genial Equity Research

VALE

3Q23 Preview: Built on iron, not copper

LatAm Metals & Mining

Main takeaways:

(i) Iron ore fines maintains strong production volume, despite a drop y/y; **(ii)** Base metals with weak volume and lowered guidance for copper; **(iii)** Gap between production and sales was even smaller than our estimates; **(iv)** Realized price of iron ore fines came in line, but pellets came in below estimates; **(v)** Higher pellet production in this quarter should result in higher sales only in 4Q23; **(vi)** Base metals are cooling with a weaker nickel curve; **(vii)** Revenues will come in with a significant improvement q/q and y/y; **(viii)** Seasonality and destocking play in favor of a reduction in costs; **(ix)** EBITDA should show a strong recovery; **(x)** We project net income to rise 85% q/q; **(xi)** Although there was an increase in the volume of ferrous business division, **changes in the base metals unit and in freight assumptions** led to a **slight cut off in our Target Price**. Despite the changes, we **remain bullish on Vale**. Trading at a discounted **EV/EBITDA 24E** of **4.3x**, lower than its historical average of 4.8x, we reiterate our **BUY rating**, with a **new 12M Target Price** of **US$16.75** for **NYSE ADRs** and **R$82.50** for **VALE-B3**, implying an **upside** of **+21.59%**.

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Company

VALE US Equity
Buy

Price: US$ 13.15 (17-Oct-2023)
Target Price 12M: US$ 16.75 (NYSE)

VALE3 BZ Equity
Target Price 12M: R$ 82.50 (B3)

Vale released its 3Q23 Production and Sales report yesterday, after the market closed (AMC). The figures were **mostly in line** with our expectations and consensus **for the ferrous division** and **weaker than expected** for the **base metals' unit**. Even so, we remain constructive about Vale's performance going forward, considering that the base metals division has a lower weight in the EBITDA's composition. Vale will also **disclose 3Q23 financial data on 26th of October**, also AMC.

We note a quarter in which Vale **increased its iron ore production** due to a natural seasonal movement, plus a partial sale of accumulated inventories. With this dynamic, we believe that the company will benefit not only from **higher revenues**, but also from **greater capacity to dilute fixed costs during 2H23**. In line with what we described in our previous report, this will probably **cool down C1/t**, addressing investors' concerns about the high costs of 1H23, helping to calm spirits and bring back the buyer flow to the shares.

Table1. volumes broadly in line with expectations

	Reported	Genial Est.	
Summary	**3Q23A**	**3Q23E**	**% Diff.**
Iron Ore Fines Production	86.238	88.984	**-3,1%**
Iron Ore Fines Shipments	69.714	67.110	**3,9%**
Pellets Production	9.175	9.411	**-2,5%**
Pellets Shipments	8.613	9.362	**-8,0%**

Source: Genial Investimentos, Vale

Table2. Reported vs. 2Q23 and 3Q22

Reported				
3Q23A	**2Q23A**	**% q/q**	**3Q22A**	**% y/y**
86.238	78.743	**9,5%**	89.701	**-3,9%**
69.714	65.381	**6,6%**	65.381	**6,6%**
9.175	9.111	**0,7%**	8.256	**11,1%**
8.613	8.809	**-2,2%**	8.521	**1,1%**

Source: Genial Investimentos, Vale

Valuation and rating. In the release, Vale **lowered its production guidance for copper** to 315-325kt (-6% vs. previous lower band and -13% vs. upper band). Faced with weak figures for both production and sales, we have **updated our model** to reflect a production of 320Kt (-5% vs. Old Est.), targeting the middle of the new guidance.

Even considering that the base metals division has much less weight in EBITDA compared to the ferrous business unit, we now have a lower estimate for this year's copper figures than we originally expected, and as a result, the projections for 2024 onwards have also become lower in our model. In addition, with freight costs rising due to the recent and unexpected rise in fuel prices, we changed some assumptions, which added to the new copper production and sales in our model ended up implying a **soft Target Price cut** of **-US$0.25** for the **ADRs** or **–R$$0.50** for **VALE3-B3**.

