

"I am pleased to present Vale's results for the first time as the company's CEO. Before I comment on the quarter's performance, I would like to briefly lay out what I envisage as the path forward for the company. First, we will strive to transform Vale into a more agile and efficient company, fostering innovation and a performance culture. Having said that, safety and operational excellence are non-negotiable elements of this journey. Second, our strategic efforts will be concentrated on delivering a superior portfolio, with a greater focus on customer-centricity. On iron ore, we will accelerate our high-quality product offerings, while on base metals, we aim to continue to grow, particularly on copper. Lastly, I am committed to enhancing our institutional relationships, ensuring we leave a positive impact on people and the environment."

In the quarter, our iron ore production reached its highest levels in over five years, underscoring our continued focus on operational excellence. Our pellet production is at its peak since 2019, aligned with our strategy to deliver high-quality products. In our base metals division, copper and nickel production also showed solid progress, marked by operational improvements in Canada, with the asset review implementation already bearing fruit. We also continue to deliver on dam safety, having recently removed the Sul Superior dam from emergency Level 3. Lastly, we expect to sign the Mariana settlement very soon, aiming at a definitive resolution that will, above all, benefit the impacted people and society, through a mutually beneficial agreement for all stakeholders." commented Gustavo Pimenta, Chief Executive Officer

Selected financial indicators

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Net operating revenues	9,553	10,623	-10%	9,920	-4%	27,932	28,730	-3%
Total costs and expenses ¹ (ex-Brumadinho and	(6,802)	(6,921)	-2%	(6,974)	-2%	(19,673)	(18,736)	5%
Expenses related to Brumadinho and dams	(126)	(305)	-59%	1	n.a.	(166)	(687)	-76%
Adjusted EBIT	2,867	3,651	-21%	3,200	-10%	8,791	9,928	-11%
Adjusted EBITDA	3,615	4,431	-18%	3,993	-9%	11,046	12,143	-9%
Adjusted EBITDA margin (%)	38%	42%	-4 p.p	40%	-2 p.p	40%	42%	-2 p.p
Proforma adjusted EBITDA^{2,3}	3,741	4,736	-21%	3,992	-6%	11,212	12,830	-13%
Free cash flow	179	1,126	-84%	(178)	n.a.	2,001	4,186	-52%
Net income attributable to Vale's shareholders	2,412	2,836	-15%	2,769	-13%	6,860	5,565	23%
Net debt ⁴	9,536	10,009	-5%	8,590	11%	9,536	10,009	-5%
Expanded net debt	16,472	15,494	6%	14,683	12%	16,472	15,494	6%

¹ Includes adjustment of US\$ 94 million in 3Q24, US\$ 83 million in 2Q24, US\$ 243 million in 9M24, US\$ 47 million in 3Q23 and US\$ 134 million in 9M23 to reflect the performance of the streaming transactions at market price. ² Excluding expenses related to Brumadinho. ³ Including the EBITDA from associates and JVs. Historical figures were restated. ⁴ Including leases (IFRS 16).

Results Highlights

- **Operational and sales performance improved across all business segments.** Iron ore shipments increased by 1.3 Mt (+2%) y/y, driven by an 18% rise in pellet sales due to higher production and strong demand.
- **The average realized iron ore fines price was US\$ 90.6/t, US\$ 7.6/t lower q/q despite iron ore reference prices having decreased by US\$ 12.0/t.** The lower decline vs. the reference price is attributed to an enhanced product portfolio and positive provisional pricing adjustments.
- **Proforma Adjusted EBITDA decreased by 6% q/q and 21% y/y, totaling USD 3.7 billion.** Higher volumes and lower unit costs, particularly in iron ore, partly offset the impact of lower prices.
- **Iron ore fines' C1 cash cost, ex-3rd party purchases, was 17% lower q/q and 6% lower y/y, reaching US\$ 20.6/t,** driven mainly by: (i) fixed costs dilution due to higher production; (ii) a better production mix, with higher volumes from the Northern System where production costs are lower and (iii) continued efficiency. In September, the C1 production cost reached US\$ 18.2/t, indicating a positive performance in Q4. Vale is highly confident in achieving the low-end of its 2024 C1 cash cost guidance, ex-3rd-party purchases, of US\$ 21.5–23.0/t.
- **Copper and nickel all-in costs were US\$ 2,851/t and US\$ 18,073/t,** respectively. The copper all-in cost guidance is again being revised down, now to US\$ 2,900 – 3,300/t. On nickel, the all-in cost guidance range of US\$ 15,000–16,500/t is maintained and on track to be delivered.
- **Free cash flow was US\$ 179 million,** US\$ 947 million lower y/y, largely reflecting the decrease in EBITDA.
- **The Samarco-related provision was revised to US\$ 4.7 billion,** an increase of US\$ 1.0 billion, reflecting the most updated assessment regarding the potential settlement agreement with the Brazilian authorities, the claims related to the Samarco dam failure, and the extent to which Samarco may be able to fund any future outflows.
- **Expanded net debt of US\$ 16.5 billion as of September 30th,** US\$ 1.8 billion higher q/q, primarily due to the additional provisions related to Samarco's dam failure.

Business Highlights



Iron Ore Solutions

- Commissioning of the Vargem Grande 1 project's wet processing operations started in September, one month ahead of schedule. The project represents an important step towards Vale's iron ore production guidance of 340–360 Mt in 2026, by resuming approximately 15 Mtpy of iron ore capacity and improving the site's iron content by nearly 2 p.p. Other key projects underway: +15 Mt at Capanema and +20 Mt at S11D are 91% and 67% complete and on track to start in 1H25 and 2H26.
- In September, Vale completed the joint venture transaction with Apollo for US\$ 600 million. Under the agreement Vale now holds 50% of the Vale Oman Distribution Center (VODC). VODC operates a maritime terminal with a large deep-water jetty and an integrated iron ore blending and distribution center with a nominal capacity of 40 Mtpy in Sohar, Oman.

Energy Transition Metals

- In October, the second underground mine of the Voisey's Bay Mine Extension (VBME) project achieved mechanical completion, which will allow the mine to begin ramping up production in the coming months. The ramp-up of the Voisey's Bay transition is an important milestone for the competitiveness of Canadian operations and will support unit cost reduction of the nickel business segment.

Recent developments

- The Onça Puma plant resumed operations on October 15th after a 10-day halt due to a power outage. Nickel metal production at the furnace restarted on October 22nd.
- Vale and BNDES have advanced with the creation of a private investment fund to foster Critical Minerals development in Brazil. The fund aims to raise up to R\$ 1 billion, of which Vale and BNDES will contribute with an amount between R\$ 100 million and R\$ 250 million each. The amount raised should be invested in about 20 junior and mid-sized companies that operate in mineral research, development, and implementation of new strategic mineral mines in Brazil.

ESG



Tailing Dams

- Vale completed the de-characterization of Dique 1A and Dique 1B in September and October, respectively. Since 2019, Vale has de-characterized 16 structures, representing 53% of the Upstream Dam Decharacterization Program.
- The Sul Superior dam, located in Barão de Cocais, had its emergency level lowered from 3 to 2 in August following the execution of geological-geotechnical investigations and safety improvement measures.

Circular Mining

- Vale's Waste-to-Value program is transforming waste and tailings into valuable resources. It encompasses more than 150 initiatives, including repurposing iron ore tailings into high-grade pellet feed in Carajás and eliminating waste rock stockpiles through reprocessing to create circular iron ore products in Minas Gerais. As part of the program, an additional 7 Mt iron ore production has been identified for 2024.

Decarbonization

- Vale and Green Energy Park, an integrated European hydrogen company, have joined forces to deliver decarbonization solutions for the global steel sector. The companies will work on feasibility studies to develop a green hydrogen production facility to supply a future Mega Hub in Brazil, an industrial complex aimed at manufacturing low-carbon steel products.
- Vale and Petrobras signed, in October, a strategic alliance for the supply of products and services focused on decarbonization. It establishes conditions for potential commercialization of co-processed diesel with renewable content, natural gas, and bunker fuel with 24% renewable content.

Reparation



Brumadinho

- The Brumadinho Integral Reparation Agreement continues to progress, with more than 70% of the agreed-upon commitments completed and in accordance with the settlement deadlines.

Mariana

- Renova continues to progress with its reparation program, with R\$ 38 billion disbursed and more than 446 thousand people compensated by the end of September.
- Advanced negotiations are ongoing for the Mariana settlement agreement, at a total value of approximately R\$ 170 billion, considering past and future obligations to support the people, communities, and environment affected by the dam failure.



Financials

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Proforma Adjusted EBITDA								
Net operating revenues	9,553	10,623	-10%	9,920	-4%	27,932	28,730	-3%
COGS	(6,281)	(6,309)	0%	(6,349)	-1%	(17,997)	(17,198)	5%
SG&A	(139)	(150)	-7%	(137)	1%	(416)	(407)	2%
Research and development	(192)	(188)	2%	(189)	2%	(537)	(492)	9%
Pre-operating and stoppage expenses	(89)	(115)	-23%	(91)	-2%	(272)	(342)	-20%
Brumadinho & decharacterization of dams ¹	(126)	(305)	-59%	1	n.a.	(166)	(687)	-76%
Other operational expenses ²	(101)	(159)	-36%	(208)	-51%	(451)	(297)	52%
EBITDA from associates and JVs	242	254	-5%	253	-4%	698	621	12%
Adjusted EBIT	2,867	3,651	-21%	3,200	-10%	8,791	9,928	-11%
Depreciation, amortization & depletion	748	780	-4%	793	-6%	2,255	2,215	2%
Adjusted EBITDA	3,615	4,431	-18%	3,993	-9%	11,046	12,143	-9%
Proforma Adjusted EBITDA^{3,4}	3,741	4,736	-21%	3,992	-6%	11,212	12,830	-13%
Reconciliation of Proforma EBITDA to Net Income								
Proforma Adjusted EBITDA^{3,4}	3,741	4,736	-21%	3,992	-6%	11,212	12,830	-13%
Brumadinho and decharacterization of dams ¹	(126)	(305)	-59%	1	n.a.	(166)	(687)	-76%
Impairment and results on disposal of non-current assets ^{2,5}	1,050	(122)	n.a.	928	13%	1,905	(279)	n.a.
EBITDA from associates and JVs	(242)	(254)	-5%	(253)	-4%	(698)	(621)	12%
Equity results on associates and JVs and other results	(574)	94	n.a.	112	n.a.	(338)	44	n.a.
Financial results	(374)	(385)	-3%	(1,252)	-70%	(2,063)	(1,072)	92%
Income taxes	(336)	(127)	165%	34	n.a.	(750)	(2,337)	-68%
Depreciation, depletion & amortization	(748)	(780)	-4%	(793)	-6%	(2,255)	(2,215)	2%
Net income	2,391	2,857	-16%	2,769	-14%	6,847	5,663	21%
(Net income)/loss attributable to non-controlling interests	21	(21)	n.a.	-	n.a.	13	(98)	n.a.
Net income attributable to Vale's shareholders	2,412	2,836	-15%	2,769	-13%	6,860	5,565	23%

¹ Find more information on expenses in Annex 4: Brumadinho & Decharacterization. ² Includes adjustment of US\$ 94 million in 3Q24, US\$ 83 million in 2Q24, US\$ 243 million in 9M24, US\$ 47 million in 3Q23 and US\$ 134 million in 9M23 to reflect the performance of the streaming transactions at market price. ³ Excluding expenses related to Brumadinho. ⁴ Starting from 1Q24 the EBITDA will be reported including the EBITDA proportionate from associates and JVs and the previous periods were restated. Previously, the EBITDA reflected solely the dividends received from associates and JVs. ⁵ Net.

EBITDA

Proforma Adjusted EBITDA of US\$ 3.7 billion, 21% lower y/y and 6% lower q/q, mainly as a result of weaker realized iron ore fines prices and higher freight costs, partially offset by the positive effect of BRL depreciation, lower costs and expenses and higher sales volumes.

Proforma Adjusted EBITDA 3Q24 vs. 3Q23 – US\$ million



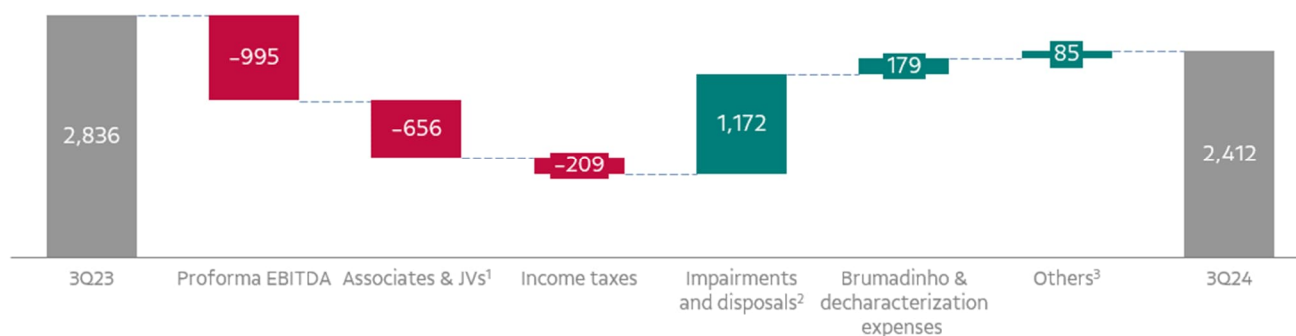
¹ Excluding Brumadinho expenses. 3Q23 EBITDA was restated including associates and JVs EBITDA (US\$ 254 million). ² Including by-products (US\$ 66 million), EBITDA Energy (US\$ 5 million) and Associates and JVs EBITDA (US\$ -12 million).



