentos

The 1-Y LPR affects most new and existing loans related to the economy's underlying goods and services, while the 5-Y rate impacts mortgage prices. The 7-day reverse repo rates were also cut to 1.7% (-0.10p.p.). This rate is used by the PBoC to remunerate the purchase of securities from commercial banks through bidding, with an agreement to sell them back to the secondary market in the future.

### Our take on macroeconomics

This week, we observed the PBoC implementing the first cut in the 7-day reverse reportates and the second cut in the LPR, reducing both the 5-Y and 1-Y LPRs. The 5-Y LPR had already been cut by -0.25p.p in February, while the PBoC kept the 1-Y LPR unchanged at that time. This decision comes after a disappointing GDP growth rate in 2Q24, reaching 4.7% y/y (-0.4p.p vs. consensus), with a significant sequential growth slowdown compared to 1Q24. Credit growth weakened, especially in the corporate and real estate sectors, due to worsening economic sentiment. We understand that the recent downgrade of both LPR references aims to stimulate corporate credit demand and stabilize the real estate market.

**The decision to cut both LPRs is correlated with the mortgage easing implemented in April.** Since mid-April, the PBoC has allowed provincial governments to set mortgage rates independently, leading to a divergence between the 5-Y LPR, usually correlated with mortgage rates, and the actual rates offered for real estate loans over the past 30 days (which were below the 5-Y LPR). Therefore, we believe the 5-Y LPR was reduced for that reason, even though we only expected a cut in the 1-Y LPR. By doing so, the PBoC appears to have realigned the correlation between mortgage rates and the LPR.

If the PBoC wasn't cutting rates despite having monetary policy room, what would have changed? Since April, commercial banks have been prevented from offering deposit rates above a specific limit, reducing their funding costs for liabilities. The 7-day reverse REPO rate cut, announced along with the LPR cuts, is expected to further ease wholesale funding costs for banks, alleviating pressure on their net interest margins (NII) amidst LPR adjustments. This was one reason why, despite weak inflation, the PBoC had not previously accelerated the LPR cuts. By addressing the negative impact on commercial banks' NII, the PBoC has found opportunities to reduce the LPRs.

**More cuts ahead? We believe so...** In response to growth challenges from the current slowdown in real estate and with very low CPI data, we anticipated last week that there would be monetary and credit policy easing throughout 2H24. We had also indicated in April that the 1-Y LPR could be cut to 3.35% in June. We were off by one month, as the reduction occurred in July. Besides the cuts observed this week, we consider a -0.10p.p. reduction in the reserve requirement ratio (RRR) likely in 3Q24. However, beyond (i) concerns about banks' net interest margins (NII), as mentioned above, there is the issue of (ii) the stability of the RMB/USD exchange rate, both factors that constrain the potential for further rate cuts.

**Deliberate Reduction of the RMB/USD Exchange Rate to Combat Tariffs on Chinese Products.** We believe the Chinese government aims to maintain flexibility in the RMB/USD exchange rate to address potential future economic vulnerabilities and external shocks, such as a possible 60% tariff from the U.S. We anticipate a cut in the FED rates in October, following the revision of Payroll data (consensus is for September). In our view, this should help alleviate depreciation pressure on the RMB, potentially allowing for more domestic rate cuts. However, if a 60% tariff is imposed on Chinese imports by the U.S. in 2025-2026, more aggressive rate cuts by the PBoC might only be justified if the Chinese central government decides to deliberately devalue the RMB/USD exchange rate. **Further monetary policy easing for commercial banks.** The PBoC has also eased operational requirements for medium-term lending facility (MLF) rates for commercial banks, allowing collateral exemptions if these banks intend to sell central government bonds (CGBs). This decision aims to increase the scale of tradable securities and alleviate supply pressures in the bond market. The PBoC had previously announced plans to borrow 10-Y CGBs from the primary market, enabling short selling and potentially increasing long-term yields. Currently, the yield on 10-Y CGBs remains low (below 2.3%).

## **Policy updates and market sentiment**

**Structural changes and salary reductions.** Considering the pressured net interest margin (NII) of commercial banks, recent salary cuts in China's financial sector reflect a significant shift in previously lucrative roles, driven by the "common prosperity" initiative. Average hiring salaries in 38 major cities fell by -1% y/y in 4Q23, a stark contrast to the +13% y/y growth seen in 4Q21. Although there was a slight recovery in 1H24, the trend suggests broader salary reductions could extend to other sectors due to high unemployment and low consumer confidence in the economy, which is likely to continue squeezing some business margins. We estimate that discretionary retail spending fell at the steepest sequential pace since the lockdowns in April 2022, when China was under the Zero-covid policy. This could pressure small and medium-sized enterprises to cut salaries further.

**Consumer confidence at lowest levels since 2016.** Consumer confidence in income and employment remains weak, with indices hovering around pandemic lows of 47-45% in 1H24. This is significantly below the more optimistic levels seen a year ago (1H23) following the end of the zero-Covid policy and the reopening of economic activities. Historically, confidence in income and employment has fallen to its lowest level since 1Q16, when GDP growth slowed to 6.7%, the slowest quarterly pace in seven years. However, a turnaround was triggered by ¥3.3 trillion (~US\$455bn) in public investments in the real estate market during 2016-17, which inflated house prices at the time. Conversely, we do not see the current real estate incentives boosting the confidence indicator this time around.

**Carbon market in China celebrates 3 years.** China's carbon trading market has shown stable performance, with a total of 465Mt in carbon emission allowances traded and a total value of ~¥27bn (~US\$3.7bn) as of July 15. Marking its third anniversary, the national carbon emission trading system, launched on July 16, 2021, covers 5.1Bt in annual carbon dioxide emissions, representing over 40% of the country's total emissions, according to the Ministry of Ecology and Environment (MEE).

# Our take on policy updates and market sentiment

**Increase in US Tariffs by 60% on Chinese Imports.** A 60% increase in US tariffs, expected in 1H25, poses a negative risk to China's economy, potentially reducing GDP growth. If the US implements these tariffs without retaliation from China and despite some trade diversion, macroeconomic policy adjustments are anticipated. As previously mentioned, we believe it is likely that fiscal policy will take the lead, while monetary policy may be slightly eased, although full quantitative easing or a zero-interest rate is not expected. As we have previously noted, we believe the Chinese central government might deliberately devalue the RMB/USD exchange rate by up to 10%. This could mitigate the negative impact on GDP in a scenario where domestic consumption does not improve, but China continues redirecting factory overcapacity to global export markets.

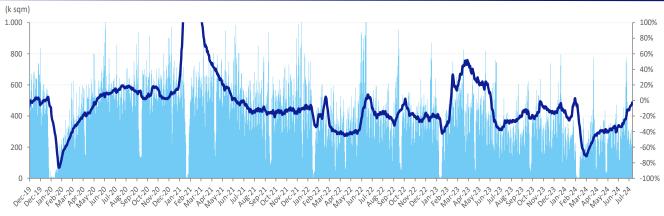
What are the updates on the 3rd Plenary Session of the Chinese Communist **Party?** The Communist Party of China (CPC) began its third plenary session on Monday, July 21. The plenary is an important meeting held approximately every 5 years to define long-term social and economic policies. This session, the third since the 2022 party congress, will focus on a key document aimed at deepening reforms and advancing modernization. The series of meetings will conclude on Thursday, July 25.