Trading at an **EV/EBITDA 24E** of **4.3x** (vs. a historical average of 4.8x), we reinforce our **BUY rating**, with a **slight cut** in the **12M Target Price** to **US$16.75** (vs. US$17.00 previously) on **NYSE ADRs**. For **VALE3-B3** our **12M Target Price** is **R$82.50** (vs. R$82.50 previously), which implies an **upside** of **+21.59%**.

Straight to the point…

In this chapter, we've **broken down the highlights** in a more **objective and comprehensive way**, for those of you who don't have much time. **We encourage** those who are more interested **to also read the chapter "In detail!"**, to be even more informed about the events as well as what to expect for the **3Q23 figures in a more specific way**.

Price of i.o. fines in line, but pellets miss estimates. Although the 62% Fe curve was almost stable during the period in average (US$114/t in 3Q23 vs. US$111/t in 2Q23), we would point out that, as we anticipated in our last report published (Vale 3Q23 Operational Preview: A watershed?), the provisioning mechanism contributed positively to the prices' realization for iron ore fines, which closed the quarter at US$105.1/t (+0.8% vs. Genial Est.), up +6.7% q/q. The premium for fines was US$0.8/t, in line with our estimate. For pellets, the premium was lower than we expected, at +US$30/t vs. the 65% Fe curve.

We initially believed that Vale would be a little more resilient when it came to contractual pellet premiums, but the company ended up giving in more to the pressure to reduce the spread between the 65% Fe and 62% Fe curves than we had initially expected, as the market has not much of interest in paying for high grade with steelmakers dealing with lower margins. This resulted in a realized pellet price of US$161.2/t (-11.4% vs. Genial Est.).

Production with a positive seasonal effect and sales above expectations. Looking at volumes, both production and sales showed satisfactory figures. Production of fines was 86.2Mt (-3.1% vs. Genial Est.), with shipments reaching 69.7Mt (+3.9% vs. Genial Est.), above expectations. For pellets, production stood at 9.1Mt (-2.5% vs. Genial Est.), and sales reached 8.6Mt (-8.0% vs. Genial Est.).

Base metals division was the big disappointment. At the other end of the spectrum, the base metals division felt the opposite effect to the ferrous division. With regard to the figures for nickel, although expected, we would point out that the fall in the LME price curve was directly reflected in a lower realization by the company.

In addition to what we already expected in relation to nickel, the copper figures were not satisfactory, coming in below our estimates given the greater than expected difficulty in ramping up production, resulting in a downgrade of the annual guidance.

As only ~10% of Vale's EBITDA comes from the base metals division, the unit's poor performance will certainly be diluted by the superior performance of the ferrous division, both sequentially and on an annual basis (as we already expected).Therefore, we believe that the 3Q23 result, which will be released on August 26 after the market closes, should still show an interesting recovery on a consolidated basis.

Updating projections... We have changed our projection for the quarter in view of the release of the production sales report yesterday, as we had commented would be done in our previous publication. Projected EBITDA for 3Q23 is now US$5.1bn Genial Est. (-7.3% vs. Old Est.), growing +24.0% q/q and +28.7% y/y. The new projection for net income is US$2.6bn Genial Est. (-10.3% vs. old Est.), representing a rise of +84.7% q/q and a fall of -41.2% y/y.

Basically, the new estimates for 3Q23 vs. the old ones bring small drops, which are due to two reasons: **(i)** lower pellet premiums than previously expected and **(ii)** weak performance for production and sales in base metals, especially copper.