Net Income

Net income attributable to Vale's shareholders of US\$ 2.4 billion, 15% lower y/y and 13% lower q/q, mainly due to lower Proforma EBITDA and the negative effect from Associates & JV's as a result of Samarco's dam failure potential settlement agreement. This was partially offset by a positive effect from the disposal of non-current assets related to VODC's 50% stake sale.

Net income attributable to Vale's shareholders 3Q24 vs. 3Q23 – US\$ million



¹ Considers equity results and EBITDA from associates and JVs. ² Impairment and disposal of non-current assets, net. Includes the sale of 50% of VODC's share capital to Apollo of which: US\$ 600 million in proceedings received from the sale, US\$ 600 million related to the fair value of 50% interest retained and US\$ 22 million in other effects related to the deconsolidation. Includes adjustment of US\$ 94 million in 3Q24 and US\$ 47 million in 3Q23 to reflect the performance of the streaming transactions at market price. ³ Includes (i) US\$ 32 million in depreciation, depletion & amortization, (ii) US\$ 11 million in financial results and (iii) US\$ 42 million net income/loss attributable to non-controlling interests.



Capital Expenditures

Total CAPEX

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Iron Ore Solutions	1,000	963	4%	906	10%	2,907	2,438	19%
Energy Transition Metals	376	453	-17%	405	-7%	1,148	1,209	-5%
Nickel	298	365	-18%	344	-13%	948	936	1%
Copper	78	88	-11%	61	28%	200	273	-27%
Energy and others	22	48	-54%	17	29%	66	155	-57%
Total	1,398	1,464	-5%	1,328	5%	4,121	3,802	8%

Growth Projects

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Iron Ore Solutions	323	354	-9%	293	10%	936	845	11%
Energy Transition Metals	49	96	-49%	33	48%	121	263	-54%
Nickel	46	67	-31%	29	59%	107	151	-29%
Copper	3	29	-90%	4	-25%	14	112	-88%
Energy and others	4	18	-78%	2	100%	14	62	-77%
Total	376	468	-20%	328	15%	1,071	1,170	-8%

Investments in growth projects totaled US\$ 376 million, US\$ 92 million (-20%) lower y/y, mainly as a result of (i) lower expenditures with the Salobo 3 copper project; (ii) the deconsolidation of PTVI in our Energy Transition Metals business; and (iii) lower disbursements for the Tubarão Briquette project as the physical progress is at an advanced stage.

Sustaining Investments

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Iron Ore Solutions	677	609	11%	613	10%	1,971	1,593	24%
Energy Transition Metals	327	357	-8%	372	-12%	1,027	946	9%
Nickel	252	298	-15%	315	-20%	841	785	7%
Copper	75	59	27%	57	32%	186	161	16%
Energy and others	18	30	-40%	15	20%	52	93	-44%
Total	1,022	996	3%	1,000	2%	3,050	2,632	16%

Sustaining investments totaled US\$ 1.022 billion, US\$ 26 million (+3%) higher y/y mainly as a result of higher investments in equipment and asset reliability improvements partially compensated by lower expenditures in the Voisey's Bay Mine Expansion nickel project.



Free cash flow

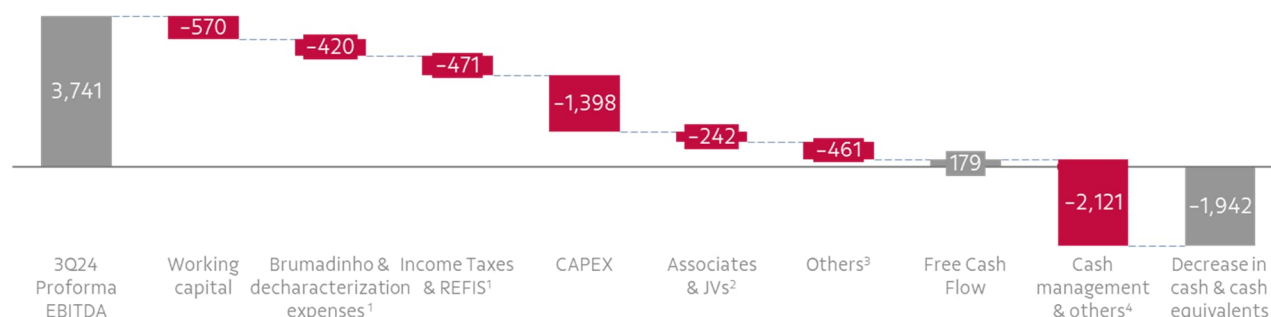
US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Proforma Adjusted EBITDA	3,741	4,736	-21%	3,992	-6%	11,212	12,830	-13%
Working capital	(570)	(186)	206%	(1,111)	n.a.	(213)	(45)	373%
Brumadinho and de-characterization expenses	(420)	(559)	-25%	(480)	-13%	(1,262)	(1,595)	-21%
Income taxes and REFIS	(471)	(720)	-35%	(466)	1%	(1,443)	(1,631)	-12%
Capex	(1,398)	(1,464)	-5%	(1,328)	5%	(4,121)	(3,802)	8%
Associates & JVs	(242)	(254)	-5%	(253)	-4%	(698)	(621)	12%
Others	(461)	(427)	8%	(532)	-13%	(1,474)	(950)	55%
Free Cash Flow	179	1,126	-84%	(178)	n.a.	2,001	4,186	-52%
Cash management and others	(2,121)	(2,087)	2%	3,056	n.a.	(860)	(5,023)	-83%
Increase/Decrease in cash & equivalents	(1,942)	(961)	102%	2,878	n.a.	1,141	(837)	n.a.

Free Cash Flow generation reached US\$ 179 million in 3Q24, US\$ 947 million lower y/y, mainly explained by lower Proforma EBITDA (US\$ 995 million lower y/y).

In the quarter, EBITDA-to-cash conversion was impacted by a negative working capital of US\$ 570 million, largely explained by an increase in accounts receivables, given higher provisional prices and accrued iron ore sales at the end of the quarter.

Vale's cash position was impacted by: (i) the distribution of US\$ 1.6 billion to shareholders in interest on capital, (ii) the continuation of debt liability management, with a negative US\$ 632 million net effect, (iii) the acquisition of the 45%-stake of Aliança Energia for US\$ 493 million, all partly offset by the proceeds from the sale of a 50%-stake at VODC for US\$ 600 million.

Free Cash Flow 3Q24 - US\$ million



¹ Includes US\$ 342 million in disbursements related to the Brumadinho and de-characterization provisioned expenses and US\$ 78 million in Brumadinho incurred expenses. ² Related to Associates and Joint Ventures EBITDA that was included in the Proforma EBITDA. ³ Includes interest on loan, derivatives, leasing, payments related to Samarco dam failure and others. ⁴ Includes disbursements of US\$ 1.586 billion in interest on capital, US\$ 20 million in shares buyback, US\$ 493 million for the acquisition of Aliança Energia and US\$ 1.584 billion in debt repayment. These were partially offset by US\$ 962 million in new loans & bonds and US\$ 600 million received from VODC transaction.



Debt

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q
Gross debt¹	13,420	12,556	7%	13,770	-3%
Lease (IFRS 16)	765	1,480	-48%	1,360	-44%
Gross debt and leases	14,185	14,036	1%	15,130	-6%
Cash, cash equivalents and short-term investments	(4,649)	(4,027)	15%	(6,540)	-29%
Net debt	9,536	10,009	-5%	8,590	11%
Currency swaps ²	(128)	(722)	-82%	(26)	392%
Brumadinho provisions	2,390	3,197	-25%	2,412	-1%
Samarco & Renova Foundation provisions ³	4,674	3,010	55%	3,707	26%
Expanded net debt	16,472	15,494	6%	14,683	12%
Average debt maturity (years)	8.9	8.2	9%	9.2	-3%
Cost of debt after hedge (% pa)	5.6	5.6	1%	5.8	-3%
Total debt and leases / adjusted LTM EBITDA (x)	0.8	0.9	-11%	0.8	0%
Net debt / adjusted LTM EBITDA (x)	0.5	0.6	-17%	0.5	0%
Adjusted LTM EBITDA / LTM gross interest (x)	22.4	23.0	-3%	23.6	-5%

¹ Does not include leases (IFRS 16). ² Includes interest rate swaps. ³ Provisions in 3Q23 do not include Germano which was reported separately at the time. With Germano, the provisions in 3Q23 would have been US\$ 3,219.

Gross debt and leases reached US\$ 14.2 billion as of September 30th, 2024, US\$ 0.9 billion lower q/q, mainly as a result of the net effect of liability management in the quarter (~US\$ 0.6 billion) and the deconsolidation of Vale Oman Distribution Center's liabilities (US\$ 0.6 billion) after the sale of the 50% stake.

Samarco & Renova Foundation provisions: This quarter, Vale recognized an additional provision of US\$ 956 million for Samarco/Renova based on advanced negotiations with Brazilian authorities for an agreement which defines the measures for the reparation and compensation related to the collapse of the Samarco dam. The amount of the additional provisions considers the extent to which Samarco may be able to fund future outflows. Total provisions for Samarco & Renova Foundation now stand at US\$ 4.7 billion.

Expanded net debt increased by US\$ 1.8 billion q/q, totaling almost US\$ 16.5 billion, mainly as a result of a reduction in cash and cash equivalents to US\$ 4.7 billion (US\$ 1.9 billion lower q/q) and the increase in provisions related to Samarco and the Renova Foundation (~ US\$ 1 billion). Vale's expanded net debt target remains at US\$ 10-20 billion.

Average debt maturity declined to 8.9 years at the end of 3Q24 from 9.2 years at the end of 2Q24. The average annual cost of debt after currency and interest rate swaps was 5.6%, falling from 2Q24's 5.8%.

In October, Moody's upgraded Vale S.A and Vale Overseas Limited's issuer rating and senior unsecured notes rating to "Baa2" from "Baa3" and reaffirmed the positive outlook on the ratings. The rating agency also upgraded the senior unsecured notes issued by Vale Canada Ltd. to "Baa3" from "Ba1" and changed the ratings outlook from stable to positive.

Segments' Performance

Proforma Adjusted EBITDA from continuing operations, by business area:

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Iron Ore Solutions	3,731	4,696	-21%	3,887	-4%	11,077	12,236	-9%
Fines	2,844	3,799	-25%	3,071	-7%	8,422	9,670	-13%
Pellets	790	751	5%	724	9%	2,396	2,200	9%
Other	97	146	-34%	92	5%	259	366	-29%
Energy Transition Metals¹	248	385	-36%	407	-39%	912	1,434	-36%
Nickel	(66)	100	n.a.	108	n.a.	59	663	-91%
Copper	360	269	34%	351	3%	995	725	37%
Other	(46)	16	n.a.	(52)	-12%	(142)	46	n.a.
Others^{2,3}	(238)	(345)	-31%	(302)	-21%	(777)	(840)	-8%
Total	3,741	4,736	-21%	3,992	-6%	11,212	12,830	-13%

¹ Includes adjustment of US\$ 94 million in 3Q24, US\$ 83 million in 2Q24, US\$ 243 million in 9M24, US\$ 47 million in 3Q23 and US\$ 134 million in 9M23, to reflect the performance of the streaming transactions at market prices, which will be made until the proceeds received on the streaming transactions are fully recognized in the adjusted EBITDA of the business. Based on the current projections for volumes and commodities prices, it will be fully realized by 2027. ² Including a negative y/y effect of provisions related to communities' programs, reversal of tax credit provisions, and contingency loss. ³ Includes US\$ 20 million in unallocated expenses from Vale Base Metals Ltd ("VBM") in 3Q24. Considering the unallocated expenses, VBM's EBITDA was US\$ 228 million in 3Q24.

Segment information 3Q24

US\$ million	Net operating revenues	Cost ¹	SG&A and others ¹	R&D ¹	Pre operating & stoppage ¹	Associates and JVs EBITDA	Adjusted EBITDA
Iron Ore Solutions	7,970	(4,255)	(45)	(87)	(63)	211	3,731
Fines	6,281	(3,371)	(15)	(76)	(58)	83	2,844
Pellets	1,502	(747)	(2)	(3)	(3)	43	790
Other	187	(137)	(28)	(8)	(2)	85	97
Energy Transition Metals	1,583	(1,313)	30	(74)	(1)	23	248
Nickel ²	904	(936)	(17)	(34)	(1)	18	(66)
Copper ³	759	(366)	(3)	(30)	-	-	360
Others ⁴	(80)	(11)	50	(10)	-	5	(46)
Brumadinho and decharacterization of dams	-	-	(126)	-	-	-	(126)
Others⁵	-	-	(211)	(32)	(3)	8	(238)
Total	9,553	(5,568)	(352)	(193)	(67)	242	3,615

¹ Excluding depreciation, depletion and amortization. ² Including copper and by-products from our nickel operations. ³ Including by-products from our copper operations. ⁴ Includes an adjustment of US\$ 94 million increasing the adjusted EBITDA in 3Q24, to reflect the performance of the streaming transactions at market prices, which will be made until the proceeds received on the streaming transactions are fully recognized in the adjusted EBITDA of the business. Based on the current projections for volumes and commodities prices, it will be fully realized by 2027. ⁵ Includes US\$ 20 million in unallocated expenses from Vale Base Metals Ltd ("VBM") in 3Q24. Considering the unallocated expenses, VBM's EBITDA was US\$ 228 million in 3Q24.

