VALE

2Q23 Review: Touching a sore point...

LatAm Metals & Mining

Main takeaways:

(i) Production strong, but sales still slower; **(ii)** Revenue in ferrous metals with no surprises, but in base metals the dynamics have changed; **(iii)** C1 Cost was higher than our already pessimistic estimates but offset by a softer freight cost **(iv)** Following our warning, C1 Cost guidance for 2023 is revised; **(v)** COGS perfectly in line; **(vi)** EBITDA gets breathing room again; **(vii)** Non-recurrence makes net income the real disappointment. **(viii)** With the losses quite contained in our model because we are already using more pessimistic C1/t assumptions, we continue with our **BUY rating**, with a **12M Target Price** of **R$83.00** for **VALE3-B3**, and for **VALE-NYSE** ADRs of **US$17.00**, which implies an **upside** of **+17.86%**.

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Company

VALE US Equity
Buy

Price: US$ 14.79 (27-jul-2023)
Target Price 12M: US$ 17.00 (NYSE)

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

Vale released yesterday, July 27th, after the market closed, its 2Q23 result. **Mostly reporting in-line numbers, although non-recurring effects eroded net income**, we believe that the **result has a neutral bias**, since even in the face of the normalization of shipments at the Ponta da Madeira (MA) terminal, the **delay effect of inventory in transit put barriers to the constitution of a drop in costs** for the quarter, exactly as we mentioned even before our preview report. We had already warned some time ago that we were skeptical of a possibility of a more significant cooling in C1/t, as historical data show Q2 as being the worst in terms of dilution. Given the results, **Vale changed C1 guidance to US$21.5-22.5/t (vs. US$21/t previously)**.

Retrospective: Production and Sales Operational Report

Strong production, with sales a step behind. Vale delivered better than expected numbers in fine ore production (78.7Mt vs. 76.4Mt Genial Est.), due to a natural seasonality effect as well as the use of crushers in the S11D project, which boost drilling in the region where there is a higher volume of jaspilite (for more details, see Vale's chapter in the sector report, attached). Still, the logistical setback in Ponta da Madeira (MA) in 1Q23 ended up permeating 2Q23, as the stock piling that occurred last quarter did not result in an increase in additional shipments this quarter. Our estimates pointed to a slight closing of the gap between production and sales, but sales volumes disappointed us a bit (63.3Mt vs. 65.0Mt Genial Est.), although they rose +38.1% q/q and +0.9% y/y, on track for its production guidance of 310-320Mt, which should be achieved. A more intense closing of the gap between shipments and production compared to historical levels, as a compensatory effect of the fine iron ore destocking process, should occur only in 3Q23.

Improvement in pellets volumes should intensify further in 2H23. Although we expect more concentrated volumes in 3Q23 and 3Q24 due to the start-up of the Brucutu (MG) plant operations, pellet production this quarter was already higher than expected, at 9.1Mt vs. 8.9Mt Genial Est., while shipments were in line, at 8.8Mt in 2Q23 (-1.0% vs. Genial Est.).

Weaker realized prices. Suffering from the drop in the international curve for 62% Fe ore, the realized price of fine ore came in at US$98.5/t (-3.4% vs. Genial Est.), relying on a premium dynamic of only +US$0.6/t, significantly more impoverished than historical. Meanwhile, pellets benefited from its system with ~30% of price realization correlated with the ~60 days i.o spot delay, causing its realized price to be less affected, reaching US$160.4/t (+1% vs. Genial Est.), and increasing its premium vs. the 65% Fe curve to US$32/t vs. US$22/t in 1Q23.

Base metals followed guidance dynamics. In the base metals' unit, volumes moved towards guidance, which is down for nickel and up for copper. During the quarter we have already seen an acceleration in copper production and sales, up +17% q/q and in line with our estimates. On the flip side, nickel reported weaker production of 36.9kt in 2Q23 vs. 41.1kt in 1Q23, with sales more resilient by seasonal destocking, staying flat q/q even as production fell. Moreover, against a backdrop of global slowdown, both commodities saw their benchmark curves cool in the quarter, and were directly hit by a weaker realized price q/q.

2Q23 analysis

Revenue in ferrous metals with no surprises, but in base metals dynamics changed. Vale reported total net revenue of US$9.6bn (vs. -2.2% Genial Est.) in line with expectations, driven by the dynamics of fines and agglomerates with no surprise. Although the price scenario has worsened from one quarter to the other, revenues from fine ores brought a great recovery q/q, reaching US$6.2bn (+25.2% q/q; -12.3% y/y), driven by **(i)** the normalization of shipments of the volume produced in the Northern System, while **(ii)** the seasonality brings a lower rainfall rate, allowing the sequencing of the ramp-up of production.