Table3. New 3Q23 Est. vs. old one

	Genial Est.	Old Est.	
Income Statement	**3Q23E**	**3Q23E**	**% Diff.**
Net Revenue	10.732	11.079	**-3,1%**
Proforma EBITDA	5.153	5.526	**-6,7%**
Net Income	2.638	2.987	**-11,7%**

Source: Genial Investimentos

Table4. New 3Q23 Est. vs. 2Q23 and 3Q22

Genial Est.				
3Q23E	**2Q23A**	**% q/q**	**3Q22A**	**% y/y**
10.732	9.673	**10,9%**	9.929	**8,1%**
5.153	4.157	**24,0%**	4.031	**27,8%**
2.638	1.428	**84,7%**	4.484	**-41,2%**

Source: Genial Investimentos, Vale

In detail!

Now we'll **go into more detail** about on the operational figures that the company released yesterday, as well as what investors can expect from the financial release on October 26th.

Iron ore production remains strong, despite a drop y/y. Moving towards production's guidance of 310-320Mt, Vale brought in good figures for iron ore fines in 3Q23, although the y/y comparison shows a marginal drop, as we also expected. With ROM production at Paraopeba very strong in 3Q22, something that is difficult to replicate in the short term, fine iron ore production clocked in at 86.2Mt (vs. 89.9Mt Genial Est.), up +9.5% q/q and down -3.9% y/y.

A one-off failure in the conveyor belt system at the S11D mine in August resulted in a negative impact of -2Mt on the quarter. Even so, volumes increased by +0.4Mt y/y despite the fact that this one-off event hampered some of S11D's ramp-up, with record monthly mine movements in September. In other words, apart from the unforeseen event, the S11D would have increased its production by +12.6% y/y, which makes us optimistic about its performance given the potential for extracting higher quality iron ore, more than offsetting the depletion effect seen at Serra Norte.

Pellets still making baby steps, to accelerate in 4Q23. Reporting production of 9.2Mt (-2.5% vs. Genial Est.), we saw growth of +0.7% q/q and +11.1% y/y for pellets, which should pick up pace in the next quarter, since the commissioning of the Torto dam in Brucutu (MG) was completed in July and there is some logistical time for the arrival of a larger volume of iron ore at the pelletizing plant yard at the Tubarão terminal (ES).

So, although the Torto dam has already had some effect on the increase in pellet production, we believe that it only partially affected the quarter, and we expect an even more intense improvement in 4Q23. We commented on exactly this dynamic in our previous report. In addition, the Brucutu mine also brought about a substantial improvement in the product mix, increasing the supply of pellets and decreasing the share of products with a high silica content.

Base metals with weak volumes and downgraded guidance for copper. In a new guidance for copper with 315-325kt (vs. 335-375kt previously), production was brought lower than expected at 81.6kt (-9.4% vs. Genial Est.), due to setbacks for the ramp-up at mines in Canada, which are operating new mining methods at Coleman and maintenance at Sudbury and Thompson also had an effect. In addition, maintenance at Salobo I and II also made it difficult to deliver a more favorable copper performance.

In line with the guidance for nickel, which was maintained at 160-175kt (vs. ~180kt in 2022), production stood at 42.1kt (-2.1% vs. Genial Est.), practically in line with our estimates, due to difficulties with maintenance and ramp-up of new projects.

Table 5. Production Summary Vale (3Q23 vs. Genial Est.)

Vale Production Summary (Kt)	3Q23 Reported	3Q23E Genial Est.	% R/E
Iron Ore[1]	86.238	88.984	-3,1%
Pellets	9.175	9.411	-2,5%
Nickel	42,1	43,0	-2,1%
Copper	81,6	90,1	-9,4%

Production Summary (Kt)	3Q23 Reported	2Q23 Reported	% q/q	3Q22 Reported	% y/y
Iron Ore[1]	86.238	78.741	9,5%	89.701	-3,9%
Pellets	9.175	9.111	0,7%	8.255	11,1%
Nickel	42,1	36,9	14,1%	51,8	-18,7%
Copper	81,6	78,8	3,6%	74,3	9,8%

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

Source: Genial Investimentos, Vale

Gap between production and shipments was even smaller than our estimates. As expected, there was a partial reversal of the inventory built up during 1H23, due to the restriction on shipments of iron ore from the Northern System at the Ponta da Madeira (MA) terminal. Our estimate was an atypical increase in sales for 3Q, considering the process of destocking 7.5Mt of iron ore, or 20% of the total accumulated inventory due to the one-off event at Ponta da Madeira. As Vale does not provide disclosure of inventory data, it is difficult for us to know how assertive we were in relation to this figure.