Iron Ore Solutions

Highlights

	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Average Prices (US\$/t)								
Iron ore – 62% Fe price	99.7	114.0	-13%	111.8	-11%	111.5	116.9	-5%
Iron ore fines realized price, CFR/FOB	90.6	105.1	-14%	98.2	-8%	96.1	103.7	-7%
Iron ore pellets realized price, CFR/FOB	148.2	161.2	-8%	157.2	-6%	158.7	161.3	-2%
Volume sold ('000 metric tons)								
Fines	69,344	69,714	-1%	68,512	1%	190,402	178,904	6%
Pellets	10,143	8,613	18%	8,864	14%	28,232	25,556	10%
ROM	2,351	2,232	5%	2,416	-3%	6,822	6,132	11%
Total – Iron ore	81,838	80,559	2%	79,792	3%	225,456	210,591	7%
Financials indicators (US\$ million)								
Net Revenues	7,970	8,862	-10%	8,298	-4%	23,293	23,049	1%
Costs ¹	(4,255)	(4,164)	2%	(4,415)	-4%	(12,222)	(10,883)	12%
SG&A and Other expenses ¹	(45)	(79)	-43%	(81)	-44%	(190)	(101)	88%
Pre-operating and stoppage expenses ¹	(63)	(89)	-29%	(67)	-6%	(194)	(258)	-25%
R&D expenses	(87)	(75)	16%	(94)	-7%	(264)	(179)	47%
EBITDA Associates & JVs	211	241	-12%	246	-14%	654	608	8%
Adjusted EBITDA	3,731	4,696	-21%	3,887	-4%	11,077	12,236	-9%
Depreciation and amortization	(515)	(508)	1%	(574)	-10%	(1,570)	(1,413)	11%
Adjusted EBIT	3,216	4,188	-23%	3,313	-3%	9,507	10,823	-12%

¹ Net of depreciation and amortization.

Adjusted EBITDA per segment

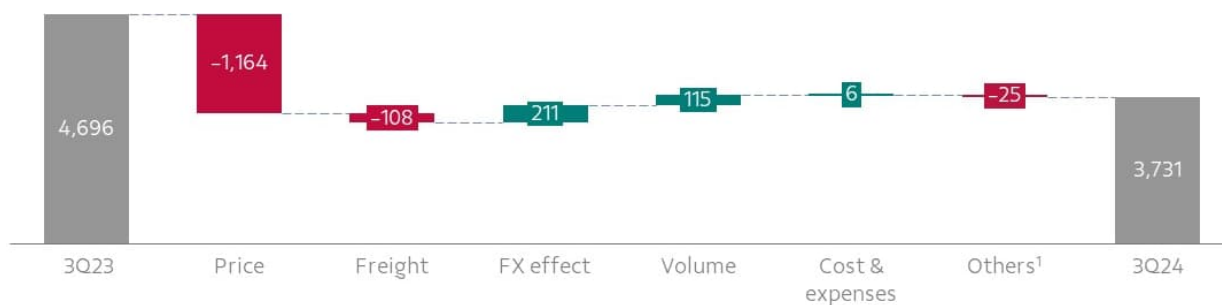
US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Fines	2,844	3,799	-25%	3,071	-7%	8,422	9,670	-13%
Pellets	790	751	5%	724	9%	2,396	2,200	9%
Other	97	146	-34%	92	5%	259	366	-29%
Adjusted EBITDA	3,731	4,696	-21%	3,887	-4%	11,077	12,236	-9%

Iron Ore Solutions EBITDA was US\$ 3.7 billion, 21% lower y/y, driven by lower prices. Cost and expenses were flat y/y.

In Iron Ore Fines, EBITDA decreased by 25% y/y, totaling US\$ 2.8 billion, mostly explained by lower realized prices (US\$ 1.016 billion) and higher freight costs (US\$ 104 million). These effects were partially offset by the positive effect of the BRL depreciation (US\$ 144 million) and slightly lower cost and expenses (US\$ 63 million).

In Iron Ore Pellets, EBITDA increased by 5% y/y, totaling US\$ 790 million, mostly explained by 18% higher sales volumes (US\$ 139 million) and the positive effect of the BRL depreciation (US\$ 57 million), partially offset by lower average realized prices (US\$ 137 million).

EBITDA variation – US\$ million (3Q24 vs. 3Q23)



¹ Includes associates and JV's EBITDA and others.

Iron Ore Fines

Product mix

'000 metric tons	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Volume sold								
Fines¹	69,344	69,714	-1%	68,512	1%	190,402	178,904	6%
IOCJ	11,709	14,758	-21%	13,180	-11%	34,290	39,599	-13%
BRBF	34,797	36,454	-5%	30,528	14%	91,018	89,134	2%
Pellet feed – China (PFC1) ²	3,328	4,234	-21%	3,337	0%	9,201	10,056	-9%
Lump	1,971	2,367	-17%	1,782	11%	5,562	5,626	-1%
High-silica products	8,050	6,131	31%	11,372 ³	-29%	26,584 ³	18,090	47%
Other fines (60–62% Fe)	9,489	5,770	64%	8,313 ³	14%	8,256 ³	16,399	-50%

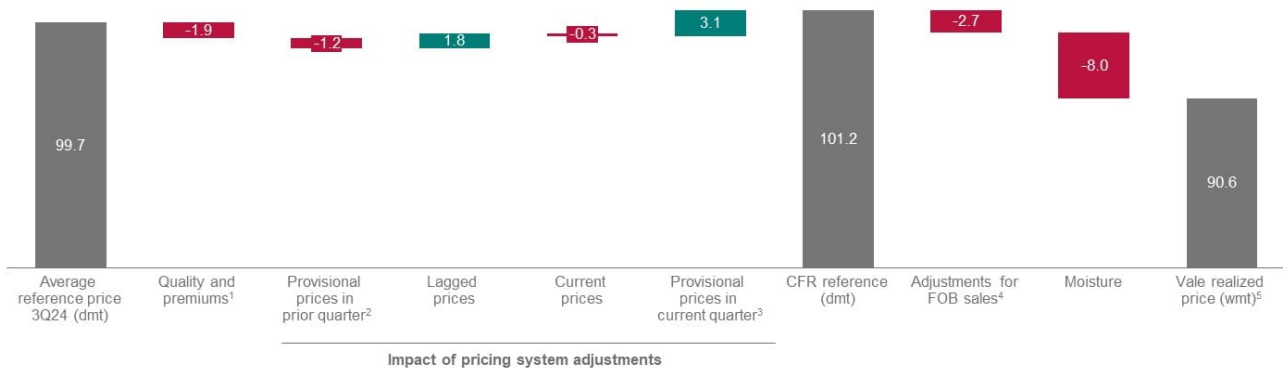
¹ Including third-party purchases. ² Products concentrated in Chinese facilities. ³ Restated from historical figures.

Revenues

The average realized iron ore fines price was US\$ 90.6/t, US\$ 7.6/t lower q/q, despite iron ore reference prices decreasing by US\$ 12/t in the period. The lower decline vs. the reference price is attributed to the positive effect of provisional pricing adjustments, given higher-than-average forward prices in the last day of the quarter (US\$ 4.7/t higher q/q) and an enhanced product portfolio (US\$ 1.4/t higher q/q).

The iron ore fines premium totaled US\$ -1.9/t, improving US\$ 1.4/t q/q, driven by enhanced average quality of the product portfolio. This is a result of increased availability of high-quality products, mainly from the Northern System, allowing for higher BRBF sales and the proactive decision to reduce direct sales of high-silica products due to market conditions. **The all-in premium improved by US\$ 1.8/t, totaling US\$ 1.7/t**, driven by a higher share of pellet sales.

Price realization iron ore fines – US\$/t 3Q24



¹ Includes quality (US\$ 0.4/t) and premiums/discounts and commercial conditions (US\$ -2.3/t). ² Adjustment as a result of provisional prices booked in 2Q24 at US\$ 106.5/t. ³ Difference between the weighted average of the prices provisionally set at the end of 3Q24 at US\$ 108.8/t based on forward curves and US\$ 99.7/t from the 3Q24 average reference price. ⁴ Includes freight pricing mechanisms of CFR sales freight recognition. ⁵ Vale's price is net of taxes.

Costs and expenses

Iron ore fines and pellets all-in costs (cash cost break-even landed in China)

US\$/t	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
C1 cash cost, incl. 3rd-party purchases¹	24.0	25.6	-6%	28.2	-15%	26.5	26.2	1%
C1 cash cost, ex-3 rd -party purchases	20.6	21.9	-6%	24.9	-17%	22.9	22.9	0%
3 rd -party purchases cost adjustments	3.3	3.7	-10%	3.4	-2%	3.6	3.3	9%
Freight cost ²	20.6	18.9	9%	19.0	8%	19.7	18.2	9%
Distribution cost	2.5	2.6	-3%	2.6	-6%	2.5	2.7	-6%
Expenses ³ & royalties	5.4	6.2	-12%	6.3	-14%	6.0	5.8	4%
Moisture adjustment	4.3	4.6	-5%	4.9	-12%	4.7	4.6	1%
Iron ore fines quality adjustment	1.9	(0.8)	n.a.	3.3	-41%	2.3	(0.2)	n.a.
Iron ore fines all-in costs	58.7	57.1	3%	64.3	-9%	61.7	57.3	8%
Pellet business contribution	(3.6)	(3.4)	7%	(3.1)	15%	(3.6)	(3.2)	11%
Iron ore fines and pellets all-in costs	55.1	53.7	2%	61.2	-10%	58.1	54.1	8%
Sustaining investments (fines and pellets)	8.2	7.8	5%	7.9	4%	8.9	7.9	12%
Iron ore fines and pellets all-in costs⁴	63.3	61.5	3%	69.1	-8%	67.0	62.0	8%

¹ Ex-ROM, ex-royalties and FOB (US\$/t). ² Ex-bunker oil hedge. ³ Net of depreciation and associates and JV's EBITDA. Including stoppage expenses. ⁴ Includes sustaining.

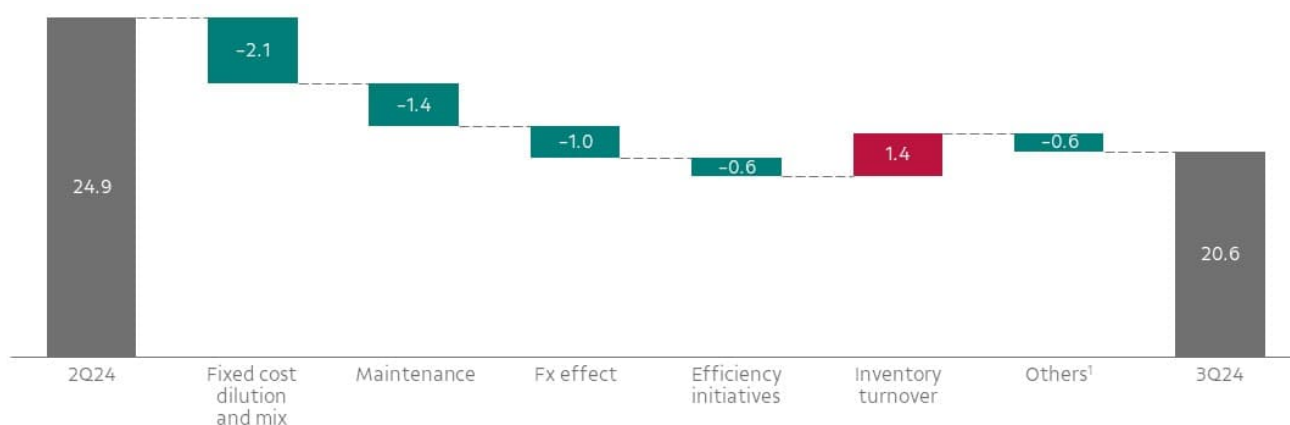
Iron ore fines C1 production costs

US\$/t	3Q24	3Q23	Δ y/y	2Q24	Δ t/t	9M24	9M23	Δ y/y
C1 production costs, ex-3 rd -party purchases	18.5	21.3	-13%	24.4	-24%	24.6	24.5	0%
C1 cash cost, ex-3 rd -party purchases	20.6	21.9	-6%	24.9	-17%	25.2	23.5	7%

The C1 cash cost, ex-third-party purchases, reached US\$ 20.6/t in Q3, US\$ 4.3/t lower q/q.