Still within the ferrous metals' unit, pellets brought net revenues to US$1.4bn, up +6.9% q/q, as sales up +9.4% were more than enough to offset a -1.3% drop in realized price, both vs. 1Q23. For the base metals' unit, Vale posted revenues of US$1.2bn (-19.0% q/q; -3.2% y/y) from nickel operations, frustrating our expectation, due to the individual dynamics of other metals aggregated in the mines. Moreover, in the split between accounting for nickel and copper operations, copper ended up reporting better than expected, in the opposite direction, reaching US$538mn (+2.7% q/q/ +64.0% y/y), with the increase in sales having more effect than the drop in realized price for its top line.

Table1. Net Revenue Vale (2Q23 vs. Genial Est.)

(US$ millions)	2Q23 Reported	2Q23E Genial Est.	% R/E	1Q23 Reported	% q/q	2Q22 Reported	% y/y
Net Revenue	**9.673**	**9.890**	**-2,2%**	**8.434**	**14,7%**	**11.157**	**-13,3%**
Iron ore fines	6.235	6.238	0,0%	4.982	25,2%	7.113	-12,3%
Pellets	1.413	1.413	0,0%	1.322	6,9%	1.780	-20,6%
Nickel operations	1.222	1.541	-20,7%	1.509	-19,0%	1.262	-3,2%
Copper operations	538	477	12,8%	524	2,7%	328	64,0%
Others	265	222	19,4%	97	173,2%	674	-60,7%

Source: Genial Investimentos, Vale

C1 cost was higher than our already pessimistic estimates but offset by a softer freight cost. In the cost formation for the fine i.o. subdivision, the most relevant lines (C1 and Freight) ended up acting in opposite directions simultaneously, considering our bearish sentiment for both. While C1 Cost, whose estimate contemplated a cooling of -5.6% q/q, but still 20% above guidance, end up clocking in at US$26.5/t (vs. US$25.2/t Genial Est.), basically without any kind of additional dilution in the quarter, at a level 26% above guidance. The indicator is sticking side by side with the 1Q23 figure, showing an even less progress in this part than our already pessimistic estimate.

However, freight showed a drop to US$17.6/t (vs. -15% Genial Est.), which helped to partially offset the effect of an above-expectation C1. We were projecting a slightly below-curve increase in SSY (Tubarão-Qingdao), which accumulated an acceleration of ~11% q/q, due to Vale using its own market fleet, helping it not to feel this surge as intensely as some peers. This characteristic makes Vale a Company not so exposed to the spot price of freight, and played a role in cooling even more than our estimates for this particular dynamic.

Following our warning, the C1 Cost guidance for 2023 is revised. The explanation for such a high C1/t is the trend we had already brought up in previous reports: the inventory-in-transit reopens the scars of the past quarter, by carrying into the 2Q23 results a level of exorbitant costs due to the low dilution capacity. The Company's shipping system is mostly CFR. The journey to China takes ~45 days, and sales can then only be computed when the iron ore cargo is cleared through customs at the port of destination, so for that reason there are some financial aspects of delays in inventory sales. As the interruption of shipments at the Ponta da Madeira (MA) terminal intensely cooled the ability to dilute costs last quarter, a portion of this effect is also carried over into the subsequent result, in this case, 2Q23. We knew about this dynamic, and warned about it in our preview report, but the situation was even worse than we expected.

In addition to the dilution factor below the potential that we know Vale can deliver, the fall in the USD/BRL exchange rate catalyzed the effect on C1, especially compared to the 2023 guidance of US$20-21/t. For a considerable time, we were warning investors that achieving guidance would be an arduous task for the Company. Following our pessimistic tone regarding that aspect, which can be seen in a previous report (Vale: Bullish on production, bearish on costs), after a very difficult 1H23, having realized ~US$26/t up to now, the cost target was revised to US$21.5-22.5/t, an increase of +7.15% vs. previous guidance.

And what does this change going forward? At this level, the new guidance implies an expectation that the Company will make a C1 Cost (ex. third-party purchase) of ~US$21/t in 2H23, to enter the upper band, according to the calculations in our model. Now this seems quite possible to us, given the continuation of the natural ramp-up in 2H, due to low rainfall, and the expectation that we have of a much better 2H23 for Vale than the first half, considering that the destocking process should happen in 3Q23.

