VALE

3Q23 Operational Preview: A watershed?

LatAm Metals & Mining

Main takeaways:

(i) The gap between iron ore production and sales usually widens in the 3Qs, with a historical average of 26% over the last 5 years. However, we expect it to be lower than historical levels now in 3Q23, as we believe that favorable market conditions have led to a slightly more intense movement of sales of surplus inventory formed in 1Q23; **(ii)** The slightly abnormal increase in sales will boost revenue and should bring greater dilution in fixed costs, helping the Company to lower C1/t more significantly; **(iii)** Growing revenue trends with a more diluted cost leads our current EBITDA projection for 3Q23 to stand at US$5.5bn Genial Est. (+33.1% q/q; +37.1% y/y); **(iv)** Iron ore production should fall marginally y/y with ROM normalization; **(v)** We believe that 3Q23 will leave Vale closer to the upper guidance band of 310-320Mt; **(vi)** We expect the Torto Dam to boost pellet feed production only from 4Q23 onwards; **(vii)** We project that both base metals groups will grow production q/q, but in opposite dynamics y/y; **(viii)** Slight increase q/q in 62% Fe curve, coupled with price provisioning at the end of the quarter being at a higher value, should be positive factors in the realized price of fines for 3Q23; **(ix)** We expect better contractual premiums for pellets, in contrast to the 65% Fe reference spread, which drop even more q/q; **(x)** We believe that the sharply falling nickel price curve will hinder price realization in the base metals' unit; **(xi)** We therefore estimate a natural q/q evolution of the consolidated result together with an atypical y/y improvement; **(Xii)** Our take is that 3Q23 will be a watershed for the stock's performance in the short term, which has led us to **elevate Vale to Top Pick status** in the **Metals & Mining** sector, with a **24E EV/EBITDA** of **4.1x** (vs. 4.8 historical average), with a **12M Target Price** of **US$17.00** for **NYSE ADRs**, and a **12M Target Price** of **R$83.00** for **VALE3-B3**, which implies an **upside** of **+24.64%**.

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Company

VALE US Equity
Buy

Price: US$ 13.09 (13-Oct-2023)
Target Price 12M: US$ 17.00 (NYSE)

VALE3 BZ Equity
Target Price 12M: R$ 83.00 (B3)

Vale will release its 3Q23 Production and Sales report on 17th of October, after the market closes. We believe it will be a **quarter with a double-digit sequential increase in production**, given the ramp-up driven by the seasonal effect, however, as the **3Q22 base is difficult to overcome** due to the greater availability of Run Of Mine (ROM), **we believe in a slight a/a decline for production**.

On the other hand, **sales should show a substantial improvement q/q** and a **low single digit rise y/y**. It's important to keep in mind that the 3Qs are typically the most favorable quarters for Vale's production, considering that during the 2Qs the rainy season still persists in Carajás (PA), while in Minas Gerais (MG), the rains end up being concentrated mainly in the 1Qs.

In other words, Q3 is usually marked as the best part of the year for Vale's production, considering that both the northern and southeastern systems are operating without any major setbacks in terms of weather conditions.

1H23 vs. 2H23... We expect some changes

What usually happens... As the iron ore obtained from S11D and Serra Norte mines is of higher quality than that extracted in Minas Gerais, the production mix also tends to improve in 3Qs. However, from the sales' point of view, there is a time lag between the processes of extraction, transportation of the cargo to the port and, finally, shipment of the iron ore to the consumer markets. In addition to this time, the length of the journey that the vessels take to reach the ports of the destination must also be taken into consideration. Vale's largest consumer market is China, with the journey taking ~45 days.

As a result, this potential for improvement in the mix, as well as the increase in volume, is not fully reflected in sales in Q3 and, therefore, does not usually have full weight in price realization. This means that 3Qs are usually the best production quarters, but sales don't keep up with this increase. This is precisely because of the delay effect, which is largely attributable to the in-transit inventory and Vale's way of operating, with most sales through CFR-type contracts.