This significant C1 reduction was driven by: (i) increased production and the resulting fixed cost dilution, particularly in the Northern System; (ii) lower maintenance costs, following the strategy to concentrate activities in the 1H24; (iii) the positive impact of the BRL depreciation; and (iv) continued progress of the efficiency program. These gains were partially offset by the impact of the inventory turnover effect. The **C1 production cost reached US\$ 18.2/t in September**, indicating a solid performance for the upcoming quarter.

C1 cash cost, ex-third-party purchase costs – US\$/t, 3Q24 vs. 2Q24



¹ Including demurrage (US\$ -0.4/t) and others (US\$ -0.2/t).

Vale's maritime freight cost averaged US\$ 20.6/t, US\$ 6.1/t lower than the Brazil-China C3 route average in Q3. The US\$ 1.6/t sequential increase in freight cost is largely explained by a larger exposure to spot freight rates (US\$ 1.1/t higher q/q), driven by Vale's usual shipping seasonality and higher bunker fuel costs (US\$ 0.4/t higher q/q). CFR sales totaled 59.8 Mt in Q3, representing 86% of total iron ore fines sales.



Pellets

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Net revenues	1,502	1,388	8%	1,394	8%	4,481	4,123	9%
Cash costs ¹	(747)	(669)	12%	(705)	6%	(2,191)	(1,991)	10%
Pre-operational & stoppage expenses	(3)	(6)	-50%	(2)	50%	(10)	(15)	-33%
Expenses ²	(5)	(1)	400%	(1)	400%	(1)	(8)	-88%
Leased pelletizing plants EBITDA	43	39	10%	38	13%	117	91	29%
EBITDA	790	751	5%	724	9%	2,396	2,200	9%
Iron ore pellets realized price (CFR/FOB, US\$/t)	148.2	161.2	-8%	157.2	-6%	158.7	161.3	-2%
Cash costs¹ per ton (US\$/t)	73.6	77.7	-5%	79.5	-7%	77.6	77.9	0%
EBITDA per ton (US\$/t)	77.9	87.2	-11%	81.7	-5%	84.9	86.1	-1%

¹ Including iron ore, leasing, freight, overhead, energy and others. ² Including selling, R&D and others.

Pellets sales reached 10.1 Mt, 14% higher q/q and 18% higher y/y, driven by higher pellet production and healthy demand.

The average realized iron ore pellets price was US\$ 148.2/t, US\$ 9.0/t lower q/q, due to lower 65%Fe index iron ore prices (US\$ 12.0/t lower q/q), which were partially offset by the positive effect of pricing mechanisms (US\$ 2.9/t).

Pellets' cash costs per ton was 5% lower q/q, totaling US\$ 73.6/t, mainly as a result of increased production and the resulting fixed cost dilution. FOB sales represented 61% of total sales.

Energy Transition Metals

Highlights

US\$ million (unless otherwise stated)	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Net Revenues	1,583	1,718	-8%	1,622	-2%	4,639	5,622	-17%
Costs ¹	(1,313)	(1,338)	-2%	(1,171)	12%	(3,621)	(4,083)	-11%
SG&A and Other expenses ¹	30	75	-60%	22	36%	58	81	-28%
Pre-operating and stoppage expenses ¹	(1)	(1)	0%	(3)	-67%	(5)	(5)	0%
R&D expenses	(74)	(75)	-1%	(70)	6%	(195)	(187)	4%
EBITDA from associates and JVs ²	23	6	283%	7	229%	36	6	500%
Adjusted EBITDA	248	385	-36%	407	-39%	912	1,434	-36%
Depreciation and amortization	(212)	(257)	-18%	(229)	-7%	(664)	(760)	-13%
Adjusted EBIT	36	128	-72%	178	-80%	248	674	-63%

¹ Includes an adjustment of US\$ 94 million increasing the adjusted EBITDA in 3Q24, to reflect the performance of the streaming transactions at market prices, which will be made until the proceeds received on the streaming transactions are fully recognized in the adjusted EBITDA of the business. Based on the current projections for volumes and commodities prices, it will be fully realized by 2027. ² Starting in 3Q24, PTVI EBITDA is included in EBITDA from associates and JVs, reflecting VBM's ownership of 33.9% in PTVI.

Adjusted EBITDA

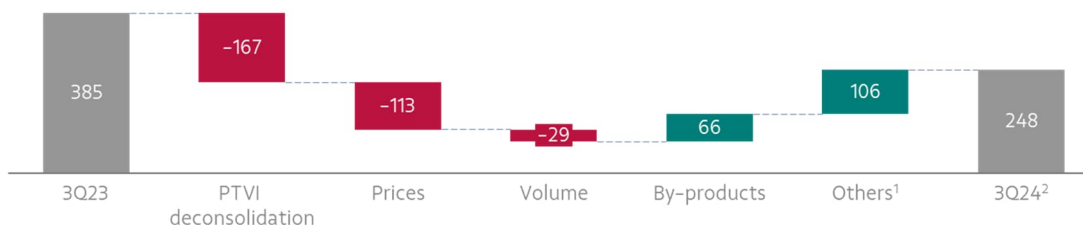
US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Nickel	(66)	100	n.a.	108	n.a.	59	663	-91%
Copper	360	269	34%	351	3%	995	725	37%
Others	(46)	16	n.a.	(52)	-12%	(142)	46	n.a.
Total	248	385	-36%	407	-39%	912	1,434	-36%

EBITDA decreased by 36% y/y, largely impacted by the nickel segment.

In Copper, EBITDA increased by 34% y/y, positively impacted by higher realized copper prices (US\$ 79 million) and stronger by-product revenues (US\$ 45 million), partially offset by the impact of the conveyor belt occurred at Salobo 3 (US\$ -21 million) and other effects (US\$ -13 million), included in Others.

In Nickel, EBITDA decreased to US\$ -66 million in Q3, mainly explained by lower realized nickel prices (US\$ -192 million), the PTVI deconsolidation (US\$ -167 million) and higher volumes (US\$ -30 million). These were partially offset by stronger by-products revenues (US\$ 21 million) and Others (US\$ 192 million), largely explained by a decrease in external feed costs.

EBITDA variation – US\$ million (3Q24 vs. 3Q23)



¹ Includes variations of (i) negative US\$ 21 million in PPA, (ii) positive US\$ 46 million in currency variation, (iii) positive US\$ 61 million in costs and expenses and (iv) EBITDA from associates and JVs of US\$20 million in others. ² Includes an adjustment of US\$ 94 million increasing the adjusted EBITDA in 3Q24, to reflect the performance of the streaming transactions at market prices, which will be made until the proceeds received on the streaming transactions are fully recognized in the adjusted EBITDA of the business. Based on the current projections for volumes and commodities prices, it will be fully realized by 2027.

Copper

US\$ million (unless otherwise stated)	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
LME copper price (US\$/t)	9,210	8,356	10%	9,753	-6%	9,131	8,585	6%
Average realized copper price (US\$/t)	9,016	7,731	17%	9,202	-2%	8,651	7,969	9%
Volume sold – copper (kt)	61	62	-2%	58	5%	176	158	12%
Net Revenues	759	660	15%	779	-3%	2,177	1,722	26%
Costs ¹	(366)	(341)	7%	(391)	-6%	(1,086)	(930)	17%
Selling and other expenses ¹	(3)	(3)	0%	(8)	-63%	(14)	40	n.a.
Pre-operating and stoppage expenses ¹	-	-	-	-	-	-	(4)	-100%
R&D expenses	(30)	(47)	-36%	(29)	3%	(82)	(103)	-20%
Adjusted EBITDA	360	269	34%	351	3%	995	725	37%
Depreciation and amortization	(39)	(49)	-20%	(41)	-5%	(120)	(120)	0%
Adjusted EBIT	321	220	46%	310	4%	875	605	45%

¹ Net of depreciation and amortization

Adjusted EBITDA

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Salobo	311	251	24%	306	2%	878	655	34%
Sossego	98	59	66%	44	123%	159	128	24%
Other ¹	(49)	(41)	20%	1	n.a.	(42)	(58)	-28%
Total	360	269	34%	351	3%	995	725	37%

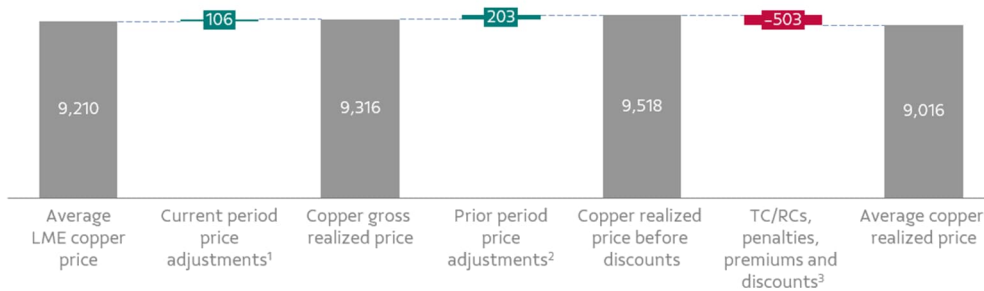
¹ Includes US\$ 25 million in R&D expenses related to the Hu'u project in 3Q24 and the unrealized provisional price adjustments.

Revenues

Net revenues increased by 17% y/y mainly because of the increase in realized copper prices, as well as higher by-products revenues. The higher by-product revenue resulted from the increase in market prices for gold.

The average realized copper price was up 17% y/y mainly due to higher average LME price. Sequentially, the average realized copper price was down 2%, on the back of lower LME prices.

Average realized copper price 3Q24 – US\$/t



Note: Vale's copper products are sold on a provisional pricing basis, with final prices determined in a future period. The average copper realized price excludes the mark-to-market of open invoices based on the copper price forward curve (unrealized provisional price adjustments) and includes the prior and current period price adjustments (realized provisional price adjustments).

¹ Current-period price adjustments: Final invoices that were provisionally priced and settled within the quarter. ² Prior-period price adjustment: Final invoices of sales provisionally priced in prior quarters. ³ TC/RCs, penalties, premiums, and discounts for intermediate products



Costs & Expenses

All-in costs (EBITDA breakeven)

US\$/t	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
COGS	5,962	5,512	8%	6,726	-11%	6,172	5,895	5%
By-product revenues	(3,710)	(2,960)	25%	(3,714)	0%	(3,550)	(2,952)	20%
COGS after by-product revenues	2,252	2,552	-12%	3,012	-25%	2,622	2,943	-11%
Other expenses ¹	96	152	-37%	168	-43%	137	70	96%
Total costs	2,348	2,704	-13%	3,180	-26%	2,759	3,013	-8%
TC/RCS penalties, premiums and discounts	503	560	-10%	472	7%	499	543	-8%
EBITDA breakeven^{2,3}	2,851	3,264	-13%	3,651	-22%	3,258	3,556	-8%

¹ Includes sales expenses, R&D associated with Salobo and Sossego, pre-operating and stoppage expenses and other expenses. ² Considering only the cash effect of streaming transactions, copper operations EBITDA break-even would increase to US\$ 4,799/t. ³ The realized price to be compared to the EBITDA break-even should be the copper realized price before discounts (US\$ 9,518/t), given that TC/RCS, penalties, and other discounts are already part of the EBITDA break-even build-up.

All-in costs decreased by 13% y/y, primarily due to higher unit by-products revenues.

Unit COGS increased by 8% y/y mainly driven by higher costs at Salobo, due to repairs after the fire occurred at the conveyor belt in June. Unit COGS at Sossego performed stably.

Unit COGS, net of by-products, decreased by 12% y/y mainly reflecting the positive impact of by-products revenues, at both Salobo and Sossego.

All-in costs (EBITDA breakeven)

US\$/t	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Salobo	1,623	2,130	-24%	2,319	-30%	1,903	2,358	-19%
Sossego	3,648	3,751	-3%	5,652	-35%	4,824	4,511	7%

Unit expenses were 37% lower y/y, mainly as a result of lower R&D expenditures.

Nickel

US\$ million (unless otherwise stated)	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
LME nickel price (US\$/t)	16,259	20,344	-20%	18,415	-12%	17,072	22,890	-25%
Average realized nickel price (US\$/t)	17,012	21,237	-20%	18,638	-9%	17,478	23,203	-25%
Volume sold – nickel (kt)	41	39	4%	34	19%	108	120	-10%
Volume sold – copper (kt)	14	12	15%	18	-23%	52	53	-1%
Net Revenues	904	1,023	-12%	879	3%	2,619	3,566	-27%
Costs ¹	(936)	(925)	1%	(731)	28%	(2,441)	(2,760)	-12%
Selling and other expenses ¹	(17)	31	n.a.	(6)	183%	(46)	(58)	-21%
Pre-operating and stoppage expenses ¹	(1)	(1)	0%	(3)	-67%	(5)	(1)	400%
R&D expenses	(34)	(28)	21%	(31)	10%	(86)	(84)	2%
EBITDA from associates and JVs ²	18	-	n.a.	-	n.a.	18	-	n.a.
Adjusted EBITDA	(66)	100	n.a.	108	n.a.	59	663	-91%
Depreciation and amortization	(167)	(208)	-20%	(187)	-11%	(536)	(640)	-16%
Adjusted EBIT	(233)	(108)	116%	(79)	195%	(477)	23	n.a.