COGS perfectly in line. With a slightly worse C1, and a cooler freight, COGS for fine ores was US$3.0bn (+38.7% q/q; +2.6% y/y), basically in line with our estimates. The double-digit rise q/q was mainly due to the pick-up in shipment volumes, which had been quite undervalued last quarter. In the other categories, we highlight improvements in the COGS of nickel operations, which reflect the thickening of volumes and prices in by-products, specifically cobalt and PGMs, and the fall in nickel and copper prices themselves, helping third-party purchase costs. Therefore, Vale posted a consolidated COGS of US$6.0bn (vs. -2% Genial Est.).

Table2. COGS Vale (2Q23 vs. Genial Est.)

	2Q23	2Q23E		1Q23		2Q22	
(US$ millions)	**Reported**	**Genial Est.**	**% R/E**	**Reported**	**% q/q**	**Reported**	**% y/y**
CPV (COGS)	**(5.940)**	**(6.061)**	**-2,0%**	**(4.949)**	**20,0%**	**(5.950)**	**-0,2%**
Iron ore fines	(3.048)	(2.998)	1,7%	(2.197)	38,7%	(2.971)	2,6%
Pellets	(674)	(684)	-1,4%	(648)	4,0%	(707)	-4,7%
Nickel operations	(886)	(1.099)	-19,4%	(1.112)	-20,3%	(652)	35,9%
Copper operations	(319)	(325)	-2,0%	(270)	18,1%	(268)	19,0%
Others	(234)	(130)	79,7%	(109)	114,7%	(575)	-59,3%
D&A	(779)	(824)	-5,5%	(613)	27,1%	(777)	0,3%

Source: Genial Investimentos, Vale

EBITDA gets breathing room again. Overall, operational performance numbers met our estimates, as Proforma Adjusted EBITDA stood at US$4.1bn (-3.2% vs. Genial Est.), showing a recovery of +12.4% q/q, despite the -21.1% y/y drop. The main drivers of better EBITDA were fine ores, with US$3.0bn (+17% q/q), due to the normalization of shipments after problems in the Northern System, and pellets with US$818mn (+13.2% vs. Genial Est.), with the ramp-up of production in pursuit of the ambitious guidance, beating our estimates by some margin, reporting sequential growth of +22.6% q/q. We are optimistic about an improvement in profitability for agglomerates in 2H23 due to the start of operations at the Torto dam, as we have already pointed out in a previous report.

The base metals unit brought mixed results, with nickel bringing a worse than expected number at US$235mn (-33.4% q/q; -58.9% y/y), while copper surprised positively with US$236mn (+7.3% q/q; +926.1% y/y), rising even with a strong realized price loss.

Table4. COGS Vale (2Q23 vs. Genial Est.)

(US$ millions)	2Q23 Reported	2Q23E Genial Est.	% R/E	1Q23 Reported	% q/q	2Q22 Reported	% y/y
EBITDA Proforma	**4.145**	**4.280**	**-3,2%**	**3.687**	**12,4%**	**5.254**	**-21,1%**
Iron ore fines	3.087	3.127	-1,3%	2.638	17,0%	3.975	-22,3%
Pellets	818	723	13,2%	667	22,6%	1.140	-28,2%
Nickel operations	235	396	-40,6%	353	-33,4%	572	-58,9%
Copper operations	236	115	105,5%	220	7,3%	23	926,1%
Others	(231)	(79)	194,1%	(191)	20,9%	(456)	-49,3%

Source: Genial Investimentos, Vale

Non-recurrence makes Net Income the real disappointment. With some non-recurring effects going through the **(i)** financial result (FX variation of -US$750mn), and the **(ii)** fees (write-off of deferred taxes and provisions for Renova Foundation after its judicial recovery, at -US$881mn), net income ended up at US$892mn in 2Q23, missing estimates, given the -51.4% q/q and -78.2% y/y decline. Still, excluding both non-recurring effects, Vale would post a net income of ~US$2.5bn, in line with our prior estimates.

We believe that Vale should gradually increase its results for provisioning purposes for the Mariana (MG) event involving Samarco, its JV with BHP, through the Renova Foundation. In conversations we had not long ago with the Company, Vale mentioned that Samarco had accumulated cash. Precisely because in judicial recovery, the obligation of some expenditures is suspended, as well as there is a longer period to renegotiate debts. With Vale and BHP redirecting the reparation funds through the Renova Foundation, the guidance of R$1.9bn, passed by Vale in a meeting with analysts at the end of last year regarding provisioning for the Mariana event, could suffer oscillations in the form and amount to be processed via the result in each quarter of the year.