However, it's important to note that the volume of i.o. fines shipments stood at 69.7Mt (+3.9% vs. Genial Est.), indicating an increase of +10.1% q/q and +6.6% y/y. When we calculate the gap now with the realized figures, we arrive at ~20% (-4.5p.p vs. Genial Est.), which suggests that the destocking process was slightly higher than the 7.5Mt we projected, and may have stood at ~9.5Mt, or something close to 25% of the total inventory accumulated during 1H23.

Our take is that this is good news for Vale, bearing in mind that 4Qs are already seasonally better for sales, so opting to boost 3Q, which is usually a little weaker, with a higher realization of accumulated inventory didn't seem like a bad idea to us. So, in the event that a higher percentage of inventory has already been released in 3Q, we believe that this helps the company to destock a larger volume when the period was more favorable for price dynamics, based on the acceleration of iron ore between 2Q23 and 3Q23. Remember that our 62% Fe curve is decreasing for 4Q23, and this reduction is already starting to happen during October, with iron ore prices falling to US$117/t vs. US$120 at the beginning of the month.

Higher pellet production this quarter should result in higher sales only in 4Q23. In a different trend from the one seen in its production, pellets had their total sales at 8.6Mt (-8% vs. Genial Est.), reaching -2.2% q/q and +1.1% y/y, marking a performance below our expectations, with the improvement in production not yet fully resulting in sales. Even so, as we have already mentioned, 4Q23 should be stronger in this respect.

Meanwhile, within the metal's unit for the energy transition, volumes also came in below estimates, with nickel at 39.2kt (-8.4% vs. Genial Es.), down -2.7% q/q and -11.5% y/y, and copper at 73.8kt (-12.6% vs. Genial Est.), stable q/q and up +4.7% y/y.

Table 6. Shipments Summary Vale (3Q23 vs. Genial Est.)

Vale Shipments Summary (Kt)	3Q23 Reported	3Q23E Genial Est.	% R/E
Iron ore fines	69.714	67.110	3,9%
Pellets	8.613	9.362	-8,0%
ROM	2.232	2.201	1,4%
Nickel	39,2	43	-8,4%
Copper	73,8	84	-12,6%

Vale Shipments Summary (Kt)	3Q23 Reported	2Q23 Reported	% q/q	3Q22 Reported	% y/y
Iron ore fines	69.714	63.329	10,1%	65.381	6,6%
Pellets	8.613	8.809	-2,2%	8.521	1,1%
ROM	2.232	2.236	-0,2%	3.668	-39,1%
Nickel	39,2	40,3	-2,7%	44,3	-11,5%
Copper	73,8	73,8	0,0%	70,5	4,7%

[1] Including third-party purchases

Source: Genial Investimentos, Vale

Base metals cooled by weaker nickel curve. The negative highlight within the base metal's unit was nickel, with the loss in the LME curve directly affecting Vale's price, which hit US$20,300/t (+2.4% vs. Genial Est.), falling -7.6% q/q and -8.7% y/y. In addition, copper had a stable curve, but whose lower temporal adjustments resulted in a price of US$7,700/t (+10.0% q/q; +16.0% y/y), and slightly above our expectations.

Revenues to significantly improve q/q and y/y. With a sustained advance by its main unit, we expect net revenue of US$10.7bn Genial Est. in 2Q23 (+11.4% y/y; +7.8% y/y), with i.o. fines rising +17.5% q/q to US$7.3bn Genial Est., while pellets should stand at US$1.3bn Genial Est. (-1.7% y/y; -16.2%). For base metals, we are projecting a revenue without much progress sequentially, with nickel at US$1.3bn Genial Est. (+1.3% q/q; -20.8% y/y) and copper at US$571mn Genial Est. (+6.0% q/q; +19.1% y/y).