¹ Net of depreciation and amortization. ² Starting in 3Q24, PTVI EBITDA is included in EBITDA from associates and JVs, reflecting VBM's ownership of 33.9% in PTVI. Historical figures were not restated.

Adjusted EBITDA

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Sudbury ¹	16	45	-66%	16	-3%	95	419	-77%
Voisey's Bay & Long Harbour	(56)	(67)	-16%	(76)	-26%	(166)	(176)	-6%
Standalone Refineries ²	9	(28)	n.a.	21	-57%	24	39	-38%
Onça Puma	17	15	14%	(17)	n.a.	(46)	51	n.a.
PTVI (historical)	-	104	-100%	79	-100%	137	400	-66%
Associates and JVs	18	-	n.a.	-	n.a.	18	-	n.a.
Others ³	(70)	31	n.a.	85	n.a.	(3)	(70)	-96%
Total	(66)	100	n.a.	108	n.a.	59	663	-91%

¹ Includes the Thompson operations. ² Comprises the sales results for Clydach and Matsusaka refineries. ³ Includes intercompany eliminations, provisional price adjustments and inventories adjustments. Hedge results have been relocated to each nickel business operation. ³ Includes proportionate EBITDA from PTVI, starting from 3Q24. Historical figures include the consolidated results from PTVI.

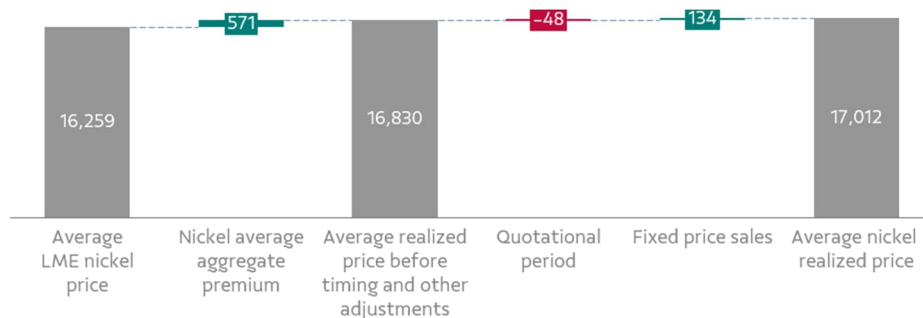
Revenues

Revenues decreased by 12% y/y mainly as a result of lower nickel prices, partially offset by higher by-products revenues. The higher by-products revenues resulted primarily from higher copper sales and prices.

The average realized nickel price was US\$ 17,012/t, down 20% y/y, mainly due to 20% lower LME nickel average price. On a sequential basis, the realized nickel price was down 9% mainly as a result of 12% lower LME prices.

In 3Q24, the average realized nickel price was 5% higher than the LME average, mainly due to the 74% share of Upper Class I products in the mix of North Atlantic, with average US\$ 1,080/t premiums.

Average realized nickel price 3Q24 – US\$/t



Costs & Expenses

All-in costs (EBITDA breakeven)

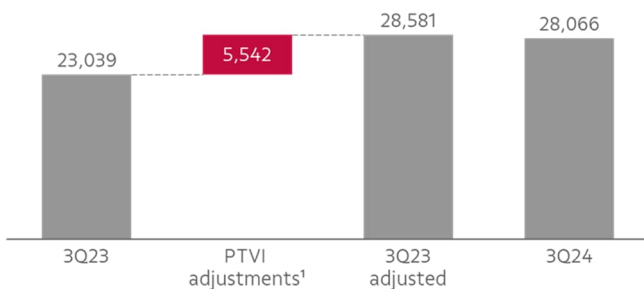
US\$/t	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
COGS ex. external feed	28,066	23,039	22%	20,755	35%	23,316	22,180	5%
COGS ²	23,019	23,581	-2%	21,306	8%	22,253	23,061	-4%
By-product revenues ²	(5,140)	(4,807)	7%	(7,097)	-28%	(6,725)	(6,590)	2%
COGS after by-product revenues	17,878	18,774	-5%	14,210	26%	15,528	16,471	-6%
Other expenses ³	1,208	(81)	n.a.	1,109	9%	1,203	1,194	1%
EBITDA from associates & JVs ⁴	(442)	-	n.a.	-	n.a.	(167)	-	n.a.
Total Costs	18,644	18,693	0%	15,319	22%	16,564	17,665	-6%
Nickel average aggregate (premium) discount	(571)	(123)	364%	(319)	79%	(474)	(77)	516%
EBITDA breakeven⁵	18,073	18,570	-3%	15,000	20%	16,090	17,588	-9%

¹ Starting in 3Q24, COGS ex. external feed excludes 3rd party feed and PTVI offtake. Historical figures have not been adjusted. ² Excluding marketing activities. ³ Includes R&D, sales expenses and pre-operating & stoppage. ⁴ Starting from 3Q24, it includes the proportionate results from PTVI (33.9% owned by VBM). ⁵ Considering only the cash effect of streaming transactions, nickel operations EBITDA break-even would increase to US\$ 18,264/t in 3Q24.

All-in costs decreased by 3% y/y, primarily due to higher by-product revenues, lower unit COGS and higher realized premiums. Sequentially, they were 22% higher, mainly due to the increase in unit costs.

Unit COGS, excluding external feed purchases, was 22% higher y/y, mainly reflecting the impact of the PTVI deconsolidation. Excluding the effect of PTVI deconsolidation, the unit COGS, excluding 3rd-party feed purchases, was US\$ 515/t lower y/y.

Unit COGS, excluding external feed purchases 3Q24 vs. 3Q23 adjusted – US\$/t



¹ Reflects the cost of the PTVI offtake at the purchase price and excludes the costs associated with volumes that were not entitled to Vale Base Metals.

Unit COGS was down 2% y/y as a result of lower acquisition costs for external feed in the refineries and Canadian operations, due to nickel prices, as well as because of the continued ramp-up of Voisey's Bay. These effects were partially offset by the increase in maintenance costs in Sudbury. Unit costs also decreased at Onça Puma, driven by higher fixed costs dilution. Sequentially, unit costs increased by 8%, mainly reflecting the impact of the PTVI deconsolidation.

Unit by-product revenues were 7% higher y/y, driven by higher copper sales and prices. Q/q, they were 26% lower, mainly driven by lower copper sales, as mine and mill maintenance performed in the quarter reduced copper concentrates availability for sale, as well as lower copper prices q/q.

Unit COGS, net of by-products, by operation

US\$/t	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Sudbury ^{1,2}	15,175	18,723	-19%	15,219	0%	13,715	14,868	-8%
Voisey's Bay & Long Harbour ²	21,953	30,316	-28%	31,114	-29%	24,130	29,225	-17%
Standalone refineries ^{2,3}	16,876	23,372	-28%	16,880	0%	17,687	22,342	-21%
Onça Puma	10,318	11,543	-11%	21,705	-52%	18,494	11,813	57%

¹ Sudbury costs include Thompson costs. ² A large portion of Sudbury, Clydach, Matsusaka and Long Harbour finished nickel production is derived from intercompany transfers, as well as from the purchase of ore or nickel intermediates from third parties. These transactions are valued at fair market value. ³ Comprises the unit cash costs for Clydach and Matsusaka refineries.

Expenses were higher y/y as 3Q23 was positively affected by one off settlement of royalties.

Webcast information

Vale will host a webcast on

Friday	October 25th, 2024	At
		1:00 p.m. (NY)
		2:00 p.m. (BRT) 6:00 p.m. (GMT)

Internet access to the webcast and presentation materials will be available on Vale website at

www.vale.com/investors

A webcast replay will be accessible shortly after the completion of the call.

Further information on Vale can be found at:
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Except where otherwise indicated, the operational and financial information in this release is based on the consolidated figures in accordance with IFRS. Our quarterly financial statements are reviewed by the company's independent auditors. The main subsidiaries that are consolidated are the following: Companhia Portuária da Baía de Sepetiba, Vale Manganês S.A., Minerações Brasileiras Reunidas S.A., Vale Base Metals Ltd., Tecored Desenvolvimento Tecnológico S.A., Aliança Geração de Energia S.A., Vale Holdings B.V, Vale Canada Limited, Vale International S.A., Vale Malaysia Minerals Sdn. Bhd. and Vale Oman Pelletizing Company LLC.

This press release may include statements about Vale's current expectations about future events or results (forward-looking statements). Many of those forward-looking statements can be identified by the use of forward-looking words such as "anticipate," "believe," "could," "expect," "should," "plan," "intend," "estimate" "will" and "potential," among others. All forward-looking statements involve various risks and uncertainties. Vale cannot guarantee that these statements will prove correct. These risks and uncertainties include, among others, factors related to: (a) the countries where Vale operates, especially Brazil and Canada; (b) the global economy; (c) the capital markets; (d) the mining and metals prices and their dependence on global industrial production, which is cyclical by nature; and (e) global competition in the markets in which Vale operates. Vale cautions you that actual results may differ materially from the plans, objectives, expectations, estimates and intentions expressed in this presentation. Vale undertakes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information or future events or for any other reason. To obtain further information on factors that may lead to results different from those forecast by Vale, please consult the reports that Vale files with the U.S. Securities and Exchange Commission (SEC), the Brazilian Comissão de Valores Mobiliários (CVM) and, in particular, the factors discussed under "Forward-Looking Statements" and "Risk Factors" in Vale's annual report on Form 20-F.

The information contained in this press release includes financial measures that are not prepared in accordance with IFRS. These non-IFRS measures differ from the most directly comparable measures determined under IFRS, but we have not presented a reconciliation to the most directly comparable IFRS measures, because the non-IFRS measures are forward-looking and a reconciliation cannot be prepared without unreasonable effort.



Annex 1: Detailed Financial Information

Simplified financial statements

Income Statement								
US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Net operating revenue	9,553	10,623	-10%	9,920	-4%	27,932	28,730	-3%
Cost of goods sold and services rendered	(6,281)	(6,309)	0%	(6,349)	-1%	(17,997)	(17,198)	5%
Gross profit	3,272	4,314	-24%	3,571	-8%	9,935	11,532	-14%
Gross margin (%)	34.3	40.6	-6 p.p.	36.0	-2 p.p.	35.6	40.1	-4 p.p.
Selling and administrative expenses	(139)	(150)	-7%	(137)	1%	(416)	(407)	2%
Research and development expenses	(192)	(188)	2%	(189)	2%	(537)	(492)	9%
Pre-operating and operational stoppage	(89)	(115)	-23%	(91)	-2%	(272)	(342)	-20%
Other operational expenses, net	(321)	(511)	-37%	(289)	11%	(860)	(1,118)	-23%
Impairment reversal (impairment and disposals) of non-current assets, net	1,144	(75)	n.a.	1,010	13%	2,148	(145)	n.a.
Operating income	3,675	3,275	12%	3,875	-5%	9,998	9,028	11%
Financial income	129	100	29%	78	65%	316	327	-3%
Financial expenses	(373)	(362)	3%	(365)	2%	(1,077)	(1,079)	0%
Other financial items, net	(130)	(123)	6%	(965)	-87%	(1,302)	(320)	307%
Equity results and other results in associates and joint ventures	(574)	94	n.a.	112	n.a.	(338)	44	n.a.
Income before income taxes	2,727	2,984	-9%	2,735	0%	7,597	8,000	-5%
Current tax	(320)	(278)	15%	(638)	-50%	(1,692)	(900)	88%
Deferred tax	(16)	151	n.a.	672	n.a.	942	(1,437)	n.a.
Net income	2,391	2,857	-16%	2,769	-14%	6,847	5,663	21%
Net income (loss) attributable to noncontrolling interests	(21)	21	n.a.	-	n.a.	(13)	98	n.a.
Net income attributable to Vale's shareholders	2,412	2,836	-15%	2,769	-13%	6,860	5,565	23%
Net income	2,391	2,857	-16%	2,769	-14%	6,847	5,663	21%
Net income (Loss) attributable to Vale's to noncontrolling interests	(21)	21	n.a.	-	n.a.	(13)	98	n.a.
Net income attributable to Vale's shareholders	2,412	2,836	-15%	2,769	-13%	6,860	5,565	23%
Earnings per share (attributable to the Company's shareholders - US\$):								
Basic and diluted earnings per share (attributable to the Company's shareholders - US\$)	0.56	0.66	-15%	0.65	-14%	1.60	1.27	26%

Equity income (loss) by business segment

US\$ million	3Q24	%	3Q23	%	Δ y/y	2Q24	%	Δ q/q	9M24	%	9M23	%	Δ y/y
Iron Ore Solutions	88	112	87	93	1%	109	95	-19%	255	98	80	77	219%
Energy Transition Metals	5	6	-	-	-	-	-	-	5	2	-	-	-
Others	(14)	(18)	7	7	n.a.	6	5	n.a.	(1)	-	24	23	n.a.
Total	79	100	94	100	1%	115	100	-19%	259	100	104	100	219%