Table5. Income Statmenmt Vale (2Q23 Genial Est.)

(US$ millions)	2Q23 Reported	2Q23E Genial Est.	% R/E	1Q23 Reported	% q/q	2Q22 Reported	% y/y
Net Revenue	**9.673**	**9.890**	**-2,2%**	**8.434**	**14,7%**	**11.157**	**-13,3%**
COGS	(5.940)	(6.061)	-2,0%	(4.949)	20,0%	(5.950)	-0,2%
Adjusted Proforma EBI	**4.145**	**4.280**	**-3,2%**	**3.687**	**12,4%**	**5.534**	**-25,1%**
EBITDA Margin (%)	42,9%	43,3%	-0,43p.p	43,7%	-0,86p.p	49,6%	-6,75p.p
Adjusted EBIT	**3.095**	**2.987**	**3,6%**	**2.920**	**6,0%**	**4.444**	**-30,4%**
EBIT Margin (%)	32,0%	30,2%	1,8p.p	34,6%	-2,63p.p	39,8%	-7,84p.p
D&A	(779)	(867)	-10,1%	(656)	18,8%	(810)	-3,8%
Financial Result	(157)	(388)	-59,5%	(530)	-70,4%	821	-119,1%
Net income	**892**	**2.478**	**-64,0%**	**1.837**	**-51,4%**	**4.093**	**-78,2%**
Net margin (%)	9,2%	25,1%	-15,83p.p	21,8%	-12,56p.p	36,7%	-27,46p.p

Source: Genial Investimentos, Vale

Our Take on Vale

Despite showing some kind of recovery during the quarter, we put more weight to the Company's 2H23 result as the Ponta da Madeira shipment disruptions generated an inventory build-up, with a still very subtle reduction in the gap between production and sales in 2Q23. This added to the inventory-in-transit effect still hits Vale's soft spot, making the consequences of a 1Q23 to be forgotten still lingering in the recent memory of many investors. Revision of C1/t guidance may touch a sore point for some investors.

In short, the cascade effect was composed of **(i)** infrastructure problems due to the large rainfall volume, **(ii)** lower sales volume, with the impossibility of shipping in the Northern System, **(iii)** lower price realized by the high quality of local ore, **(iv)** higher C1/t with basically no room for cost dilution.

Even in the face of the small pick-up for Vale's share prices this week, the Company continues to suffer a loss of -21.23% YTD. We believe that the cascading effect we mentioned, catalyzed by a very large distrust of the consensus regarding China's resumption after the end of the Covid-zero policy, forms the reason to explain such bad performance. However, as we highlighted in our earnings preview, we are more optimistic about Vale's 2H23.

Operational improvement in 2H23 should fuel buyer flow into the shares. The C1 cost guidance revision for us was basically certain move. In our model we were already taking a pessimistic approach to this topic, so the change in C1/t cost target to US$21.5-22.5/t (vs. US$21/t previously) does not affect our estimates at all. We are being very vocal in saying that the level of assumptions we use in our model are not the most bullish, on the contrary.... The only point we decided to adjust upwards recently was production, which we now expect to be more in line with the top end of the guidance of 310-320Mt, whereas before we were using assumptions aligned to the mid-range. And that's because Vale is demonstrating a lot of capacity to ramp-up production, especially in S11D.

With the authorization of the Torto dam, we believe that the Brucutu (MG) plant should improve productivity and the mix of agglomerates, raising the premium dynamics throughout 2H23. And it is necessary to consider that, unlike fine iron ore, the largest pellet market for Vale is not in China, but in Europe, the US and Japan.

By our projections of a declining iron ore price to ~US$95/t by end-2023 and US$90/t by 2024, the downside could come with an even a lower than estimate realized price. However, so far, 62% Fe contracts remain at high levels (~US$110/t 62% Fe). We believe that this sustainability of the iron ore price level has a strong correlation with the expectation of possible stimulus for the real estate sector in China, without anything concrete having been announced yet, even after the politburo meeting. As we have previously opined, we believe it is unlikely that the Chinese government will release a sizable amount of direct aid to the sector. In our view, the stimulus will be focused more on the interest rates, an indirect tool that the Chinese government has more room to maneuver, given the rather weak inflationary dynamics (almost on the verge of deflation), in a year that the consensus (not us) expected a strong and resounding recovery.