So far, President Xi Jinping has emphasized long-term goals, equal access to production factors, and fair competition, with a focus on high-quality development and innovation. The main areas of reform include (i) urbanization (through social housing, further explored in the real estate market section of this report), (ii) Improvements in social welfare, and (iii) a rebalanced fiscal relationship between central and local governments, shifting tax collection from producers to consumers to increase local government revenue. Nevertheless, without further details on the purchase of unsold property stock, market sentiment remains negative, and the interest rate cuts (LPRs) have not yet boosted investor confidence, despite being surprisingly implemented according to consensus.

# **Real Estate**

**Improvement in Tier I city sales likely to be short-lived.** There is no doubt that data show the easing of mortgage rules in May is having a positive impact on Tier I cities. In June, state-owned developers reported a +54% y/y increase in primary home sales, while solvent private developers saw up to +24% y/y. However, we believe this situation is temporary due to the continued negative sentiment among buyers and structural challenges within the sector. The gains are influenced by seasonal factors (historically, mid-year sales tend to show increased appetite). We consider a reasonable duration for this sales boost to be ~90-days from early June. We do not foresee the trend persisting much beyond this period.

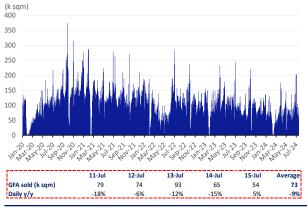
### Graph 3. Daily sales of primary housing (30 major cities)



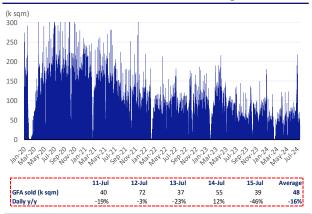
30 cities 30 day moving average y/y 2-Jul-24 3-Jul-24 4-Jul-24 5-Jul-24 6-Jul-24 7-Jul-24 9-Jul-24 10-Jul-24 11-Jul-24 12-Jul-24 13-Jul-24 14-Jul-24 15-Jul-24 8-Jul-24 Average 249 261 304 314 219 258 276 293 249 313 221 203 229 GFA sold (k sqm) 190 256 -14% -29% -13% -2% -23% -22% 4% 10% 41% Daily y/y -8% -37% 97% 5% -35% 30d MA y/y -11% -12% -12% -11% -12% -12% -9% -8% -7% -7% -6% -6% -5% -3%

Source: Wind, Genial Investimentos

### Graph 4. Daily sales of primary housing GFA (Tier 1)



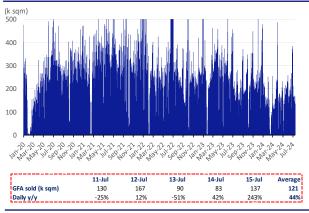
Source: Wind, Genial Investimentos



### Graph 6. Daily sales of primary housing GFA (Tier 3)

Source: Wind, Genial Investimentos

## Graph 5. Daily sales of primary housing GFA (Tier 2)

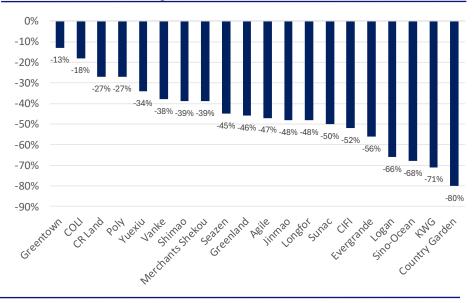


Source: Wind, Genial Investimentos

### www.bancogenial.com



**Negative sentiment among buyers still prevails.** Homeowners in Guangzhou have begun halting mortgage payments on a project with 160 pre-sold units. This action highlights the ineffectiveness of existing whitelist policies designed to ensure housing completion, potentially leading to an increase in secondary home sales and a decline in pre-sales for defaulting developers like Country Garden, Shimao, and R&F. Homeowners of the Guangzhou Shenglong Jinsheng Real Estate project, pre-sold in 2022 with a delivery forecast for June, have notified 5 banks of their decision to stop mortgage payments due to delays. Despite a new round of stimulus measures introduced since mid-May, which have indeed improved primary sales in Tier I cities, we believe it is unlikely that Country Garden's contracted sales will recover from a -80% y/y decline in 1H24, given its focus on low-tier cities.

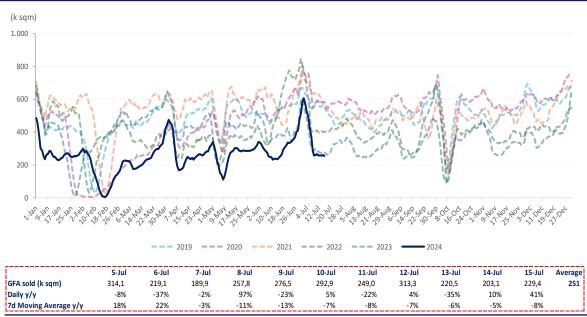


### Graph 7. Contracted sales growth: 1H24 vs. 1H23 (y/y %)

Source: Bloomberg, Genial Investimentos

Why are stimulus unlikely to solve the problems facing real estate developers? We believe that buyers are increasingly focused on completed homes or the secondary market, leaving developers still facing hurdles for new launches. According to our perception, the main barriers to a sustainable recovery include: (i) discouraging job prospects, (ii) economic uncertainty, and (iii) unfavorable trends in residential property prices. Additionally, the situation is compounded by structural issues such as (iv) the demographic crisis and (v) the oversupply of housing. This combination of factors suggests that the balance between supply and demand in China's real estate market will take some time to stabilize, as we have been signaling since 2022. We understand that the overall picture shows such dysfunction that it could take nearly a decade to reverse. The area sold improved to 229k sqm (+12.8% w/w), but the 7-day moving average still shows a contraction of 8% y/y (-3p.p. w/w).

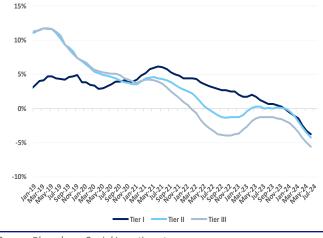
**Beijing was one of the last major cities to embrace the relaxation.** Beijing reduced payment requirements by -10p.p, to 20% for first buyers and 35% for second homes in urban areas, with a drop of -5p.p (or 30% in non-urban areas), in line with easing measures in other Tier I cities. This follows the central government's plan to tackle the housing crisis. Although Beijing's rules now favor families with 2 plus+ children, skepticism persists due to the PBoC's minimal funding (which seems to us to be an obstacle, as we commented last week) and the slow progress of the social housing programs being tested. For example, despite similar measures, primary sales of new homes in Shanghai rose by only +8% in the first 23 days of June, far from ideal to compensate for the total of the 70 largest cities reaching a contraction of -9% y/y in the weekly analysis.