Balance sheet

US\$ million	9/30/24	9/30/23	Δ y/y	6/30/24	Δ q/q
Assets					
Current assets	13,800	14,673	-6%	14,829	-7%
Cash and cash equivalents	4,596	3,967	16%	6,479	-29%
Short term investments	53	60	-12%	61	-13%
Accounts receivable	3,001	3,348	-10%	2,332	29%
Other financial assets	223	426	-48%	168	33%
Inventories	4,946	5,114	-3%	4,793	3%
Recoverable taxes	714	1,355	-47%	659	8%
Judicial deposits	-	-	-	-	-
Other	267	403	-34%	337	-21%
Non-current assets held for sale	-	-	-	-	-
Non-current assets	13,378	14,060	-5%	13,294	1%
Judicial deposits	606	1,296	-53%	585	4%
Other financial assets	155	586	-74%	160	-3%
Recoverable taxes	1,385	1,264	10%	1,329	4%
Deferred income taxes	9,875	9,682	2%	9,931	-1%
Other	1,357	1,232	10%	1,289	5%
Fixed assets	61,708	60,256	2%	58,492	5%
Total assets	88,886	88,989	0%	86,615	3%
Liabilities					
Current liabilities	15,174	13,644	11%	13,743	10%
Suppliers and contractors	5,353	5,582	-4%	4,769	12%
Loans, borrowings and leases	842	779	8%	910	-7%
Leases	157	197	-20%	177	-11%
Other financial liabilities	1,550	1,538	1%	1,467	6%
Taxes payable	1,257	630	100%	1,242	1%
Settlement program ("REFIS")	396	407	-3%	383	3%
Provisions for litigation	117	119	-2%	115	2%
Employee benefits	887	824	8%	724	23%
Liabilities related to associates and joint ventures	2,322	899	158%	1,605	45%
Liabilities related to Brumadinho	978	1,324	-26%	974	0%
De-characterization of dams and asset retirement obligations	937	845	11%	956	-2%
Other	378	500	-24%	421	-10%
Liabilities associated with non-current assets held for sale	-	-	-	-	-
Non-current liabilities	34,000	35,858	-5%	34,485	-1%
Loans, borrowings and leases	12,578	11,777	7%	12,860	-2%
Leases	608	1,283	-53%	1,183	-49%
Participative shareholders' debentures	2,406	2,405	0%	2,451	-2%
Other financial liabilities	2,654	2,583	3%	2,656	0%
Settlement program (REFIS)	1,229	1,744	-30%	1,284	-4%
Deferred income taxes	966	1,343	-28%	806	20%
Provisions for litigation	814	1,341	-39%	765	6%
Employee benefits	1,284	1,231	4%	1,221	5%
Liabilities related to associates and joint ventures	2,352	2,320	1%	2,102	12%
Liabilities related to Brumadinho	1,412	1,873	-25%	1,438	-2%
Decharacterization of dams and asset retirement obligations	5,511	6,111	-10%	5,484	0%
Streaming transactions	1,945	1,621	20%	1,948	0%
Others	241	226	7%	287	-16%
Total liabilities	49,174	49,502	-1%	48,228	2%
Shareholders' equity	39,712	39,487	1%	38,387	3%
Total liabilities and shareholders' equity	88,886	88,989	0%	86,615	3%



Cash flow

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q
Cash flow from operations	2,757	4,128	-33%	2,353	17%
Interest on loans and borrowings paid	(247)	(174)	42%	(211)	17%
Cash received on settlement of Derivatives, net	(30)	70	n.a.	81	n.a.
Payments related to Brumadinho	(188)	(292)	-36%	(265)	-29%
Payments related to decharacterization of dams	(154)	(146)	5%	(132)	17%
Interest on participative shareholders debentures paid	-	-	-	(149)	-100%
Income taxes (including settlement program) paid	(471)	(720)	-35%	(466)	1%
Net cash generated by operating activities	1,667	2,866	-42%	1,211	38%
Cash flow from investing activities					
Short-term investment	67	68	-1%	28	139%
Capital expenditures	(1,398)	(1,464)	-5%	(1,328)	5%
Payments related to Samarco dam failure	(113)	(317)	-64%	(105)	8%
Dividends received from joint ventures and associates	12	-	n.a.	39	-69%
Cash received (paid) from disposal and acquisition of investments, net	107	-	n.a.	2,610	-96%
Other investment activities, net	(3)	14	n.a.	(4)	-25%
Net cash used in investing activities	(1,328)	(1,699)	-22%	1,240	n.a.
Cash flow from financing activities					
Loans and financing:					
Loans and borrowings from third parties	962	150	541%	1,090	-12%
Payments of loans and borrowings from third parties	(1,584)	(13)	12085%	(530)	199%
Payments of leasing	(48)	(47)	2%	(44)	9%
Payments to shareholders:					
Dividends and interest on capital paid to Vale's shareholders	(1,586)	(1,678)	0%	-	n.a.
Share buyback program	(20)	(546)	-96%	(114)	-82%
Net cash used in financing activities	(2,276)	(2,134)	7%	402	n.a.
Net increase (decrease) in cash and cash equivalents	(1,937)	(967)	100%	2,853	n.a.
Cash and cash equivalents in the beginning of the period	6,479	4,983	30%	3,790	71%
Effect of exchange rate changes on cash and cash equivalents	(21)	(49)	-57%	(164)	-87%
Cash and cash equivalents from subsidiaries acquired and sold, net	75	-	-	-	-
Cash and cash equivalents at the end of period	4,596	3,967	16%	6,479	-29%
Non-cash transactions:					
Additions to property, plant and equipment - capitalized loans and borrowing costs	11	5	120%	8	38%
Cash flow from operating activities					
Income before income taxes	2,727	2,984	-9%	2,735	0%
Adjusted for:					
Review of estimates related to Brumadinho	48	184	-	(14)	n.a.
Review of estimates for decharacterization of dams	-	-	-	(70)	-100%
Equity results and other results in associates and joint ventures	574	(94)	n.a.	(112)	n.a.
Impairment and gains (losses) on disposal of non-current assets, net	(1,144)	75	n.a.	(1,010)	13%
Depreciation, depletion and amortization	748	780	-4%	793	-6%
Financial results, net	374	385	-3%	1,252	-70%
Change in assets and liabilities					
Accounts receivable	(672)	(410)	64%	(167)	302%
Inventories	(145)	(97)	49%	165	n.a.
Suppliers and contractors	471	480	-2%	(528)	n.a.
Other assets and liabilities, net	(224)	(159)	41%	(691)	-68%
Cash flow from operations	2,757	4,128	-33%	2,353	17%



Reconciliation of IFRS and “non-GAAP” information

(a) Adjusted EBIT

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q
Net operating revenues	9,553	10,623	-10%	9,920	-4%
COGS	(6,281)	(6,309)	0%	(6,349)	-1%
Sales and administrative expenses	(139)	(150)	-7%	(137)	1%
Research and development expenses	(192)	(188)	2%	(189)	2%
Pre-operating and stoppage expenses	(89)	(115)	-23%	(91)	-2%
Brumadinho event and dam decharacterization of dams	(126)	(305)	-59%	1	n.a.
Other operational expenses, net ¹	(101)	(159)	-36%	(208)	-51%
EBITDA from associates and JVs	242	254	-5%	253	-4%
Adjusted EBIT	2,867	3,651	-21%	3,200	-10%

¹ Includes adjustment of US\$ 94 million in 3Q24, US\$ 83 million in 2Q24 and US\$ 47 million in 3Q23 to reflect the performance of the streaming transactions at market price.

(b) Adjusted EBITDA

EBITDA defines profit or loss before interest, tax, depreciation, depletion and amortization. The definition of Adjusted EBITDA for the Company is the operating income or loss plus EBITDA associates and joint ventures, and excluding the amounts charged as (i) depreciation, depletion and amortization and (ii) impairment reversal (impairment and disposals) of non-current assets. However, our adjusted EBITDA is not the measure defined as EBITDA under IFRS and may possibly not be comparable with indicators with the same name reported by other companies. Adjusted EBITDA should not be considered as a substitute for operational profit or as a better measure of liquidity than operational cash flow, which are calculated in accordance with IFRS. Vale provides its adjusted EBITDA to give additional information about its capacity to pay debt, carry out investments and cover working capital needs. The following tables shows the reconciliation between adjusted EBITDA and operational cash flow and adjusted EBITDA and net income, in accordance with its statement of changes in financial position. The definition of Adjusted EBIT is Adjusted EBITDA plus depreciation, depletion and amortization.

Reconciliation between adjusted EBITDA and operational cash flow

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q
Adjusted EBITDA	3,615	4,431	-18%	3,993	-9%
Working capital:					
Accounts receivable	(672)	(410)	64%	(167)	302%
Inventories	(145)	(97)	49%	165	n.a.
Suppliers and contractors	471	480	-2%	(528)	n.a.
Review of estimates related to Brumadinho	48	184	-74%	(14)	n.a.
Review of estimates related to decharacterization of dams		-	-	(70)	n.a.
Others	(560)	(460)	22%	(1,026)	-45%
Cash flow	2,757	4,128	-33%	2,353	17%
Income taxes paid (including settlement program)	(471)	(720)	-35%	(466)	1%
Interest on loans and borrowings paid	(247)	(174)	42%	(211)	17%
Payments related to Brumadinho event	(188)	(292)	-36%	(265)	-29%
Payments related to decharacterization of dams	(154)	(146)	5%	(132)	17%
Interest on participative shareholders' debentures paid		-	-	(149)	n.a.
Cash received on settlement of Derivatives, net	(30)	70	n.a.	81	n.a.
Net cash generated by operating activities	1,667	2,866	-42%	1,211	38%

Reconciliation between adjusted EBITDA and net income (loss)

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q
Adjusted EBITDA	3,615	4,431	-18%	3,993	-9%
Depreciation, depletion and amortization	(748)	(780)	-4%	(793)	-6%
EBITDA from associates and joint ventures	(242)	(254)	-5%	(253)	-4%
Impairment reversal (impairment) and results on disposals of non-	1,050	(122)	n.a.	928	13%
Operating income	3,675	3,275	12%	3,875	-5%
Financial results	(374)	(385)	-3%	(1,252)	-70%
Equity results and other results in associates and joint ventures	(574)	94	n.a.	112	-613%
Income taxes	(336)	(127)	165%	34	n.a.
Net income	2,391	2,857	-16%	2,769	-14%
Net income (loss) attributable to noncontrolling interests	(21)	21	n.a.	-	n.a.
Net income attributable to Vale's shareholders	2,412	2,836	-15%	2,769	-13%

¹ Includes adjustment of US\$ 94 million in 3Q24, US\$ 83 million in 2Q24 and US\$ 47 million in 3Q23, to reflect the performance of the streaming transactions at market price.

(c) Net debt

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q
Gross debt	13,420	12,556	7%	13,770	-3%
Leases	765	1,480	-48%	1,360	-44%
Cash and cash equivalents	(4,649)	(4,027)	15%	(6,540)	-29%
Net debt	9,536	10,009	-5%	8,590	11%



(d) Gross debt / LTM Adjusted EBITDA

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q
Gross debt and leases / LTM Adjusted EBITDA (x)	0.8	0.9	-11%	0.8	0%
Gross debt and leases / LTM operational cash flow (x)	0.8	0.8	0%	0.8	0%

(e) LTM Adjusted EBITDA / LTM interest payments

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q
Adjusted LTM EBITDA / LTM gross interest (x)	22.4	23.0	-3%	23.6	-5%
LTM adjusted EBITDA / LTM interest payments (x)	23.0	21.2	8%	26.2	-12%

(f) US dollar exchange rates

R\$/US\$	3Q24	3Q23	Δ y/y	2Q24	Δ q/q
Average	5.5454	4.8803	14%	5.2129	6%
End of period	5.4481	5.0076	9%	5.5589	-2%



Revenues and volumes

Net operating revenue by business area

US\$ million	3Q24	%	3Q23	%	Δ y/y	2Q24	%	Δ q/q	9M24	%	9M23	%	Δ y/y
Iron Ore Solutions	7,970	83%	8,862	83%	-10%	8,298	84%	-4%	23,293	83%	23,04	80%	1%
Fines	6,281	66%	7,331	69%	-14%	6,729	68%	-7%	18,302	66%	18,548	65%	-1%
ROM	33	0%	33	0%	0%	27	0%	22%	87	0%	94	0%	-7%
Pellets	1,502	16%	1,388	13%	8%	1,394	14%	8%	4,481	16%	4,123	14%	9%
Others	154	2%	110	1%	40%	148	1%	4%	423	2%	284	1%	49%
Energy Transition	1,583	17%	1,718	16%	-8%	1,622	16%	-2%	4,639	17%	5,588	19%	-17%
Nickel	692	7%	833	8%	-17%	639	6%	8%	1,889	7%	2,777	10%	-32%
Copper	680	7%	567	5%	20%	699	7%	-3%	1,966	7%	1,665	6%	18%
PGMs	44	0%	54	1%	-19%	38	0%	16%	150	1%	214	1%	-30%
Gold as by-	144	2%	147	1%	-2%	155	2%	-7%	437	2%	376	1%	16%
Silver as by-	13	0%	8	0%	63%	12	0%	8%	35	0%	30	0%	17%
Cobalt ¹	8	0%	14	0%	-43%	2	0%	300%	20	0%	57	0%	-65%
Others ²	2	0%	95	1%	-98%	77	1%	-97%	142	1%	469	2%	-70%
Others	-	0%	42	0%	-	-	0%	0%	-	0%	93	0%	-
Total	9,553	100%	10,623	100%	-10%	9,920	100%	-4%	27,932	100%	28,73	100%	-3%

¹ Exclude the adjustment of US\$ 94 million in 3Q24, US\$ 83 million in 2Q24, US\$ 243 million in 9M24, US\$ 47 million in 3Q23 and US\$ 134 million in 9M23, related to the performance of streaming transactions at market price. ² Includes marketing activities.