We believe it is natural that the iron ore price will fall in 2H23 due to the more favorable seasonality of Brazilian mining companies, increasing supply and bringing down the price to this level of demand we have today in terms of real economy. Still with a lower realized price, Vale should report sequentially better results in the coming quarters, with the **(i)** closing of the gap between production and sales between 3Q23 and 4Q23, when the inventory piled up from last quarter will finally be disposed of with greater flow; **(ii)** better cost dilution, taking C1/t from an average of US$26/t to ~US$22.5/t, with the new guidance already aligned with our previous assumptions, without the need to change the Target Price and **(iii)** Torto dam coming into operation, improving the quality of the agglomerates mix by the Brucutu mill (MG), offering a premium increase.

Base metals 13% stake sale confirmed. Confirming the strategy of bringing in a partner for the base metals' unit, Vale announced the sale of part of its stake for an implied EV of US$26bn, in which Marana Minerals, a JV between Ma'aden and PIF, will have the equivalent of 13% of the company, for a payment of US$3.4bn. Initially, the idea of bringing in a player with a large operational experience in the base metals sector, such as a mining company or a company belonging to the energy transition chain, seemed to us to be an option that would add more to value building in the long term for shareholders. However, the M&A still makes us reflect on the value of Vale ex base metals, trading at an **EV/EBITDA 23E of 3.55x vs. a historical average of 4.84x.** Therefore, while on the one hand the long-term value could be unlocked more intensely with a more strategic and non-financial player, on the other hand the more stretched valuation of the base metals unit increasingly makes the ferrous metals unit, already a robust cash generator, look a bargain.... We commented more on this dynamic in another recently published report, of which we leave the link attached. (Vale: Sale of base metals' stake)

Maintaining the pattern as an excellent dividend payer. Vale also announced the distribution of new dividends. In a total amount of R$8.2bn, or the equivalent of R$1.91 per share, which today means a distribution of 2.7% of its market value. **Numbers are aligned with our estimate** of a **9.2% dividend yield** yet to be paid in 2023.

Touching a sore point... Although we expect a **negative reaction at the market opening**, due to the revision of the dynamics linked to C1/t (higher than expected in 2Q23 + upward revision of guidance), **the damage to our model is still very well contained**, since our assumptions were already pessimistic and did not include the achievement of the previous guidance. The effects on the profit decline were not recurrent, so the other reason that could impact a negative market reaction also does not reveal anything about how 2H23 will be... the next quarters where operational performance should improve substantially. Thus, we maintain our **BUY rating**, with a **12M Target Price** of **R$83.00** for **VALE3-B3**, and for **VALE-NYSE** ADRs of **US$17.00**, which implies an upside of **+17.86%**.

Appendix: Vale

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

Income Statement	2023E	2024E	2025E	2026E	2027E	2028E
Net Revenue	**40.885**	**40.844**	**43.056**	**44.702**	**45.003**	**45.386**
(-) COGS	(24.092)	(26.242)	(28.083)	(30.299)	(31.936)	(33.536)
Gross profit	**16.793**	**14.602**	**14.972**	**14.403**	**13.067**	**11.851**
(-) Expenses	(3.816)	(4.305)	(3.112)	(3.194)	(2.758)	(2.685)
Adjusted EBIT	**12.977**	**10.297**	**11.860**	**11.209**	**10.310**	**9.165**
(+/-) Financial Result	(1.838)	(1.683)	(1.594)	(1.430)	(1.426)	(1.116)
(-) Taxes	(551)	(244)	(352)	(299)	(214)	(136)
Net income	**10.588**	**8.370**	**9.914**	**9.480**	**8.670**	**7.913**
Profitability						
Net margin (%)	25,90%	20,49%	23,03%	21,21%	19,26%	17,44%

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

Cash Flow	2023E	2024E	2025E	2026E	2027E	2028E
Net Revenue	**40.885**	**40.844**	**43.056**	**44.702**	**45.003**	**45.386**
(-) COGS	(24.092)	(26.242)	(28.083)	(30.299)	(31.936)	(33.536)
Adjusted EBITDA	**16.386**	**13.864**	**15.571**	**15.066**	**14.310**	**13.299**
EBIT	**12.977**	**10.297**	**11.860**	**11.209**	**10.310**	**9.165**
(-) Taxes	(551)	(244)	(352)	(299)	(214)	(136)
(+/-) Provisios and dams	786	(589)	394	(61)	371	197
(+) D&A	3.409	3.567	3.711	3.856	4.000	4.134
(+/-) Δ WK	(1.064)	(234)	635	(295)	(54)	(114)
(-) Capex	(5.878)	(6.020)	(6.173)	(6.217)	(6.217)	(6.217)
FCFF	**9.679**	**6.777**	**10.075**	**8.194**	**8.197**	**7.029**

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Genial Rating

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

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