#### Graph 8. Daily primary housing GFA sales (30 major cities / 7 days Moving Average)

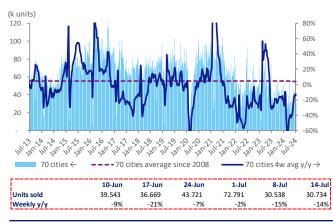
Source: Wind, Genial Investimentos





Source: Bloomberg, Genial Investimentos

Graph 10. Weekly primary housing sales (70 major cities)



Source: CRIC, CREIS, Genial Investimentos

Unemployment remains strong, especially among youth, who are typically first

**buyers.** It seems that, despite official unemployment figures showing a reduction to 5% in May (vs. 5.7% at the end of 2022) and remaining stable in June, growing anxiety over employment will continue to dampen consumer confidence. Youth unemployment, although it fell to 13.2% in June (-1 p.p. m/m vs. May), remains at very high levels. It is crucial to understand that for the sector to cool down real estate bubble characteristics, first buyer penetration would need to increase. However, the primary age group struggling with job searches are young people, who are typically those looking to buy their first home. Therefore, the decline in employment sentiment in China threatens to undermine the potential recovery in home sales, despite stimulus efforts. The number of verified job seekers increased by +38% y/y in 1H24.

**Changes in mortgage rates likely to have no lasting impact.** The mortgage rate for first-time homebuyers in China dropped to a record low of 3.45%, the lowest since 2009, following relaxations in May. However, the decrease remains modest at -0.64 p.p. since the beginning of 2023. In contrast, the mortgage rate for second homes fell more significantly, reaching 3.9% (-1 p.p. vs. 2023), indicating a shift towards more lenient regulations on real estate speculation. In other words, the relaxations now extend to buyers who are not first-time purchasers. Despite these reductions, we believe that expectations of housing price declines continue to dampen demand. Previous rate cuts, (i) -1.65 p.p. over 15M between 2021 and 2022 and (ii) -0.23 p.p. in 2023, have done little to alleviate the current decline in sales, raising doubts about the potential impact of a -0.41 p.p. reduction in 1H24.

**End of the "Housing is for Living, not speculation" discourse.** Regulatory adjustments may be occurring in response to ongoing challenges in home sales, as evidenced by a narrower gap between mortgage rates for second and first homes since May. The gap has decreased to 0.45 p.p., down from 0.91 p.p. in previous months. Meanwhile, cities such as Hangzhou and Chengdu have started to lift restrictions on home purchases, reflecting a shift towards stimulating the real estate market and the economy, rather than strictly adhering to the principle that housing is primarily for living, not for speculation a slogan introduced by President Xi Jinping's administration in 2019. Since the removal of the "housing is for living, not for speculation" slogan from Premier Li Qiang's employment/payroll activity report in May this year, we have sensed that the government would begin to relax measures beyond first buyers, as we have anticipated in other sector reports.

**Temporary increase in sales for major cities at the expense of smaller cities.** The latest round of mortgage rate cuts in May, along with lower down payment requirements, may boost real estate transaction volumes in major cities from June to August (approximately 90 days, as previously noted), supporting KE Holdings' commission revenue. Mortgage rates for first homes have decreased to 3.15% in Foshan, 3.25% in Suzhou, Nanjing, and Wuhan, and 3.5% in Shanghai and Shenzhen, reaching higher-tier Tier II cities beyond just Tier I cities. Concerns about the non-completion of pre-sold homes suggest that the stimulus effect is likely to be more apparent in secondary market transactions than in new home sales contracted by developers. Primary home sales in the 70 largest cities continued to decelerate, ending the week at 30.7k units (-14% y/y).

As previously noted, measures targeting tier I and upper-tier II cities may redirect demand from tier III and low-tier II cities. country garden is least exposed to these larger cities, with only 8% of its landbank in such areas, while Evergrande, Seazen, and Agile have 16% to 20%. Therefore, recent stimulus policies may have limited impact on increasing home sales for private developers facing tighter balance sheets. Yuexiu and COLI, both state-owned, are more exposed to Tier I and upper-Tier II cities, with 74% and 59% of their land banks, respectively. Longfor has 37%, and Vanke has 33%.



### Graph 11. Weekly housing launches and sales rate (9 major cities)

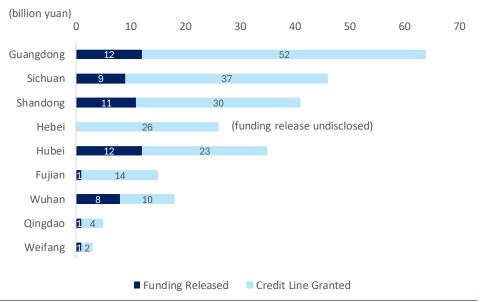
Source: CREIS, Genial Investimentos

Local governments are providing subsidized credit for commercial banks to lend to developers. Most of the financial support for meeting Whitelists, which prioritize completing housing projects, is manifesting as extensions of existing loans, allowing projects to continue construction and minimize delays. Local governments have been authorized by the PBoC to release credit lines for developers to finance unfinished projects. In other words, while the government is subsidizing the credit, the risk of default remains with the bank that issues the loan. Channel checks with private builders indicate that new loan applications generally require additional collateral, typically from a new phase of the project, posing challenges for developers facing cash flow tightness.

Credit support for whitelists may not reduce the stock of unfinished homes. According to our analysis, the focus of Chinese commercial banks on lending for housing projects on Whitelists is unlikely to generate a substantial volume of additional loans, even if governments are willing to subsidize credit. This may do little to reduce the number of unfinished homes. Whitelists imply a total financing need of ~¥1.4 trillion (~US\$194bn), representing ~1% of China's GDP. Since the risk of default remains with the bank, commercial banks are advancing credit to developers very slowly, as they are reluctant to lend resources. For example, Country Garden, one of the top 3 private developers, secured support for only ¥1.7bn (~US\$233mn) of financing versus ¥604b (~US\$83bn) of unfinished homes, representing less than 1% of its total portfolio. Equity

genial

**Credit lines are not a guarantee of financing disbursement.** As of March, credit lines totaling ¥469bn were allocated to 1,979 projects on Whitelists. Six provinces, including Guangdong and Sichuan, reported ¥182bn (~US\$25bn) in bank credit lines. However, having access to these credit lines does not guarantee that the funds will be disbursed, as discussed earlier. For example, Country Garden had ~¥300bn (~US\$40bn) in credit lines in 2022, while its total debt was ¥271bn (~US\$37bn) at the end of the year. Despite this, the developer missed a payment on a US\$15.4mn offshore bond in October 2023, correlating with a significant drop in sales of -71% y/y in 1H24 vs. -34% y/y in 1H23. This situation suggests that banks may withhold assistance when a developer's cash flow deteriorates.



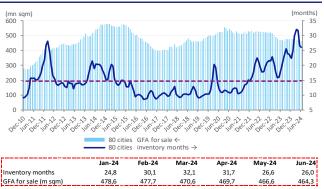
### Graph 12. Credit line granted vs. funding released

Source: Bloomberg Genial Investimentos

**Financing challenges for developers persist.** In April, 1,247 projects on the Whitelists secured loans totaling ¥155bn (~US\$20bn). However, loans from local governments to private developers decreased by -6% y/y in March, following a -10% y/y drop in January and February. The share of local government loans in the overall financing sources for developers fell to 15% (-4 p.p. m/m), indicating continued financing challenges despite the introduction of Whitelists at the end of January. Our analysis suggests that Chinese banks' support for developers to address the issue of unfinished homes may be insufficient, with recent financing of ¥2.3bn (~US\$315mn) representing only 0.3% of the total value of these homes. Besides the example of Country Garden, Shimao received only ¥68mn out of the ¥366mn requested by April for its 28 projects included in local government Whitelists. The banks' caution in extending further loans to the struggling real estate sector indicates that developers need to rely more on their own resources, even with subsidized credit.