Therefore, there is a typically more prominent gap between production vs. sales in 3Qs, which is 26% in the historical average of the last 5 years and reached 28% in 3Q22. This gap tends to be almost completely reversed in the 4Qs. Production cools down again with summer season arrival in December, bringing torrential rains, which intensify in the 1Qs of the following years. Conversely, sales tend to increase as cargoes are cleared in China's ports, by realizing in-transit inventory formed in the previous quarter.

What's likely to be different? Although the normal dynamic for the 3Qs is the one we mentioned above, 3Q23 should have some atypical characteristics. Despite the company has shown some recovery over the past quarter, we are being quite vocal about the performance that Vale should achieve in 2H23 (3Q23 and 4Q23).

The temporary interruption of shipments at the Ponta da Madeira (MA) terminal, which affected Vale during 1Q23, resulted in an accumulation of inventory and only a slight decrease in the disparity between production and sales in 2Q23. These factors, together with the effects of in-transit inventory, demonstrated the company's vulnerability during the first half of the year. We believe that the impacts of a disruption in sales remained fresh in the minds of many investors.

This domino effect consisted in a number of components, including **(i)** a decrease in sales volume due to the unfeasibility of shipments in the Northern System, **(ii)** realized prices and all-in premium lower than usual due to the missing effect of higher quality for the i.o., which end up not being sold and stockpiled and **(iii)** prominent C1/t due to the low sales volume and therefore weak dilution capacity, with the potential for higher cost contamination not only in 1Q23, but also in 2Q23 due to the delay effect of realizing a portion of these sales in transit with higher levels of expenses.

As we have quoted in previous reports, we attribute the -22% YTD drop in Vale's shares to this domino effect mentioned above, also catalyzed by widespread skepticism about China's recovery.

However, the seasonality present in the dynamics between production and sales, together with the resilience of the iron ore price observed during 3Q23 and the initial moments of 4Q23, should help Vale to reverse this bad impression that was imprinted during the first two quarters of the year.

We believe that the unusual gap between production and sales for fine iron ore, which amounted to 25% in 1H23 (vs. 18% 1Hs' historical average) should begin to be reversed with more intensity now in 3Q23. As we said in our last sector report on Mining, published in September and whose link is attached (Metals & Mining: An X-ray of the exposed fracture in the Chinese real estate market), depending on price and other market conditions, Vale could intensify now in 3Q23 the sales of part of this inventory, which we calculate at 36Mt Genial Est. We also emphasized that the reversal should not achieve the total amount.

We saw market conditions as the main variable for the intensity of this destocking movement. This variable in particular acted in Vale's favor, as iron ore prices rose at the end of the quarter, reaching US$120/t in September, and averaged US$114/t during 3Q23. This move was a bit different the Company's approach that we talked about 2 months ago. The idea was using part of the stockpile of iron ore generated by the Ponta da Madeira situation to reinforce the inventories that have been broken down in recent years.

We have therefore updated our calculations to a destocking of ~7.5Mt Genial Est., which would represent a scenario in which ~20% of the volume not sold due to the suspension of shipments at Ponta da Madeira in 1Q23 would have been sold now in 3Q23. This should cause the gap between production vs. sales in 3Q23 to deviate from recent historical behavior, thus being slightly lower than the 26% average we mentioned, marking an atypical movement for a 3Q.

How might this be reflected in the results? We estimate that the gap between production vs. sales should be 25%, which would represent a decrease of -3p.p vs. 3Q22. Consequently, the sales volume in 3Q23 tends to be higher than 3Q22, through this process of partial realization of accumulated inventories. We believe that the quarter will be marked not only by a sequential improvement q/q, due to the natural seasonal effect, but also by an improvement y/y, with sales being boosted more than usual.

Another positive outcome would be a greater dilution in fixed costs, helping the company to lower C1/t more significantly in the quarter. And this point in particular is where investors are currently most concerned. It's important to remember that in view of the weak performance in sales dilution, C1/t in 1H23 was seriously compromised, which led Vale to revise upwards the guidance in the 2Q23 earnings release. As a result, investors became uncertain about cost management and how far the consequences of what happened in Ponta da Madeira could go.