Net operating revenue by destination

US\$ million	3Q24	%	3Q23	%	Δ y/y	2Q24	%	Δ q/q	9M24	%	9M23	%	Δ y/y
North America	347	3.6	398	3.7	-13%	435	4.4	-20%	1,209	4.3	1,605	5.6	-25%
USA	291	3.0	323	3.0	-10%	254	2.6	15%	788	2.8	1,265	4.4	-38%
Canada	56	0.6	75	0.7	-25%	181	1.8	-69%	421	1.5	340	1.2	24%
South America	1,010	10.6	1,018	9.6	-1%	974	9.8	4%	3,112	11.1	3,183	11.1	-2%
Brazil	897	9.4	915	8.6	-2%	868	8.8	3%	2,771	9.9	2,828	9.8	-2%
Others	113	1.2	103	1.0	10%	106	1.1	7%	341	1.2	355	1.2	-4%
Asia	6,422	67.2	7,603	71.6	-16%	6,858	69.1	-6%	18,449	66.0	18,607	64.8	-1%
China	4,770	49.9	5,860	55.2	-19%	4,994	50.3	-4%	13,438	48.1	13,905	48.4	-3%
Japan	732	7.7	843	7.9	-13%	927	9.3	-21%	2,341	8.4	2,356	8.2	-1%
South Korea	335	3.5	289	2.7	16%	282	2.8	19%	823	2.9	975	3.4	-16%
Others	585	6.1	611	5.8	-4%	655	6.6	-11%	1,847	6.6	1,371	4.8	35%
Europe	1,142	12.0	956	9.0	19%	1,079	10.9	6%	3,230	11.6	3,746	13.0	-14%
Germany	413	4.3	261	2.5	58%	286	2.9	44%	1,025	3.7	983	3.4	4%
Italy	83	0.9	48	0.5	73%	34	0.3	144%	136	0.5	413	1.4	-67%
Others	646	6.8	647	6.1	0%	759	7.7	-15%	2,069	7.4	2,350	8.2	-12%
Middle East	281	2.9	271	2.6	4%	251	2.5	12%	798	2.9	671	2.3	19%
Rest of the World	351	3.7	377	3.5	-7%	323	3.3	9%	1,134	4.1	918	3.2	24%
Total	9,553	100.0	10,623	100.0	-10%	9,920	100.0	-4%	27,932	100.0	28,730	100.0	-3%



Operating Expenses

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
SG&A	139	150	-7%	137	1%	416	407	2%
Administrative	116	124	-6%	116	0%	351	342	3%
Personnel	40	52	-23%	42	-5%	138	149	-7%
Services	35	32	9%	41	-15%	107	90	19%
Depreciation	13	12	8%	9	44%	33	37	-11%
Others	28	28	0%	24	17%	73	66	11%
Selling	23	26	-12%	21	10%	65	65	0%
R&D	192	188	2%	189	2%	537	492	9%
Pre-operating and stoppage expenses	89	115	-23%	91	-2%	272	342	-20%
Expenses related to Brumadinho and decharacterization of dams	126	305	-59%	(1)	n.a.	166	687	-76%
Other operating expenses	195	206	-5%	290	-33%	694	431	61%
Total operating expenses	741	964	-23%	706	5%	2,085	2,359	-12%
Depreciation	36	34	6%	30	20%	102	115	-11%
Operating expenses, ex-depreciation	705	930	-24%	676	4%	1,983	2,244	-12%

Financial results

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Financial expenses, of which:	(373)	(362)	3%	(365)	2%	(1,077)	(1,079)	0%
Gross interest	(208)	(192)	8%	(211)	-1%	(590)	(557)	6%
Capitalization of interest	11	5	120%	8	38%	24	15	60%
Others	(155)	(137)	13%	(139)	12%	(439)	(423)	4%
Financial expenses (REFIS)	(21)	(38)	-45%	(23)	-9%	(72)	(114)	-37%
Financial income	129	100	29%	78	65%	316	327	-3%
Shareholder Debentures	92	30	207%	(241)	n.a.	15	304	-95%
Derivatives¹	64	(51)	n.a.	(471)	n.a.	(405)	704	n.a.
Currency and interest rate swaps	69	(92)	n.a.	(455)	-115%	(400)	682	n.a.
Others (commodities, etc)	(5)	41	n.a.	(16)	-69%	(5)	22	n.a.
Foreign exchange	4	206	-98%	53	-92%	29	(247)	n.a.
CTA	-	-	-	-	-	-	-	-
Monetary variation	(290)	(308)	-6%	(306)	-5%	(941)	(1,081)	-13%
Foreign exchange and monetary variation	(286)	(102)	180%	(253)	13%	(912)	(1,328)	-31%
Financial result, net	(374)	(385)	-3%	(1,252)	-70%	(2,063)	(1,072)	92%

¹ The cash effect of the derivatives was a lost of US\$ 30 million in 3Q24.

Sustaining Investments by type

US\$ million	Iron Ore Solutions	Energy Transition Metals	Energy and others	Total
Enhancement of operations	353	172	2	527
Replacement projects	11	99	0	109
Filtration and dry stacking projects	45	0	0	45
Dam management	35	8	0	44
Other investments in dams and waste dumps	38	14	0	53
Health and safety	66	21	1	88
Social investments and environmental protection	78	4	0	82
Administrative & others	50	8	14	73
Total	677	327	18	1022



Annex 2: Segment information

Segment results 3Q24

US\$ million	Net operating revenues	Cost ¹	SG&A and others ¹	R&D ¹	Pre operating & stoppage ¹	Associates and JVs EBITDA	Adjusted EBITDA
Iron Ore Solutions	7,970	(4,255)	(45)	(87)	(63)	211	3,731
Fines	6,281	(3,371)	(15)	(76)	(58)	83	2,844
Pellets	1,502	(747)	(2)	(3)	(3)	43	790
Other ferrous	187	(137)	(28)	(8)	(2)	85	97
Energy Transition Metals	1,583	(1,313)	30	(74)	(1)	23	248
Nickel²	904	(936)	(17)	(34)	(1)	18	(66)
Sudbury	507	(469)	(2)	(20)	-	-	16
Voisey's Bay & Long Harbour	184	(228)	-	(12)	-	-	(56)
Standalone Refineries	246	(237)	-	-	-	-	9
Onça Puma	76	(55)	(3)	(0)	(1)	-	17
Other ³	(109)	52	(12)	(2)	-	18	(52)
Copper⁴	759	(366)	(3)	(30)	-	-	360
Salobo	574	(262)	(1)	-	-	-	311
Sossego	206	(104)	(1)	(3)	-	-	98
Other	(21)	-	(1)	(27)	-	-	(49)
Others⁵	(80)	(11)	50	(10)	-	5	(46)
Brumadinho and decharacterization of dams	-	-	(126)	-	-	-	(126)
Others ⁶	-	-	(211)	(32)	(3)	8	(238)
Total	9,553	(5,568)	(353)	(192)	(67)	242	3,615

¹ Excluding depreciation, depletion and amortization. ² Including copper and by-products from our nickel operations. ³ Starting in 3Q24, PTVI's EBITDA is included in "Associates and JVs" in "Other". ⁴ Including by-products from our copper operations. ⁵ Includes an adjustment of US\$ 94 million increasing the adjusted EBITDA in 3Q24, to reflect the performance of the streaming transactions at market prices, which will be made until the proceeds received on the streaming transactions are fully recognized in the adjusted EBITDA of the business. Based on the current projections for volumes and commodities prices, it will be fully realized by 2027. ⁶ Includes US\$ 20 million in unallocated expenses from Vale Base Metals Ltd ("VBM") in 3Q24. Considering the unallocated expenses, VBM's EBITDA was US\$ 228 million in 3Q24.

Segment results 3Q23

US\$ million	Net operating revenues	Cost ¹	SG&A and others ¹	R&D ¹	Pre operating & stoppage ¹	Associates and JVs EBITDA	Adjusted EBITDA
Iron Ore Solutions	8,862	(4,164)	(79)	(75)	(89)	241	4,696
Fines	7,331	(3,408)	(79)	(70)	(78)	103	3,799
Pellets	1,388	(669)	-	(1)	(6)	39	751
Other ferrous	143	(87)	-	(4)	(5)	99	146
Energy Transition Metals	1,718	(1,338)	75	(75)	(1)	6	385
Nickel²	1,023	(925)	31	(28)	(1)	-	100
Sudbury	539	(471)	(7)	(16)	-	-	45
Voisey's Bay & Long Harbour	199	(271)	11	(6)	-	-	(67)
Standalone Refineries	247	(275)	-	-	-	-	(28)
Onça Puma	78	(58)	(4)	(1)	-	-	15
PTVI (historical)	279	(171)	(1)	(3)	-	-	104
Other	(319)	321	32	(2)	(1)	-	31
Copper³	660	(341)	(3)	(47)	-	-	269
Salobo	513	(258)	(1)	(3)	-	-	251
Sossego	148	(83)	(1)	(5)	-	-	59
Other	-	-	(2)	(39)	-	-	(41)
Others⁴	35	(72)	47	-	-	6	16
Brumadinho and decharacterization of dams	-	-	(305)	-	-	-	(305)
Others	42	(60)	(296)	(38)	-	7	(345)
Total	10,623	(5,562)	(606)	(188)	(90)	254	4,431

¹ Excluding depreciation, depletion and amortization. ² Including copper and by-products from our nickel operations. ³ Including by-products from our copper operations. ⁴ Includes an adjustment of US\$ 47 million increasing the adjusted EBITDA in 3Q23, to reflect the performance of the streaming transactions at market prices, which will be made until the proceeds received on the streaming transactions are fully recognized in the adjusted EBITDA of the business. Based on the current projections for volumes and commodities prices, it will be fully realized by 2027.



Segment information 2024

US\$ million	Net operating revenues	Cost ¹	SG&A and others ¹	R&D ¹	Pre operating & stoppage ¹	Associates and JVs EBITDA	Adjusted EBITDA
Iron Ore Solutions	8,298	(4,415)	(81)	(94)	(67)	246	3,887
Fines	6,729	(3,556)	(56)	(82)	(53)	89	3,071
Pellets	1,394	(705)	-	(1)	(2)	38	724
Other ferrous	175	(154)	(25)	(11)	(12)	119	92
Energy Transition Metals	1,622	(1,171)	22	(70)	(3)	7	407
Nickel²	879	(731)	(6)	(31)	(3)	-	108
Sudbury	426	(390)	(1)	(19)	-	-	16
Voisey's Bay & Long Harbour	136	(204)	(1)	(7)	-	-	(76)
Standalone Refineries	243	(222)	-	-	-	-	21
Onça Puma	18	(27)	(5)	-	(3)	-	(17)
PTVI (historical)	249	(168)	-	(2)	-	-	79
Other	(193)	280	1	(3)	-	-	85
Copper³	779	(391)	(8)	(29)	-	-	351
Salobo	614	(301)	(5)	(2)	-	-	306
Sossego	136	(90)	1	(3)	-	-	44
Other	29	-	(4)	(24)	-	-	1
Others⁴	(36)	(49)	36	(10)	-	7	(52)
Brumadinho and decharacterization of dams	-	-	1	-	-	-	1
Others ⁵	-	-	(277)	(25)	-	-	(302)
Total	9,920	(5,586)	(335)	(189)	(70)	253	3,993

¹ Excluding depreciation, depletion and amortization. ² Including copper and by-products from our nickel operations. ³ Including by-products from our copper operations. ⁴ Includes an adjustment of US\$ 83 million increasing the adjusted EBITDA in 2024, to reflect the performance of the streaming transactions at market prices, which will be made until the proceeds received on the streaming transactions are fully recognized in the adjusted EBITDA of the business. Based on the current projections for volumes and commodities prices, it will be fully realized by 2027. ⁵ Includes US\$ 1 million in unallocated expenses from Vale Base Metals Ltd ("VBM") in 2024. Considering the unallocated expenses, VBM's EBITDA was US\$ 408 million in 2024.