Equity

genial



#### Graph 13. Inventory months (80 major cities)

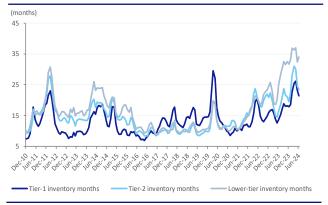
Source: CRIC. Genial Investimentos

Months of new home inventory, even with a slight reduction, remain 3x higher than before the bubble burst. Currently, new home inventory in China is taking three times longer to be absorbed by the market compared to 2016-21, marking the longest duration in 14 years. The inventory across 80 monitored cities is equivalent to an average of 31 months of sales, the highest since data collection began in 2010. This oversupply suggests that the real estate market slowdown may take longer to stabilize, with home prices likely continuing to fall, hindering sales recovery. Tier I cities need 23 months to clear inventory without any new launches, while Tier II cities would take 25 months and Tier III cities, 35 months. Additionally, 28 cities, representing 35% of monitored cities, face a potential halt in land sales due to new home inventories exceeding 36 months of sales. Among these, 21% are Tier II cities and 79% are Tier III, with only five cities having inventory absorption periods of less than 12 months.

**3rd Plenary Session: What were the announcements related to the real estate market?** At the beginning of this week, on July 21, the Chinese central government announced reforms from the Third Plenary Session focusing on urbanization and housing policies. Key points include (i) Urbanization initiatives will aim to equalize the benefits of migrant workers with those of city residents and protect the land use rights of farmers moving to urban areas. (ii) Proposed agrarian reforms will allow farmers to monetize their rural land rights. Our understanding is that these measures may have a positive impact on housing demand in the long term, depending on effective implementation. We have consistently argued, since the report we published on social housing last December, that this could be a way for China to continue increasing its urbanization rate in the coming years if the policy is well implemented. This report can be found attached (link).

**Updates on the social housing program**. During the recent announcements, the Chinese government provided more details about increasing the construction of rental housing within the social housing package to meet the needs of the working class. Local governments will gain autonomy in regulating the real estate market, including the ability to remove restrictions on home purchases. Other reforms will target the real estate development financing model, the pre-sale system, and taxation. Although reforming the pre-sale system is seen as necessary to protect buyers' rights, we believe its implementation may not be timely due to the current market weakness.

#### Graph 14. Inventory months (By city tier)





**Steel: contrary to our expectations, billet prices declined again.** The prices of Tangshan billets recorded a weekly drop, measured between July 15-19, influenced by the fall in rebar futures prices. Despite a slight reduction in billet production and increased demand from rerollers, the fundamentals of the semi-finished steel market remained weaker. On July 21, the price of Tangshan square billet fell -0.9% w/w to  $\pm$ 3,270/t (~US\$450/t), including a 13% VAT.

**Inputs: scrap prices continue to decelerate, but coke stocks decline.** In the week ending July 19, the national composite price of steel scrap hit a 3-month low, decelerating to  $\pm 2,766/t$  (~US\$380/t), reflecting a -0.8% w/w drop. We attribute this reduction primarily to the weakening of the finished steel market in electric arc furnace mills. Additionally, the production of coke oven coal has also decreased, with the execution rate falling -3.08 p.p. w/w to an average of 66.4%.

**Production in major coal mining areas was temporarily halted due to a political meeting in Beijing.** Consequently, processed coke production fell to 553.5Kt/day (-1.1% w/w). The price of metallurgical coke traded during the week experienced a slight decline of -0.2% w/w, reaching  $\pm 1,682/t$  (~US $\pm 232/t$ ). Stocks of coke from independent producers dropped to 352.1Kt (-0.8% w/w), hitting the lowest level in 3 years. We understand this decline is a result of consistent coke purchases by blast furnace mills to meet production needs, given the high utilization rates for flat steels.

**Iron ore: prices fall further, as anticipated.** Iron ore prices continued to decline throughout the past week, with the spot price for the 62% Fe benchmark closing at US\$104.2/t (-4.5% w/w), reflecting a persistent symptom of weak domestic steel demand. September futures contracts on the Dalian Commodity Exchange (DCE) slowed to US\$110/t (-3.8% w/w). However, while we believe a rebound is unlikely, iron ore prices may at least remain within a stable range this week, supported by still robust production rates at flat steel mills, primarily linked to durable goods for export. On the other hand, the steel market continues to be hindered by seasonal calm in demand, with interest in purchasing finished steel, particularly construction steel, remaining quite low due to the weakening real estate market.



### Graph 15. 30 Days Iron ore prices (Spot - S&P Platts)

Source: S&P Platts, Genial Investimentos



Av Brig Faria Lima, 3400 - 9º andar

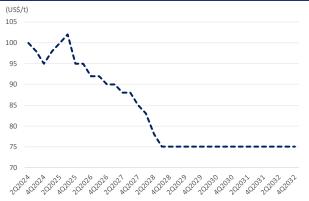






Equity

oenia

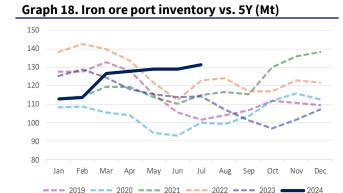


Source: CRIC, Genial Investimentos



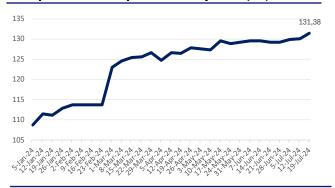
Iron ore: port inventory interrupt last week's decline and rise again. Port stocks of iron ore at ~30 ports monitored in China rose to 131.4Mt (+0.98% w/w). According to our analysis, this weekly increase in stocks (the largest since mid-April 2022) continues due to strong shipment flows from Brazilian and Australian miners. As noted in our Earnings Preview for Vale 2Q24, attached (Vale 2Q24 Preview), if mining majors maintain this strong operational performance in shipments, iron ore prices are likely to decline further.

For prices to show any lasting resilience, inventory would need to decrease the current port stocks are increasingly diverging from the levels of the past 5 years. Seasonally, the 2Hs are more favorable for production due to drier weather in Brazil. If miners do not maintain a significant gap between production and sales in 3Q24, and if shipments continue at this strong pace with domestic consumption remaining weak, spot iron ore prices are likely to fall below the US\$100/t level, testing the ~US\$95/t barrier in 4Q24. This aligns with our projection, which has been the most pessimistic compared to consensus since the beginning of the year.



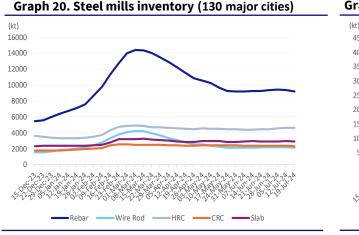
Source: Bloomberg, Genial Investimentos

Graph 19. Iron ore port inventory 2024 (Mt)



Source: Bloomberg, Genial Investimentos

**Steel: Inventory at both traders and mills decline.** Steel stocks within Chinese mills decreased for the third consecutive week. Between July 12-19, total inventories of the five main steel products (rebar, wire rod, HRC, cold-rolled coils, and plates) fell to 4.8 Mt (-1.1% y/y), according to the mills we monitor. Our analysis suggests that the main reason for the decline is reduced steel production, as many mills conducted maintenance or slightly cut back output. In a related trend, retail and trader steel inventory in China also fell -1.1% w/w, after six weeks of increases. This decrease reflects a slight recovery in demand from developers, particularly state-owned ones with land banks in Tier I cities. These developers are benefiting from a temporary sales boost due to mortgage easing and have expanded their pace of ongoing projects as weather conditions improved (moving out of the rainy months of June/July). This has led to some replenishment needs on construction sites and a slight improvement in local market sentiment.