Costs have been the thorn in Vale's side so far... In some conversations we've had with institutional investors, we've received inquiries about whether the rise in costs is totally correlated with the low sales volume in 1Q23 and its persistent repercussions in 2Q23, given the weak capacity to dilute fixed costs, or whether it's something more structural, due to the inflation of components linked to mineral extraction.

We see some sense in saying that there are components in the extraction phase that are structurally changing the cost of mineral activity. We believe that this has been changing for all peers, who suffer from inflation, as well as in some specific areas for Vale. These include costs linked to greater mine's movement.

The Serra Norte mine is in a slightly more accelerated depletion phase in the short term, with an y/y cool down production due to the lower availability of ROM. In an attempt to partially compensate for this fact, until the licenses to expand production begin to be released, Vale is making greater mine movements over there. In other words, it is removing more mass during mining in order to reach the iron ore body more quickly. The downside of this is the increase in costs, since the Company is moving a greater mass' volume with no economic value.

However, by doing that, Vale is unleashing volume of iron ore with a margin that is still positive, considering that the quality of i.o. extracted in the northern system still compensates for the increase in the cost of extraction. That said, it is clear that there are factors linked to geological inflation and greater mine movements that cause a structural cost component that would increase C1. However, we believe that Vale's rather weak results in both 1Q23 and 2Q23 are more explained by the low dilution capacity in light of the situation at the Ponta da Madeira terminal, rather than necessarily linked to these more structural components.

However, we expect an improvement in cost dynamics in 3Q23. With the new guidance of US$21.5-22.5/t (vs. US$21/t previously), Vale would have to substantially reduce C1/t in 3Q23 and 4Q23 to reach the new proposed mark, considering that the figures were disappointing in 1H23 (~US$26/t in that period).

Based on our interpretation, the new guidance suggests that Vale will incur a C1 cost (excluding third parties' purchase) of ~US$21/t in 2H23, in order to reach the upper band of US$22.5/t. We believe this is plausible. This improvement is also linked to our assumption about the ~7.5Mt Genial Est. inventory reduction taking place in 3Q23, increasing sales, and facilitating cost dilution. Therefore, we are projecting C1 clocking in at US$23.9/t Genial Est. for 3Q23, including third-party purchases (vs. US$26.5/t in 2Q23), leading to an estimated reduction of -9.7% q/q in the Company's main cost line.

3Q23 Operational Preview: Production and sales

Iron ore production to fall marginally y/y with ROM normalization. Contrary to the trend of a strong increase in fine ore production in 1H23, which accumulated an increase of +6% y/y in this period, we expect a slight year-on-year drop in iron ore production in 3Q23, since Run Of Mine (ROM) production made a major contribution during 3Q22, and this should not be repeated. Even with a marginal drop y/y, production tends to ramp up due to the seasonal effect typical of 3Qs, leading to growth on a quarterly basis. Our estimate is that reported production will be 88.9Mt Genial Est. (+13.0% q/q; -0.8% y/y).

We believe that 3Q23 will bring Vale closer to the upper guidance band of 310-320Mt. If our estimates for 3Q23 prove to be accurate, Vale would need to produce 75.5Mt in 4Q23 to reach 310Mt for the year, which corresponds to the lower end of the range. This level would be equivalent to a figure 6.6% lower than what had being recorded in 4Q22, making the achievement of reaching the lower band of the guidance look easy for this year. As such, we are confident that the company should come close to the upper band of the guidance at 320Mt, needing to grow its production by +5.7% y/y in 4Q23 (vs. a growth of +6.0% in 1H23) to hit the top of the range.

This shows a different story from last year, when Vale ended with 308Mt, below the guidance for 2022, which was 310Mt. This was even considering a cut throughout the year, because at the 2021 Investor Day, which took place in December of that year, Vale announced the expectation for 2022 at 320-335Mt. So, last year, figures ended up being ~4% below the lower band of the initially planned guidance. In principle, everything indicates that this year the company's performance will be better.

Torto Dam to boost pellet feed production only from 4Q23 onwards. As license to operate at the Torto dam was granted in July, 3Q23 figures will not yet have a significant effect on pellet feed production, although we are more optimistic a little down the road for increased production at the Brucutu mine (MG) due to obtaining the license in conjunction with the pelletizing plant attached to the Tubarão terminal.