Table 7. Net Revenue Vale (3Q23 Genial Est.)

(US$ millions)	3Q23E Genial Est.	2Q23 Reported	% q/q	3Q22 Reported	% y/y
Net Revenue	**10.732**	**9.638**	**11,4%**	**9.958**	**7,8%**
Iron Ore Fines	7.327	6.238	17,5%	6.053	21,0%
Pellets	1.388	1.413	-1,7%	1.656	-16,2%
Nickel operations	1.238	1.222	1,3%	1.563	-20,8%
Copper operations	571	538	6,0%	479	19,1%
Others	208	227	-8,4%	207	0,5%

Source: Genial Investimentos, Vale

Seasonality and destocking playing in favor of costs' reduction. We would like to highlight the exit from the period of negative seasonality in 1H, which brought rainfalls and ended up limiting iron ore production. With an improvement in rainfall conditions, the increase in production and sales in 2H is already starting to happen, through the consolidation of 3Q23 data. As higher shipment volumes are strictly necessary to increase fixed cost dilution, we expect C1 cost, which has stood at ~US$26/t so far in 1H23, to take a downward trajectory in 3Q23, to US$23.9/t Genial Est. (-9.7% q/q; +4.9% y/y).

Although shipments of iron ore fines came in slightly better than our estimates, the difference in terms of volume ended up being offset by pellet sales below what we expected, so we decided to keep C1/t at the same level we were projecting before yesterday's release, which already included this -9.7% q/q reduction. Although C1 (which historically represents ~40% of cash COGS) is expected to shrink for the quarter, freight costs (historically representing ~35% of cash COGS) may rise, which we estimate at US$18/t (vs. US$17/t in 2Q23).

We found the value of time charter falling q/q, which was the central fundament for our call on a reduction in freight costs for Vale in 3Q23, when we wrote about this topic on September sector publication, which is attached (Metals & Mining: An X-ray of the exposed fracture in the Chinese real estate market). However, the bunker ended up rising, impacting the entire base, and expunging this benefit that we had previously calculated. At the moment, we expect bunker prices to continue to rise in 4Q23 due to the war in the Middle East, which is driving up the price of Brent crude oil and affecting its derivatives.

As a result, we estimate a consolidated nominal cost of US$5.9bn Genial Est. (+2.3% q/q; -0.5% y/y), with the iron ore fines showing a natural increase in response to the higher volume, which is estimated at +2.8% q/q, while the other lines end up following sales trends.

Table 8. COGS Vale (3Q23 Genial Est.)

(US$ millions)	3Q23E Genial Est.	2Q23 Reported	% q/q	3Q22 Reported	% y/y
COGS	**(5.917)**	**(5.791)**	**2,2%**	**(6.301)**	**-6,1%**
Iron Ore Fines	(3.133)	(3.048)	2,8%	(3.095)	1,2%
Pellets	(664)	(674)	-1,4%	(714)	-7,0%
Nickel operations	(934)	(886)	5,4%	(1.325)	-29,5%
Copper operations	(292)	(319)	-8,5%	(275)	6,1%
Others	(89)	(85)	3,9%	(117)	-24,2%
Depreciação e Amort.	(805)	(779)	3,3%	(775)	3,9%

Source: Genial Investimentos, Vale

EBITDA should show a strong recovery. We are currently projecting a consolidated Proforma EBITDA of US$5.1bn Genial Est (+24.0% q/q; +27.8% y/y), with the major responsible for this movement being iron ore fines, reaching US$4.0bn Genial Est (+31.3% q/q; +42.9% y/y). In the opposite direction to this expansion, pellets should fall to US$718mn Genial Est. (-12.3% q/q; -23.1% y/y), and base metals should maintain flat their results without any major growth.