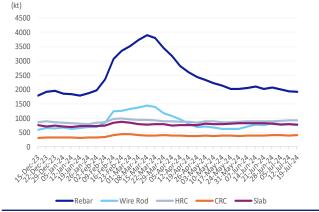






Equity

genial

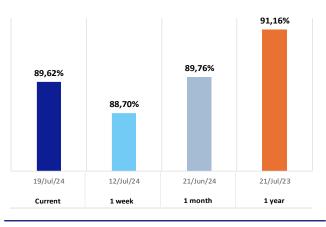


Source: My Steel, Genial Investimentos

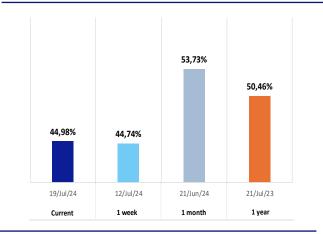
**Steel: Blast furnace utilization rate resumes upward trend.** Chinese blast furnaces (BF) recorded a recovery in capacity utilization, rising to 89.2% (+0.50 p.p. y/y), ending a three-week decline. According to our findings, some furnaces that were idle have been restarted, although many mills continue to face negative margins. Hot metal production was 2.4 Mt/day (+0.57% y/y). The production of steel from electric arc furnaces (EAF) also showed a slight improvement after four consecutive weeks of decline, with a marginal increase in the utilization rate, closing on July 19 at 44.9% (+0.24 p.p. y/y), as some mills completed their maintenance schedules. However, we note that overall production remains weak. Our view is that mills are reluctant to increase operating hours to boost output due to minimal improvements in profits (which remain negative), as they aim to capture these slight gains amidst successive declines in scrap prices providing input relief. The average loss was -¥174/t (or -US\$24/t).

# genial Research

Graph 22. BF capacity % (weighted average)

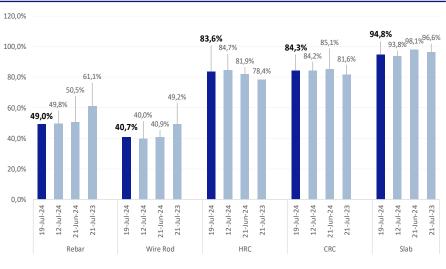


### Graph 23. EAF capacity % (weighted average)



Source: My Steel, Genial Investimentos

**Steel: Rebar production hits lowest level in 3M**. Rebar production in Chinese mills declined for the third consecutive week, ending the past week at 2.2 Mt (-1.7% w/w), reaching the lowest level in almost 3M. This figure represents a significant drop of -19.8% y/y (same week vs. 2023). The decrease in production affected both integrated mills and mini mills, with all regions except southwest and northern China reporting reductions. Demand for residential construction, a key segment for long products, still presents many uncertainties, even with the beginning of the departure from the rainy season, which had been hindering steel loading on construction sites.



### Graph 24. Blast-furnace capacity utilization (by product)

Source: My Steel, Genial Investimentos

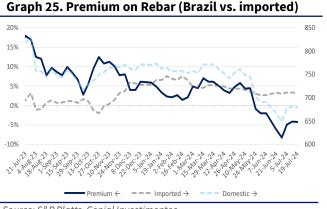
Source: My Steel, Genial Investimentos

**Steel: HRC output remains at a good level**. We understand that the decline in rebar production mainly occurred in eastern China, particularly in Jiangsu Province, where some mills halted operations or shifted production from rebar to flat steel products in an attempt to achieve better returns, as anticipated in last week's report. Therefore, mills producing Hot Rolled Coil (HRC) continue to maintain satisfactory output levels, driven by downstream demand related to the export of durable goods. The utilization rate was 83.5% (-1.14 p.p. w/w), showing a weekly slowdown but still well above the 2023 level (+5.12 p.p. y/y).

# Brazil

**Brazilian Steel: Sequencing of rebar price increases.** After an initially challenging fortnight of negotiations, Brazilian rebar prices have risen again, this time by +2.7% w/w with the completion of several July contracts. Overall, prices increased by +4.8% in July, reaching R\$3,800/t (~US\$678/t), within the range of R\$3,650-3,950/t, according to S&P Platts. This price still reflects a negative premium of -4.3% compared to imported steel. We note that the latest price adjustment fell short of the +8% increase targeted by Brazilian mills but was in line with market expectations (between 4-5%).

Looking ahead, we believe that major long steel producers (including Gerdau) will attempt another round of increases for August (+6-8%). However, we assess that achieving this, particularly at such a magnitude, will be challenging due to low visibility on the ability to accommodate new hikes, given the current demand for housing construction remains heavily reliant on low-income projects under the Minha Casa, Minha Vida (MCMV) program.



Source: S&P Platts, Genial Investimentos

Graph 26. Premium on HRC (Brazil vs. imported)



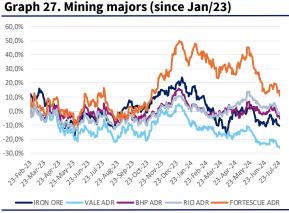
Source: S&P Platts, Genial Investimentos

**Brazilian Steel: Imported HRC price from China drops, but premium softens slightly.** As discussed, China's hot-rolled coil (HRC) output remains significantly higher compared to the same period last year, supported by the industry's interest in redirecting installed capacity from durable goods to global markets. Despite imminent risks of taxation on Chinese products, HRC blast furnace utilization rates have been rising, driven by a shift from long steel to flat products due to less strained margins.

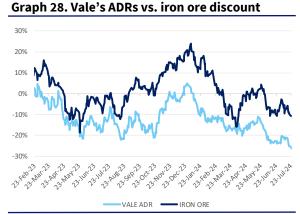


Consequently, the offloading of unused raw steel and non-rolled material will likely continue, even with the quota system implemented by the Brazilian Ministry of Commerce (MDIC). As a result, the price of Chinese imports arriving in Brazil has decreased to US\$500/t (-0.4% w/w). However, the USD/BRL exchange rate has risen, more than offsetting the effect and increasing the cost of imports at Brazilian ports. With domestic HRC prices stable at R\$4,150/t, within the R\$4,000-4,300/t range calculated by S&P Platts, the parity premium closed the week at +17.9% (-3.1p.p w/w).