In recent conversations we had with Vale, it was mentioned that, considering the time needed for the production ramp-up and the availability of this more prominent volume already in the Tubarão plant yard to produce the pellets, we should only see a slightly more significant increase in 4Q23. Therefore, we expect pellet production to stand at 9.4Mt Genial Est. (+3.3% q/q; +14.0% y/y), with a further growth in 4Q23 to reach the guidance of 36-40Mt in 2023.

We project that both base metals groups will grow production q/q, but in opposite dynamics y/y. Going in opposite directions in the y/y comparison due to the divergence of the annual guidance (up for copper, down for nickel), we had an expectation in 3Q23 for nickel production of 43kt Genial Est. (+16.6% q/q; -17.0% y/y), and copper reaching 90kt Genial Est. (+14.4% q/q; +21.2% y/y).

Table1. Production Summary Vale (3Q23 Genial Est.)

Production Summary (Kt)	3Q23 Genial Est.	2Q23 Reported	% q/q	3Q22 Reported	% y/y
Iron Ore[1]	88.984	78.741	13,0%	89.701	-0,8%
Pellets	9.411	9.111	3,3%	8.255	14,0%
Nickel	43,0	36,9	16,6%	51,8	-17,0%
Copper	90,1	78,8	14,4%	74,3	21,2%

[1] Including third-party purchases, run-of-mine and feed of other pelletization plants.

Source: Genial Investimentos, Vale

With the resilience of iron ore prices, we believe that destocking will increase the volume of shipments in fines. Partially reversing the inventory created during 1H23, we expect sales to correspond to 75% of the quarter's production for fines, slightly higher than the historical figure for 3Qs (which is 74%). As we quoted at the beginning of the report, the gap we project between production vs. sales is 25% (-3p.p vs. 3Q22), therefore resulting in a partially reversal of the inventory formed after the spot price of the commodity remained at a more favorable level, with sales of iron ore fines at 67.1Mt Genial Est. (+6.0% q/q; +2.6% y/y).

For the company's other products, the trend should be equivalent to the respective projections for the production of each commodity, with pellets expected to be at 9.3Mt Genial Est. (+6.3% q/q; +9.9% y/y), nickel at 42.8kt (+6.2% q/q; -3.3% y/y) and copper clocking in at 84.4kt (+14.4% t/t; +19.7% y/y).

Table2. Shipments Summary Vale (3Q23 Genial Est.)

Vale Shipments Summary (Kt)	3Q23 Genial Est.	2Q23 Reported	% q/q	3Q22 Reported	% y/y
Iron ore fines	67.110	63.329	6,0%	65.381	2,6%
Pellets	9.362	8.809	6,3%	8.521	9,9%
ROM	2.201	2.236	-1,6%	3.668	-40,0%
Nickel	42,8	40,3	6,2%	44,3	-3,3%
Copper	84,4	73,8	14,4%	70,5	19,7%

[1] Including third-party purchases

Source: Genial Investimentos, Vale

A slightly increase q/q in 62% Fe curve, added to price provisioning, should be positive factors in the realized price. Closing 3Q23 with an average for 62% Fe iron ore at US$114/t vs. US$111/t in 2Q23, with a smoothing rise of +2.7% q/q, we believe that the positive point in the curve should be the forward provisioning price part. We believe that forward provisioning will represent ~36% of sales, and iron ore closed 3Q23 at ~US$118/t vs. US$110/t in 2Q23.

So, if last quarter the provisioning mechanism exerted an opposing force to better price realization, in 3Q23 everything indicates that this variable will be in Vale's favor. According to the proportions and weights of the company's pricing system in our model, we project a realized price of US$104/t Genial Est. for the i.o. fines grade, up +5.9% q/q and +12.6% y/y.