Table 9. EBITDA Vale (3Q23 Genial Est.)

(US$ millions)	3Q23E Genial Est.	2Q23 Reported	% q/q	3Q22 Reported	% y/y
Proforma EBITDA	**5.153**	**4.157**	**24,0%**	**4.031**	**27,8%**
Iron Ore Fines	4.052	3.087	31,3%	2.835	42,9%
Pellets	718	818	-12,3%	933	-23,1%
Nickel operations	233	235	-1,0%	209	11,3%
Copper operations	244	236	3,4%	155	57,5%
Others	(93)	(219)	-57,5%	(101)	-7,8%

Source: Genial Investimentos, Vale

We project net income up 85% q/q. We are projecting a stronger EBITDA but facing a financial result of -R$446mn in our model (vs. -R$157mn in 2Q23), with financial expenses driven by the continued impact of credit updates on the Renova foundation and increased interest on the early payment of bonds, we expect a net profit of R$2.6bn Genial Est. (+87.5% q/q; -40.3% y/y).

Table 10. Income Statement Vale (3Q23 Genial Est.)

(US$ millions)	3Q23E Genial Est.	2Q23 Reported	% q/q	3Q22 Reported	% y/y
Net Revenue	**10.732**	**9.638**	**11,4%**	**9.958**	**7,8%**
COGS	(5.917)	(5.791)	2,2%	(6.301)	-6,1%
Proforma EBITDA	**5.153**	**4.157**	**24,0%**	**4.031**	**27,8%**
EBITDA Margin (%)	48,0%	43,1%	4,89p.p	40,5%	7,54p.p
Adjusted EBIT	**3.466**	**3.107**	**11,6%**	**2.920**	**18,7%**
EBIT Margin (%)	32,3%	32,2%	0,06p.p	29,3%	2,97p.p
D&A	(805)	(779)	3,3%	(775)	3,9%
Financial Result	(445)	(157)	183,6%	2.347	-119,0%
Net Income	**2.638**	**1.428**	**84,7%**	**4.484**	**-41,2%**
Net Margin (%)	24,6%	14,8%	9,76p.p	45,0%	-20,45p.p

Source: Genial Investimentos, Vale

Our Take on Vale

In the scenario projected for 3Q23, there is a strong prospect of recovery for Vale, driven by several positive factors, including: **(i)** natural seasonality, with reduced rainfall, making it possible to increase production, and **(ii)** the 62% Fe ore price, which remains resilient, and with positive effects from provisioning despite the challenging conditions in China.

We believe in a development of the company's performance compared to previous quarters of the year, with the highlight being the recovery in sales, especially due to the temporary interruptions in shipments during 1H23, which led to an increase in inventories. Now these inventories are being reversed.

Our analysis is that the destocking process in 3Q led to an atypical increase in iron ore sales. Before yesterday's announcement, our estimate was 7.5Mt, or 20% of the total accumulated inventory. We emphasize that it is difficult to have a precise idea of this figure given the lack of disclosure that Vale makes available on stockpiles.

After the release of the production and sales data, we saw the volume of shipments of i.o. fines reach 69.7Mt (+3.9% vs. Genial Est.), slightly above our projections. As a result, the estimated reduction in inventory may have exceeded our projections to some extent, reaching ~9.5Mt or around 25%. We see a larger destocking than initially forecast as positive news for Vale in 3Q23, since we have a slightly bearish bias for iron ore prices in 4Q23.

The combination of the destocking process and the increase in production will provide more dilution capacity of fixed costs, one of the main challenges faced by Vale so far this year, which raised C1 to US$26/t in 1H23, and with our projection cooling down in 3Q23 to US$23.9/t Genial Est.

With **(i)** sales volume driven by destocking and seasonality translating into higher revenue, and **(ii)** better fixed cost dilution capacity through a C1 potentially reducing from US$26/t to US$23.9/t, we believe Vale will report a significant increase in EBITDA, now projected at US$5.2bn Genial Est. (+24.0% q/q; +27.8% y/y).