# Key data to keep up with on companies' side



Source: Bloomberg, Genial Investimentos



Source: Bloomberg, Genial Investimentos

### **Table 1. Short position**

Company	Ticker	Lending Interest Ratio	Change in LI Ratio	Float (%)
Vale	VALE3	9,4	-1,8	4,0
CMIN	CMIN3	13,8	-2,4	19,6
Gerdau	GGBR4	11,2	2,9	4,8
Usiminas	USIM5	7,6	3,3	8,6
CSN	CSNA3	17,5	4,1	7,3

# Appendix: Vale

Income Statement	2024E	2025E	2026E	2027E	2028E	2029E
Net Revenue	39.856	44.580	43.639	45.540	46.582	50.303
(-) COGS	(25.001)	(27.973)	(28.162)	(29.333)	(30.901)	(33.368)
Gross Profit	14.855	16.607	15.477	16.207	15.681	16.935
(-) Expenses	(3.109)	(3.578)	(3.354)	(3.000)	(2.698)	(2.915)
Adjusted EBITDA	14.914	16.284	15.617	16.866	16.819	18.022
(-) D&A	(3.139)	(3.314)	(3.488)	(3.664)	(3.847)	(4.022)
EBIT	11.774	12.970	12.129	13.202	12.971	14.000
(+/-) Financial Result	(2.359)	(2.063)	(2.007)	(2.022)	(1.983)	(2.040)
(-) Taxes	(1.482)	(1.653)	(1.521)	(1.702)	(1.679)	(1.846)
Net income	7.934	9.254	8.601	9.478	9.310	10.114
Profitability						
Net margin (%)	19,91%	20,76%	19,71%	20,81%	19,99%	20,11%

# Figure 1. Vale - Income Statement in US\$ Millions (Genial Est. 2024-2029)

## Figure 2. Vale- Cash Flow in US\$ Millions (Genial Est. 2024-2029)

Cash Flow (FCFF)	2024E	2025E	2026E	2027E	2028E	2029E
Net Revenue	39.856	44.580	43.639	45.540	46.582	50.303
(-) COGS	(25.001)	(27.973)	(28.162)	(29.333)	(30.901)	(33.368)
Adjusted EBITDA	14.914	16.284	15.617	16.866	16.819	18.022
Adjusted EBIT	11.774	12.970	12.129	13.202	12.971	14.000
(-) Taxes	(1.482)	(1.653)	(1.521)	(1.702)	(1.679)	(1.846)
(+) D&A	3.139	3.314	3.488	3.664	3.847	4.022
(+/-) Brumadinho and Samarco	(716)	(2.070)	(1.750)	(1.279)	(1.117)	(826)
(+/-) Δ WK	1.517	569	847	(393)	(244)	(463)
(-) Capex	(6.758)	(6.778)	(6.778)	(7.319)	(7.319)	(7.319)
FCFF	7.475	6.352	6.416	6.173	6.459	7.568

# **Appendix: CMIN**

Figure 1. CMIN – Income Statement in R\$ Mittions (Genial Est. 2024-2028)							
Income Statement	2024E	2025E	2026E	2027E	2028E		
Net Revenue	13.366	16.842	19.948	20.607	16.959		
(-) Cash COGS	(7.635)	(8.548)	(10.263)	(11.133)	(10.455)		
Gross Profit	4.149	6.427	7.516	6.999	3.724		
(-) SG&A and others	(1.702)	(2.114)	(2.452)	(2.456)	(1.928)		
Adjusted EBITDA	4.253	6.540	7.715	7.527	4.942		
(-) D&A	(1.582)	(1.867)	(2.169)	(2.475)	(2.780)		
EBIT	2.297	4.163	4.914	4.394	1.647		
(+/-) Financial Result	(1.087)	(993)	(911)	(934)	(1.002)		
(-) Taxes	(377)	(989)	(1.248)	(1.079)	(201)		
Net income	832	2.181	2.755	2.381	444		
Profitability							
Net margin (%)	6,23%	12,95%	13,81%	11,55%	2,62%		

# Figure 1. CMIN – Income Statement in R\$ Millions (Genial Est. 2024-2028)

## Figure 2. CMIN - Cash Flow in R\$ Millions (Genial Est. 2024-2028)

2024E	2025E	2026E	2027E	2028E
13.366	16.842	19.948	20.607	16.959
(7.635)	(8.548)	(10.263)	(11.133)	(10.455)
4.253	6.540	7.715	7.527	4.942
2.297	4.163	4.914	4.394	1.647
(377)	(989)	(1.248)	(1.079)	(201)
1.582	1.867	2.169	2.475	2.780
254	(110)	23	146	290
(1.589)	(2.681)	(3.867)	(5.411)	(5.480)
2.166	2.249	1.991	525	(964)
	<b>13.366</b> (7.635) <b>4.253</b> <b>2.297</b> (377) 1.582 254 (1.589)	13.366 16.842   (7.635) (8.548)   4.253 6.540   2.297 4.163   (377) (989)   1.582 1.867   254 (110)   (1.589) (2.681)	13.366 16.842 19.948   (7.635) (8.548) (10.263)   4.253 6.540 7.715   2.297 4.163 4.914   (377) (989) (1.248)   1.582 1.867 2.169   254 (110) 23   (1.589) (2.681) (3.867)	13.366 16.842 19.948 20.607   (7.635) (8.548) (10.263) (11.133)   4.253 6.540 7.715 7.527   2.297 4.163 4.914 4.394   (377) (989) (1.248) (1.079)   1.582 1.867 2.169 2.475   254 (110) 23 146   (1.589) (2.681) (3.867) (5.411)

# Appendix: Gerdau

Income Statement	2024E	2025E	2026E	2027E	2028E
Net Revenue	65.957	66.628	67.907	69.433	71.736
(-) COGS	(56.697)	(55.257)	(54.833)	(55.976)	(56.782)
Gross Profit	9.261	11.371	13.074	13.458	14.954
(-) Expenses	(1.875)	(1.777)	(1.802)	(1.823)	(1.871)
Adjusted EBITDA	10.615	14.122	15.989	16.449	18.253
(-) D&A	(3.230)	(3.569)	(3.900)	(4.197)	(4.464)
EBIT	7.714	10.258	11.947	12.323	13.795
(+/-) Financial Result	(1.041)	(1.067)	(880)	(711)	(780)
(-) Taxes	(1.127)	(1.807)	(2.153)	(2.218)	(2.510)
Net income	5.545	7.384	8.914	9.394	10.505
Profitability					
Net margin (%)	8,41%	11,08%	13,13%	13,53%	14,64%

### Figure 1. Gerdau - Income Statement in R\$ Millions (Genial Est. 2024-2028)

### Figure 2. Gerdau- Cash Flow in R\$ Millions (Genial Est. 2024-2028)

Cash Flow (FCFF)	2024E	2025E	2026E	2027E	2028E
Net Revenue	65.957	66.628	67.907	69.433	71.736
(-) COGS	(56.697)	(55.257)	(54.833)	(55.976)	(56.782)
Adjusted EBITDA	10.615	14.122	15.989	16.449	18.253
EBIT	7.714	10.258	11.947	12.323	13.795
(-) Taxes	(1.127)	(1.807)	(2.153)	(2.218)	(2.510)
(+) D&A	3.230	3.569	3.900	4.197	4.464
(+/-) Δ WK	(822)	220	(430)	(474)	(212)
(-) Capex	(5.998)	(6.063)	(6.130)	(6.198)	(6.267)
FCFF	2.997	6.177	7.135	7.631	9.270