Better contractual premiums for pellets, in contrast to the 65% Fe reference spread, which drop even more q/q. We have bullish expectations for 3Q23 regarding the pellet premium over the 65% Fe ore curve, reaching +US$51/t (vs. +US$32/t in 2Q23), with an improvement in negotiation conditions, indicating Vale's contractual resilience among its clients and a slight mix improvement, although the price curve spread for the 65% Fe reference vs. the 62% Fe remains weak, at ~US$17/t. We have a projection for a realized pellet price in 3Q23 of US$182/t Genial Est. (+13.6% t/t; -6.2% y/y).

Sharply falling nickel price curve will hinder price realization in the base metals' unit. In a quarter with nickel prices falling -7.9% q/q, we project a significant impact on the 3Q23 realized price, reaching US$20,800/t Genial Est. (vs. US$23,000/t in 2Q23), a drop of -9.8% q/q and -8.7% y/y. If on the one hand we expect a more difficult quarter for nickel performance, on the other hand the situation for copper should be better. Although copper market prices also cooled down, it was slightly by -0.6% q/q, bringing the realized price to US$7,300/t Genial Est., up +4.0% q/q after a quarter of strong temporal discounts in price realization.

Table 3. Income Statement Vale (3Q23 Genial Est.)

(US$ millions)	3Q23 Genial Est.	2Q23 Reportado	% q/q	3Q22 Reportado	% y/y
Net Revenue	**11.079**	**9.633**	**15,0%**	**9.958**	**11,3%**
COGS	(5.928)	(5.791)	2,4%	(6.301)	-5,9%
Proforma EBITDA	**5.526**	**4.152**	**33,1%**	**4.031**	**37,1%**
EBITDA Margin (%)	49,9%	43,1%	6,78p.p	40,5%	9,4p.p
Ajusted EBIT	**3.839**	**3.102**	**23,7%**	**2.920**	**31,5%**
EBIT Margin (%)	34,6%	32,2%	2,45p.p	29,3%	5,33p.p
D&A	(805)	(779)	3,3%	(775)	3,9%
Financial Result	(361)	(157)	130,0%	2.347	-
Net Income	**2.987**	**1.363**	**119,1%**	**4.484**	**-33,4%**
Net Margin (%)	27,0%	14,2%	12,81p.p	45,0%	-18,07p.p

Source: Genial Investimentos, Vale

Our Take on Vale

We believe that 3Q23 is very much on track for a recovery, helped by **(i)** the natural seasonality of a season with reduced rainfall, allowing production to ramp up, plus **(ii)** the resilience of the 62% Fe iron ore price, despite the continued adverse scenario in China. Both factors set the stage for good figures to be posted by the company in 3Q23.

We expect a natural q/q growth along with an atypical y/y improvement. As we have pointed throughout the report, we have reasons to believe that Vale's performance in 3Q23 will be slightly better than what we would normally expect from a 3Q. We estimate a recovery quarter (now in sales) from the temporary shipment interruptions during 1Q23, which caused an increase in inventories.

Our analysis suggests a favorable market condition, given the **(i)** increase in iron ore prices to an average of US$114/t during 3Q23 and **(ii)** a stretch to US$120/t in September, further strengthening in 3Q23 the provisional forward pricing mechanism, which corresponds to 36% of price formation in our model. These two factors coming together should help with **(iii)** the shipment of 7.5Mt Genial Est. of stockpile, representing ~20% of the volume not sold due to the suspension of activities at the Ponta da Madeira terminal. As the price of the commodity proved to be attractive, Vale probably started the destocking process a little more incisively.

Our argument is that the increase in sales, driven by a volume of shipments of cargo that had previously been in storage, will help bring in higher revenue and lower costs compared to 3Q22. At this point, we are projecting net revenue clocking in at US$11.0bn Genial Est. (+15.0% q/q; +11.3% y/y), with total costs added at US$5.9bn Genial Est. (+2.4% q/q; -5.9% y/y), favoring an EBITDA expansion up to US$5.5bn Genial Est. (+33.1% q/q; +37.1% y/y), a considerable increase both sequentially and on an annual basis.

We would like to point out that we **will present our projected income statement for 3Q23 again** after the release of Vale's production and sales report, inputting the actual data into our model so that we can arrive at calculations that are closer to the revenue, costs, EBTIDA and net income for the quarter before the release of the official financial data by Vale, which will only take place on October 26th. **As a result, these projections will undergo further revision**.