Changes we made in our model. Even with a noticeable improvement in the volume of ferrous products, mainly iron ore fines, we still had to change some assumptions in our model regarding **(i)** the base metals unit and **(ii)** freight.

Volumes in the base metals' unit were weaker than expected, with copper guidance being revised to 315-325kt (vs. 335-375kt previously), impacting our 2023E production estimate by -5%, at which harm our long-term ramp-up outlook slightly.

In addition to this revision in our model, we have also changed the cost of freight, due to the perception that even with time charter values falling q/q, the cost of bunker will rise, due to the war in the Middle East raising the price of a barrel of Brent oil and putting pressure on its derivatives.

Built on iron, not copper. Although both changes in assumptions have reduced the Target Price by **-US$0.25** for **ADRs** or **-US$0.50** for **VALE3-B3**, the changes are smooth and do not detract from our bullish sentiment about Vale's investment thesis, both for the short term and on long run. We even chose the company as our **Metals & Mining Top Pick** in our previous report, which is attached below (Vale 3Q23 Operational Preview: A watershed?). In it, we further explored the reasons why we are constructive about an improvement in Vale's results from now on.

Trading at an **EV/EBITDA 24E** of **4.3x** (vs. a historical average of 4.8x), we see Vale discounted, running below its historical levels. We reinforce our **BUY rating**, now with a **12M Target Price** of **R$82.50** (vs. R$83.00 previously) **for VALE-B3**, and a **12M Target Price** of **US$16.75** (vs. US$17.00 previously) on **NYSE ADRs**, which implies an upside of **+21.59%**.

Appendix: Vale

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

Income Statement	2023E	2024E	2025E	2026E	2027E	2028E
Net Revenue	**40.950**	**38.779**	**40.521**	**42.210**	**42.931**	**43.549**
(-) COGS	(22.554)	(23.752)	(24.970)	(26.293)	(27.527)	(28.742)
Gross Profit	**18.396**	**15.027**	**15.551**	**15.917**	**15.404**	**14.807**
(-) Expenses	(3.727)	(4.135)	(3.061)	(3.189)	(2.747)	(2.680)
Adjusted EBITDA	**16.728**	**14.052**	**15.940**	**16.151**	**16.205**	**15.804**
(-) D&A	(3.153)	(3.326)	(3.471)	(3.615)	(3.753)	(3.886)
EBIT	**13.575**	**10.726**	**12.469**	**12.537**	**12.452**	**11.918**
(+/-) Financial Result	(1.854)	(1.651)	(1.628)	(1.557)	(1.697)	(1.510)
(-) Taxes	(2.556)	(1.073)	(1.264)	(1.302)	(1.274)	(1.233)
Net income	**9.165**	**8.002**	**9.576**	**9.678**	**9.480**	**9.174**
Profitability						
Net margin (%)	22,38%	20,63%	23,63%	22,93%	22,08%	21,07%

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

Cash Flow (FCFF)	2023E	2024E	2025E	2026E	2027E	2028E
Net Revenue	**40.950**	**38.779**	**40.521**	**42.210**	**42.931**	**43.549**
(-) COGS	(22.554)	(23.752)	(24.970)	(26.293)	(27.527)	(28.742)
Adjusted EBITDA	**16.728**	**14.052**	**15.940**	**16.151**	**16.205**	**15.804**
Adjusted EBIT	**13.575**	**10.726**	**12.469**	**12.537**	**12.452**	**11.918**
(-) Taxes	(2.556)	(1.073)	(1.264)	(1.302)	(1.274)	(1.233)
(+) D&A	3.153	3.326	3.471	3.615	3.753	3.886
(+/-) Δ WK	(1.810)	(427)	773	(194)	2	(61)
(-) Capex	(5.928)	(6.137)	(6.288)	(6.341)	(6.364)	(6.384)
FCFF	**6.435**	**6.415**	**9.161**	**8.315**	**8.569**	**8.126**

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