# **Appendix: CSN**

ligure 1. Con - meome	Tigure 1. CSN - Income Statement III KS Mittions (Gemat LSt. 2024-2026)							
Income Statement	2024E	2025E	2026E	2027E	2028E			
Net Revenue	45.901	53.974	59.329	59.891	60.646			
(-) COGS	(29.066)	(30.548)	(31.526)	(33.403)	(33.448)			
Gross Profit	16.835	23.426	27.803	26.488	27.198			
(-) SG&A and others	(5.478)	(5.584)	(5.350)	(4.796)	(4.089)			
EBITDA	11.358	17.842	22.453	21.692	23.109			
(+/-) Financial Result	(3.127)	(3.761)	(4.309)	(4.288)	(4.245)			
EBT	4.059	9.247	12.846	11.730	12.786			
(-) Taxes	(1.618)	(3.144)	(4.368)	(3.988)	(4.347)			
Net Income	2.441	6.103	8.479	7.742	8.439			
Profitability								
Net Margin (%)	5,32%	11,31%	14,29%	12,93%	13,92%			

### Figure 1. CSN – Income Statement in R\$ Millions (Genial Est. 2024-2028)

# Figure 2. CSN - Cash Flow in R\$ Millions (Genial Est. 2024-2028)

2024E	2025E	2026E	2027E	2028E
45.901	53.974	59.329	59.891	60.646
(29.066)	(30.548)	(31.526)	(33.403)	(33.448)
11.358	17.842	22.453	21.692	23.109
7.186	13.008	17.155	16.018	17.031
(1.618)	(3.144)	(4.368)	(3.988)	(4.347)
4.172	4.834	5.298	5.674	6.078
19	(689)	(236)	(298)	(78)
(5.452)	(6.142)	(6.113)	(5.586)	(5.629)
4.306	7.867	11.737	11.819	13.055
	<b>45.901</b> (29.066) <b>11.358</b> <b>7.186</b> (1.618) 4.172 19 (5.452)	45.901 53.974   (29.066) (30.548)   11.358 17.842   7.186 13.008   (1.618) (3.144)   4.172 4.834   19 (689)   (5.452) (6.142)	45.901 53.974 59.329   (29.066) (30.548) (31.526)   11.358 17.842 22.453   7.186 13.008 17.155   (1.618) (3.144) (4.368)   4.172 4.834 5.298   19 (689) (236)   (5.452) (6.142) (6.113)	45.901 53.974 59.329 59.891   (29.066) (30.548) (31.526) (33.403)   11.358 17.842 22.453 21.692   7.186 13.008 17.155 16.018   (1.618) (3.144) (4.368) (3.988)   4.172 4.834 5.298 5.674   19 (689) (236) (298)   (5.452) (6.142) (6.113) (5.586)

# **Appendix: Usiminas**

Income Statement	2024E	2025E	2026E	2027E	2028E
Net Revenue	26.690	26.956	27.619	27.985	27.707
(-) COGS	(24.033)	(23.371)	(23.699)	(24.035)	(23.603)
Gross Profit	2.657	3.585	3.921	3.949	4.104
(-) Expenses	(1.105)	(1.301)	(1.445)	(1.365)	(1.324)
Adjusted EBITDA	2.590	3.377	3.626	3.834	3.769
(-) D&A	(1.038)	(1.093)	(1.150)	(1.250)	(990)
EBIT	1.552	2.284	2.476	2.585	2.779
(+/-) Financial Result	545	391	469	746	837
(-) Taxes	(319)	(402)	(441)	(497)	(538)
Net income	1.885	2.380	2.611	2.941	3.185
Profitability					
Net margin (%)	7,06%	8,83%	9,45%	10,51%	11,50%

### Figure 1. Usiminas - Income Statement in R\$ Millions (Genial Est. 2024-2028)

### Figure 2. Usiminas- Cash Flow in R\$ Millions (Genial Est. 2024-2028)

Cash Flow (FCFF)	2024E	2025E	2026E	2027E	2028E
Net Revenue	26.690	26.956	27.619	27.985	27.707
(-) COGS	(24.033)	(23.371)	(23.699)	(24.035)	(23.603)
Adjusted EBITDA	2.590	3.377	3.626	3.834	3.769
EBIT	1.552	2.284	2.476	2.585	2.779
(-) Taxes	(319)	(402)	(441)	(497)	(538)
(+) D&A	1.038	1.093	1.150	1.250	990
(+/-) Δ WK	978	20	(188)	(18)	158
(-) Capex	(1.813)	(1.559)	(2.573)	(2.058)	(1.955)
FCFF	1.436	1.435	425	1.261	1.434

### **Disclosure Section**

### **1. GENERAL DISCLAIMER**

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

Genial Rating		
	Definition	Coverage
Buy	Expected return above +10% in relation to the Company's sector average	49%
Neutral	Expected return between +10% and -10% relative to the Company's industry average	41%
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 or redistributed to any other person, in whole or in part, for any purpose, without the prior written consent of GENIAL INSTITUTIONAL CCTVM. GENIAL INSTITUTIONAL 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 has no regard 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 INSTITUTIONAL 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 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 report

GENIAL INSTITUTIONAL 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 INSTITUTIONAL CCTVM.

Investing in any non-U.S. securities or related financial instruments (including ADRs) discussed in this research report may present certain risks. 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.

Past performance is not necessarily a guide to future performance and no representation or warranty, express or implied, is made by GENIAL INSTITUTIONAL CCTVM with respect to future performance. Income from investments may fluctuate. The price or value of the investments to which this research report relates, either directly or indirectly, may fall or rise against the interest of investors. Any recommendation or opinion contained in this research report may become outdated as a consequence of changes in the environment in which the issuer of the securities under analysis operates, in addition to changes in the estimates and forecasts, assumptions and valuation methodology used herein.

The locally listed shares of Brazilian companies may only be purchased by investors outside of Brazil who are "eligible investors" within the meaning of applicable laws and regulations.

genial Research



# 2. ANALYST(S) DISCLOSURES AND CERTIFICATION

The principal analyst, IGOR GUEDES, is responsible for the content of this report and for meeting the requirements of Securities and Exchange Commission of Brazil (CVM) Instruction 598/2018.

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 INSTITUTIONAL.

The analyst hereby certifies that he (she) has no connection with any individual who works for the issuer(s) discussed in this report.

The analyst hereby certifies that he (she), or his (her) spouse or companion, either directly or indirectly, in his or her own name or on behalf of a third party, does not hold any of the securities covered in this report.

The analyst hereby certifies that he (she), or his (her) spouse or companion, is not directly or indirectly involved in the purchase, disposal or brokering of the securities covered in this report.

The analyst hereby certifies that he (she), or the his (her) spouse or companion, has no direct or indirect financial interest in the issuer covered in this report (other than trading shares in investment funds, in which the analyst cannot control, directly or indirectly, the administration or management of the fund, or which do not concentrate investments in sectors or companies that are covered by reports produced by the analyst).

The analyst's compensation is, directly or indirectly, determined by income from GENIAL INSTITUTIONAL'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 relate to the revenues of GENIAL INSTITUTIONAL CCTVM, its affiliates 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 INSTITUTIONAL CCTVM.

The analyst hereby certifies that he (she), or his (her) spouse or companion, does not serve as an officer, director, or advisory board member of the subject company.

The principal analyst is 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.