How would the destocking move help on costs? We believe that partial sales of accumulated inventory should slightly alter the gap between production vs. sales to less than the historical average of 26%, and this would result in a higher sales volume in 3Q23 compared to 3Q22. In terms of costs, Vale should significantly cool down the C1/t, diluting fixed costs on higher sales volumes.

Despite the structural cost components related to geological inflation and higher mine movements, factors that seem to be more persistent, the shipment interruption that occurred in 1Q23 lower sales volumes, and seem to us to have been the biggest cause of the cost increase during 1H23, due to the weak dilution capacity in C1/t that we observed. With the new guidance at US$21.5-22.5/t, our current projection is for Vale to cool it off the C1/t to US$23.9/t in 3Q23, considering the assumption we have adopted of an inventory burn of ~7.5Mt of iron ore fines.

In addition to the destocking process, the natural ramp-up of production will also play a role in increasing the capacity to dilute fixed costs. Until then, the absence of factors that promoted greater dilution capacity had been, in our view, the company's biggest problem and mostly represents the investors’ main concerns, as C1 was brought up to US$26/t during 1H23.

A watershed? We can say that the first half of the year was unpleasant for Vale investors. The company's shares are among the large caps that have fallen the most on the Brazilian stock exchange YTD. However, we've been vocal since early stages about the opportunity to enter a long position in the shares after the intense fall that occurred in 1Q23.

One of the main reasons that reinforced our buy rating in Vale's shares was that the story to be unfold by the 2H23 figures would be quite different from the drama experienced in 1H23. So, we believe that the results to be released in the next few days should begin to rewrite this narrative, changing the genre that has prevailed until now, which has seemed more like a horror story, into a love story with investors. As things will start to get better, we would say that the results to be revealed for 3Q23 have this kind of power... to become a watershed for stock performance in the coming months.

In the short term, the market's mood towards Vale has undoubtedly been negative, however, the company's price seems attractive to us due to upcoming microeconomic events. So, leaving aside potential volatility linked to China's macroeconomic environment, there are reasons to be more bullish on the Company. "A little more micro, with a little less macro". We have already quoted this phrase in our reports on Vale throughout the year. Investors should be more attentive to what Vale is doing that is within its execution capacity and not give excessive weight to the Chinese real estate market. If we were to base our recommendation on this variable alone, Vale would be a Company for investors to stay away from, since we are quite bearish about improvements on this matter, even with the measures recently taken by the Chinese government.

It's not that we're disqualifying data on the real estate market as important to monitor. So much do we believe this to be true that we recently published an extensive report on the subject, which is attached (Metals & Mining: An X-ray of the exposed fracture in the Chinese real estate market). However, we also see it as irrational to make an investment decision based merely on pessimism about this data.

For this story to have a happy ending, we rationally base our buy rating not only on the performance of the Chinese real estate market, but on a set of factors, both microeconomic and macroeconomic vs. how much the shares have suffered in terms of stock market performance. We believe that there are some micro factors for improved results that should emerge in 2H23 and also in the medium term, however, they are being suppressed or even ignored by great portion of the market. In face of the downward movement of the stocks, when asset prices move in the opposite direction to the trend in results, a long entry opportunity is formed.

Among these factors, we see catalysts in the short term such as **(i)** the cooling down of C1 costs during 2H23, **(ii)** the start of the destocking process, which should now start to take place in 3Q23 and **(iii)** the expectation of an extraordinary dividend of US$2.4bn (~R$11.5bn), which we believe could come in 2024. For the long term, we point out that the additional capacity projects are promising, particularly the Torto dam for pellets together with the briquetting plant at the Tubarão terminal, followed by a new plant, which together will add a total capacity of +6Mtpa.

Our view is that briquettes should be well received in the steel market, potentially increasing the realization of the all-in premium to US$12/t Genial Est. in 2026 (vs. ~US$4/t now). Reducing CO_2 emissions from briquettes could make Vale's demand more resilient and help the decarbonization trend. The remaining increase to reach US$12/t should come from efficiency gains in the pelletizing process and improved market conditions, especially in the UAE.