# 3. ADDITIONAL DISCLOSURE

- (i) This document was prepared by GENIAL INSTITUTIONAL Research and is hereby supplied for the sole purpose of providing information about companies and their securities.
- (ii) The information contained herein is provided for informational purposes only and does not constitute an offer to buy or sell, and should not be construed as a solicitation to acquire, any securities in any jurisdiction. The opinions expressed herein regarding the purchase, sale or holding of securities, or with respect to the weighting of such securities in a real or hypothetical portfolio, are based on careful analysis by the analysts who prepared this report and should not be construed by current or future investors as recommendations for any particular investment decision or action. The investor's final decision should be made considering all of the risks and fees involved. This report is based on information obtained from primary or secondary public sources, or directly from companies, and is combined with estimates and calculations prepared by GENIAL INSTITUTIONAL CCTVM. This report does not purport to be a complete statement of all material facts related to any company, industry, security or market strategy mentioned. The information has been obtained from sources believed to be reliable, but GENIAL INSTITUTIONAL CCTVM does not make any express or implied representation or warranty as to the completeness, reliability or accuracy of such information. The information, opinions, estimates and projections contained in this document are based on current data and are subject to change. Prices and availability of financial instruments are indicative only and subject to change without notice. GENIAL INSTITUTIONAL CCTVM is under no obligation to update or revise this document or to advise of any changes in such data.
- (iii) The securities discussed in this report, as well as the opinions and recommendations contained herein, may not be appropriate for every type of investor. This report does not take into account the investments objectives, financial situation or particular needs of any particular investor. Investors who wish to buy, sell or invest in securities that are covered in this report should seek independent financial advice that takes individual characteristics and needs into consideration, before making any investment decision with respect to the securities in question. Each investor should make independent investment decisions after carefully analyzing the risks, fees and commissions involved. If a financial instrument is denominated in a currency other than an investor's currency, changes in exchange rates may adversely affect the price or value of, or the income derived from the financial instrument, and the reader of this report assumes all foreign exchange risks. Income from financial instruments may vary, and therefore their price or value may rise or fall, either directly or indirectly. The information, opinions and recommendations contained in this report do not constitute and should not be interpreted as a promise or guarantee of a particular return on any investment. Past performance does not necessarily indicate future results, and no representation or warranty, express or implied, is made herein regarding future performance. Therefore, GENIAL INSTITUTIONAL CCTVM, its affiliated companies, and the analysts involved in this report take no responsibility for any direct, indirect or consequential loss resulting from the use of the information contained in this report, and anyone using this report undertakes to irrevocably indemnify GENIAL INSTITUTIONAL CCTVM and its affiliates from any claims and demands.
- (iv) Prices in this report are believed to be reliable as of the date on which this report was issued and are derived from one or more of the following: (i) sources as expressly specified alongside the relevant data; (ii) the quoted price on the main regulated market for the security in question; (iii) other public sources believed to be reliable; or (iv) GENIAL INSTITUTIONAL CCTVM's proprietary data or data available to GENIAL INSTITUTIONAL CCTVM.

- (v) No representation or warranty, either express or implied, is provided in relation to the accuracy, completeness or reliability of the information contained herein, except with respect to information concerning GENIAL INSTITUTIONAL CCTVM, its subsidiaries and affiliates. In all cases, investors should conduct their own investigation and analysis of such information before taking or omitting to take any action in relation to securities or markets that are analyzed in this report.
- (vi)GENIAL INSTITUTIONAL CCTVM makes no representations herein that investors will obtain profits. GENIAL INSTITUTIONAL CCTVM will not share with investors any investment profits nor accept any liability for any investment losses. Investments involve risks and investors should exercise prudence in making their investment decisions. GENIAL INSTITUTIONAL CCTVM accepts no fiduciary duties on behalf of recipients of this report and in communicating this report is not acting in a fiduciary capacity. This report is not to be relied upon in substitution for the exercise of recipient's independent judgment. Opinions, estimates, and projections expressed herein constitute the current judgment of the analyst responsible for the substance of this report as of the date on which the report was issued and are therefore subject to change without notice and may differ or be contrary to opinions expressed by other business areas or groups of GENIAL INSTITUTIONAL CCTVM as a result of using different assumptions and criteria. The information, opinions and recommendations contained in this report do not constitute and should not be interpreted as a promise or guarantee of a particular return on any investment.
- (vii)Because the personal views of analysts may differ from one another, GENIAL INSTITUTIONAL CCTVM, its subsidiaries and affiliates may have issued or may issue reports that are inconsistent with, and/or reach different conclusions from, the information presented herein. Any such opinions, estimates, and projections must not be construed as a representation that the matters referred to therein will occur. Prices and availability of financial instruments are indicative only and subject to change without notice. Income from financial instruments may vary, and therefore their price or value may rise or fall, either directly or indirectly.
- (viii) This document may not be: (a) photocopied or duplicated in any manner, in whole or in part, and/or (b) distributed without GENIAL INSTITUTIONAL CCTVM's prior written consent. GENIAL INSTITUTIONAL CCTVM accepts no liability whatsoever for the actions of third parties in this respect.
- (ix)Neither GENIAL INSTITUTIONAL CCTVM nor any of its affiliates, nor any of their respective directors, employees or agents, accepts any liability for any loss or damage arising out of the use of all or any part of this report.
- (x) GENIAL INSTITUTIONAL CCTVM (or its affiliates, officers, directors or employees) may, to the extent permitted by law, have acted upon or used the information herein contained before the publication of this report and may have a position in securities issued by the companies mentioned herein and may make a market or act as a principal in any transactions in any such securities. Genial Institutional may from time to time perform investment banking or other services to, or solicit investment banking or other business from, the companies mentioned herein.

### 4. IMPORTANT DISCLOSURES FOR U.S. PERSONS

This research report was prepared by Genial Institutional CCTVM, a company authorized to engage in securities activities in Brazil. Genial Institutional CCTVM is not a registered broker-dealer in the United States 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") and is not being provided pursuant to a soft-dollar arrangement.

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) 897-3737. Under no circumstances should any recipient of this research report effect any transaction to buy or sell securities or related financial instruments through Genial Institutional CCTVM.

Brasil Plural Securities LLC accepts responsibility for the contents 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 INSTITUTIONAL CCTVM and distributed by Brasil Plural Securities LLC in the U.S. shall be governed by and construed in accordance with U.S. law. This report may not be reproduced or redistributed to any other person, in whole or in part, for any purpose, without the prior written consent of GENIAL INSTITUTIONAL CCTVM. Additional information relative to the financial instruments discussed in this report is available upon request.

### **UK Disclaimer:**

(i) This document is STRICTLY CONFIDENTIAL to the recipient, may not be distributed to the press or other media and may not be reproduced in any form. this document is directed only at persons who are "INVESTMENT PROFESSIONALS" falling within article 19(5) of the FSMA 2000 (FINANCIAL PROMOTION) ORDER 2005, or HIGH NET WORTH BODIES falling within ARTICLE 49(2) of that order (together THE "RELEVANT PERSONS"). This document must not be acted on or relied on by persons who are not RELEVANT PERSONS.

(ii) The distribution of this document in other jurisdictions may be restricted by law and persons into whose possession this document comes should inform themselves about, and observe, any such restrictions. Any failure to comply with these restrictions may constitute a violation of the laws of any such other jurisdiction.

Copyright 2023 GENIAL GENIAL INSTITUTIONAL CCTVM