China vs. Vale. Despite the slowdown in the Chinese economy, our expectation is that Vale will continue to grow due to the still resilient demand for iron ore, even if at this stage, this appetite is more linked to low grade. We believe that the expansion of social housing programs will grow by +50% y/y in 2023 and account for 1/5 of the total housing construction area in China.

In addition, the commercial housing market by private developers is indeed shrinking, but there is **(i)** an increase in the production of other consumer durables, such as automobiles (which are breaking records this year in China), as well as **(ii)** increases in infrastructure investments and **(iii)** continued growth in the level of steel exports. These factors seem to us to form a conjuncture that is sufficient for iron ore prices to remain attractively high (above US$100/t), sustaining blast furnace utilization rates of ~92%. Therefore, although the iron ore prices for us will continue to decline, we anticipate a less sharp fall than we projected at the beginning of the year, which in turn led to a revised Target Price increase of +US$0.30 for Vale in our latest sector report, published in September.

Metals & Mining Top Pick. In view of this asymmetry in share prices vs. the performance we expect for the Company in the next couple of quarters, **we are choosing Vale as our Top Pick in the Metals & Mining sector**, a position previously held by Gerdau. At the moment, we prefer the dynamics of mining companies rather than steel companies, and we had already removed Gerdau from this position last quarter. However, in the meantime, we have become even more convinced that Vale tends to have a performance that should once again seduce investors, and therefore the shares have the necessary triggers from a rational point of view to go up again.

Trading at an **EV/EBITDA 24E** of **4.1x** (vs. a historical average of 4.8x), we reinforce our **BUY rating**, with a **12M Target Price** of **R$83.00** for **VALE-B3**, and a **12M Target Price** of **US$17.00** for **NYSE ADRs**, which implies an **upside** of **+24.64%**.

Appendix: Vale

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

Income Statement	2023E	2024E	2025E	2026E	2027E	2028E
Net Revenue	**41.473**	**39.389**	**40.635**	**42.066**	**42.539**	**43.036**
(-) COGS	(22.437)	(23.388)	(24.809)	(26.508)	(27.766)	(28.968)
Gross Profit	**19.036**	**16.001**	**15.826**	**15.558**	**14.774**	**14.069**
(-) Expenses	(3.692)	(4.097)	(3.007)	(3.123)	(2.668)	(2.592)
Adjusted EBITDA	**17.404**	**15.064**	**16.092**	**15.858**	**15.654**	**15.153**
(-) D&A	(3.153)	(3.326)	(3.471)	(3.615)	(3.753)	(3.886)
EBIT	**14.250**	**11.738**	**12.621**	**12.243**	**11.901**	**11.268**
(+/-) Financial Result	(1.728)	(1.510)	(1.451)	(1.354)	(1.488)	(1.301)
(-) Taxes	(2.638)	(1.182)	(1.296)	(1.262)	(1.205)	(1.151)
Net income	**9.885**	**9.045**	**9.874**	**9.627**	**9.209**	**8.815**
Profitability						
Net margin (%)	23,83%	22,96%	24,30%	22,89%	21,65%	20,48%

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

Cash Flow (FCFF)	2023E	2024E	2025E	2026E	2027E	2028E
Net Revenue	**41.473**	**39.389**	**40.635**	**42.066**	**42.539**	**43.036**
(-) COGS	(22.437)	(23.388)	(24.809)	(26.508)	(27.766)	(28.968)
Adjusted EBITDA	**17.404**	**15.064**	**16.092**	**15.858**	**15.654**	**15.153**
Adjusted EBIT	**14.250**	**11.738**	**12.621**	**12.243**	**11.901**	**11.268**
(-) Taxes	(2.638)	(1.182)	(1.296)	(1.262)	(1.205)	(1.151)
(+) D&A	3.153	3.326	3.471	3.615	3.753	3.886
(+/-) Δ WK	(1.747)	(440)	682	(220)	-0	(60)
(-) Capex	(5.928)	(6.137)	(6.288)	(6.341)	(6.364)	(6.384)
FCFF	**7.091**	**7.305**	**9.191**	**8.035**	**8.085**	**7.558**

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