Segment information 9M24

US\$ million	Net operating revenues	Cost ¹	SG&A and others ¹	R&D ¹	Pre operating & stoppage ¹	Associates and JVs EBITDA	Adjusted EBITDA
Iron Ore Solutions	23,293	(12,222)	(190)	(264)	(194)	654	11,077
Fines	18,302	(9,630)	(120)	(228)	(162)	260	8,422
Pellets	4,481	(2,191)	4	(5)	(10)	117	2,396
Other ferrous	510	(401)	(74)	(31)	(22)	277	259
Energy Transition Metals	4,639	(3,621)	59	(195)	(5)	36	912
Nickel²	2,619	(2,441)	(46)	(86)	(5)	18	59
Sudbury	1,410	(1,256)	(8)	(51)	-	-	95
Voisey's Bay & Long Harbour	466	(604)	(5)	(23)	-	-	(166)
Standalone Refineries	717	(693)	-	-	-	-	24
Onça Puma	94	(122)	(12)	(1)	(5)	-	(46)
PTVI (historical)	479	(338)	(1)	(3)	-	-	137
Other	(547)	574	(22)	(7)	-	18	15
Copper³	2,178	(1,086)	(14)	(82)	-	-	995
Salobo	1,691	(801)	(8)	(4)	-	-	878
Sossego	454	(285)	(1)	(9)	-	-	159
Other	32	-	(5)	(69)	-	-	(42)
Others⁴	(158)	(95)	120	(27)	-	18	(142)
Brumadinho and decharacterization of dams	-	-	(166)	-	-	-	(166)
Others ⁵	-	-	(703)	(78)	(4)	8	(777)
Total	27,932	(15,844)	(1,000)	(537)	(203)	698	11,046

¹ Excluding depreciation, depletion and amortization. ² Including copper and by-products from our nickel operations. ³ Including by-products from our copper operations. ⁴ Includes an adjustment of US\$ 243 million increasing the adjusted EBITDA in 9M24, to reflect the performance of the streaming transactions at market prices, which will be made until the proceeds received on the streaming transactions are fully recognized in the adjusted EBITDA of the business. Based on the current projections for volumes and commodities prices, it will be fully realized by 2027. ⁵ Includes US\$ 66 million in unallocated expenses from Vale Base Metals Ltd ("VBM") in 9M24. Considering the unallocated expenses, VBM's EBITDA was US\$ 846 million in 9M24.

Segment information 9M23

US\$ million	Net operating revenues	Cost ¹	SG&A and others ¹	R&D ¹	Pre operating & stoppage ¹	Associates and JVs EBITDA	Adjusted EBITDA
Iron Ore Solutions	23,049	(10,883)	(101)	(179)	(258)	608	12,236
Fines	18,548	(8,653)	(82)	(166)	(226)	249	9,670
Pellets	4,123	(1,991)	(6)	(2)	(15)	91	2,200
Other ferrous	378	(239)	(13)	(11)	(17)	268	366
Energy Transition Metals	5,588	(4,084)	116	(187)	(5)	6	1,434
Nickel²	3,566	(2,760)	(58)	(84)	(1)	-	663
Sudbury	1,967	(1,483)	(15)	(50)	-	-	419
Voisey's Bay & Long Harbour	551	(668)	(43)	(16)	-	-	(176)
Standalone Refineries	802	(763)	-	-	-	-	39
Onça Puma	238	(177)	(9)	(1)	-	-	51
PTVI (historical)	938	(526)	(2)	(10)	-	-	400
Other	(930)	857	11	(7)	(1)	-	(70)
Copper³	1,722	(930)	40	(103)	(4)	-	725
Salobo	1,316	(678)	27	(6)	(4)	-	655
Sossego	407	(251)	(7)	(21)	-	-	128
Other	-	-	19	(76)	-	-	(57)
Others⁴	300	(394)	134	-	-	6	46
Brumadinho and decharacterization of dams	-	-	(687)	-	-	-	(687)
Others	93	(135)	(678)	(126)	(1)	7	(840)
Total	28,730	(15,101)	(1,352)	(492)	(263)	621	12,143

¹ Excluding depreciation, depletion and amortization. ² Including copper and by-products from our nickel operations. ³ Including by-products from our copper operations. ⁴ Includes an adjustment of US\$ 134 million increasing the adjusted EBITDA in 9M23, to reflect the performance of the streaming transactions at market prices, which will be made until the proceeds received on the streaming transactions are fully recognized in the adjusted EBITDA of the business. Based on the current projections for volumes and commodities prices, it will be fully realized by 2027.



Annex 3: Additional information by business segment

Iron Ore Solutions: Financial results detailed

Volumes, prices, premium and revenues breakdown

	3Q24	% total	3Q23	% total	2Q24	% total	9M24	% total	9M23	% total
Volume sold ('000 metric tons)										
Fines¹	69,344	85%	69,714	87%	68,512	86%	190,402	84%	178,904	85%
IOCI	11,709	14%	14,758	18%	13,180	17%	34,290	15%	39,599	19%
BRBF	34,797	43%	36,454	45%	30,528	38%	91,018	40%	89,134	42%
Pellet feed – China (PFC1) ²	3,328	4%	4,234	5%	3,337	4%	9,201	4%	10,056	5%
Lump	1,971	2%	2,367	3%	1,782	2%	5,562	2%	5,626	3%
High-silica products	8,050	10%	6,131	8%	11,372 ⁴	14%	26,584 ⁴	12%	18,090	9%
Other fines (60-62% Fe)	9,489	12%	5,770	7%	8,313 ⁴	10%	8,256 ⁴	4%	16,399	8%
Pellets	10,143	12%	8,613	11%	8,864	11%	28,232	13%	25,556	12%
ROM	2,351	3%	2,232	3%	2,416	3%	6,822	3%	6,132	3%
Total – Iron ore sales	81,838	100%	80,559	100%	79,792	100%	225,456	100%	210,591	100%
Share of premium products ³ (%)		73%		81%		70%		72%		78%

	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Average prices (US\$/t)								
Iron ore – 62% Fe price index	99.7	114.0	-13%	111.8	-11%	111.5	116.9	-5%
Iron ore – 62% Fe low alumina index	100.6	116.1	-13%	112.6	-11%	112.2	119.2	-6%
Iron ore – 65% Fe index	114.1	125.5	-9%	126.1	-10%	125.1	130.0	-4%
Provisional price at the end of the quarter	108.8	117.0	-7%	106.5	2%	108.8	117.0	-7%
Iron ore fines Vale's CFR reference (dmt)	101.2	116.3	-13%	110.2	-8%	107.4	115.7	-7%
Iron ore fines realized price, CFR/FOB (wmt)	90.6	105.1	-14%	98.2	-8%	96.1	103.7	-7%
Iron ore pellets realized price, CFR/FOB (wmt)	148.2	161.2	-8%	157.2	-6%	158.7	161.3	-2%
Iron ore fines and pellets quality premium (US\$/t)								
Iron ore fines quality and premiums	(1.9)	0.8	n.a.	(3.3)	-41%	(2.3)	0.2	n.a.
Pellets business' weighted average contribution	3.6	3.4	7%	3.1	15%	3.6	3.2	11%
All-in premium – Total	1.7	4.1	-59%	(0.1)	n.a.	1.3	3.4	-62%
Net operating revenue by product (US\$ million)								
Fines	6,281	7,331	-14%	6,729	-7%	18,302	18,548	-1%
ROM	33	33	0%	27	22%	87	94	-7%
Pellets	1,502	1,388	8%	1,394	8%	4,481	4,123	9%
Others	154	110	40%	148	4%	423	284	49%
Total	7,970	8,862	-10%	8,298	-4%	23,293	23,049	1%

¹ Including third-party purchases. ² Products concentrated in Chinese facilities. ³ Brazilian Blend Fines (BRBF), Carajás (IOCJ), pellets and pellet feed. ⁴ Restated from historical figures.



Volume sold by destination – Fines, pellets and ROM

'000 metric tons	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Americas	10,317	9,829	5%	9,965	4%	30,067	30,764	-2%
Brazil	9,410	9,339	1%	8,977	5%	27,149	27,600	-2%
Others	907	490	85%	988	-8%	2,918	3,164	-8%
Asia	64,179	64,801	-1%	62,357	3%	173,408	159,477	9%
China	50,290	52,139	-4%	49,422	2%	136,021	125,342	9%
Japan	6,419	6,317	2%	6,543	-2%	18,027	18,131	-1%
Others	7,470	6,345	18%	6,392	17%	19,360	16,004	21%
Europe	3,528	2,299	53%	4,199	-16%	11,043	11,489	-4%
Germany	1,395	494	182%	1,185	18%	3,356	1,884	78%
France	108	189	-43%	590	-82%	1,287	2,011	-36%
Others	2,025	1,616	25%	2,424	-16%	6,400	7,594	-16%
Middle East	1,666	1,475	13%	1,386	20%	4,459	3,668	22%
Rest of the World	2,148	2,155	0%	1,885	14%	6,479	5,193	25%
Total	81,838	80,559	2%	79,792	3%	225,456	210,591	7%

Iron ore fines pricing

Pricing system breakdown (%)

	3Q24	3Q23	2Q24
Lagged	15	13	15
Current	51	44	56
Provisional	34	43	29
Total	100	100	100

Price realization

US\$/t	3Q24	3Q23	Δ y/y	2Q24	Δ q/q
Average reference price (dmt)	99.7	114.0	-13%	111.8	-11%
Quality and premiums ¹	(1.9)	0.8	n.a.	(3.3)	-42%
Impact of pricing system adjustments	3.4	1.5	127%	1.6	113%
Provisional prices in prior quarter ²	(1.2)	0.6	n.a.	1.8	n.a.
Lagged prices	1.8	(0.5)	n.a.	1.6	13%
Current prices	(0.3)	0.1	n.a.	(0.2)	50%
Provisional prices in current quarter ³	3.1	1.3	138%	(1.6)	n.a.
CFR reference (dmt)	101.2	116.3	-13%	110.1	-8%
Adjustments for FOB sales ⁴	(2.7)	(2.1)	29%	(3.0)	-10%
Moisture	(8.0)	(9.1)	-12%	(8.9)	-10%
Vale realized price (wmt)⁵	90.6	105.1	-14%	98.2	-8%

¹ Includes quality (US\$ 0.4/t) and premiums/discounts and commercial conditions (US\$ -2.3/t). ² Adjustment as a result of provisional prices booked in 2Q24 at US\$ 106.5/t. ³ Difference between the weighted average of the prices provisionally set at the end of 3Q24 at US\$ 108.8/t based on forward curves and US\$ 99.7/t from the 3Q24 average reference price. ⁴ Includes freight pricing mechanisms of CFR sales freight recognition. ⁵ Vale's price is net of taxes.



Iron ore fines costs & expenses

COGS – 3Q24 vs. 3Q23

US\$ million	3Q23	Volume	Exchange rate	Others	Total variation	3Q24
C1 cash costs	1,784	(8)	(116)	2	(122)	1,662
Freight	1,129	(1)	–	104	103	1,232
Distribution costs	179	(1)	–	(6)	(7)	172
Royalties & others	316	(2)	–	(9)	(11)	305
Total costs before depreciation and amortization	3,408	(12)	(116)	91	(37)	3,371
Depreciation	357	(2)	(24)	14	(12)	345
Total	3,765	(14)	(140)	105	(49)	3,716

Cash cost and freight

	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
C1 cash cost (US\$ million)								
C1 cash cost, including third-party purchase costs (A)	1,662	1,784	-7%	1,935	-14%	5,043	4,682	8%
Third-party purchase cost adjustment ¹ (B)	377	402	-6%	409	-8%	1,132	944	20%
C1 cash cost, ex-third-party purchase costs (C = A – B)	1,285	1,383	-7%	1,526	-16%	3,911	3,738	5%
Sales volumes (Mt)								
Volume sold ² (D)	69.3	69.7	-1%	68.5	1%	190.4	178.9	6%
Volume sold from third-party purchases (E)	7.1	6.6	8%	7.1	0%	19.9	15.8	26%
Volume sold from own operations (F = D – E)	62.2	63.1	-1%	61.4	1%	170.5	163.1	5%
C1 cash cost², FOB (US\$/t)								
C1 cash cost, ex-third-party purchase costs (C/F)	20.6	21.9	-6%	24.9	-17%	22.9	22.9	0%
Average third-party purchase C1 cash cost (B/E)	52.9	60.5	-13%	57.4	-8%	56.9	59.9	-5%
Iron ore cash cost (A/D)	24.0	25.6	-6%	28.2	-15%	26.5	26.2	1%
Freight								
Maritime freight costs (G)	1,232	1,129	9%	1,114	11%	3,207	2,671	20%
CFR sales (%) (H)	86%	86%	0 p.p.	85%	1 p.p.	85%	82%	3 p.p.
Volume CFR (Mt) (I = D x H)	59.8	59.8	0%	58.5	2%	162.8	147.1	11%
Freight cost (US\$/t) (G/I)	20.6	18.9	9%	19.0	8%	19.7	18.2	9%

¹ Includes logistics costs related to third-party purchases. ² Excludes ROM, royalties and distribution costs.

Expenses

US\$ million	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
SG&A	13	16	-19%	15	-13%	38	38	0%
R&D	76	70	9%	82	-7%	228	166	37%
Pre-operating and stoppage expenses	58	78	-26%	53	9%	162	226	-28%
Other expenses	2	63	-97%	41	-95%	82	44	86%
Total expenses	149	227	-34%	191	-22%	510	474	8%



Iron Ore Solutions: Projects Details

Growth projects	Capex 3Q24	Financial progress ¹	Physical progress	Comments
Northern System 240 Mtpy Capacity: 10 Mtpy Start-up: 1H23 Capex: US\$ 772 MM	23	92%	~100% ²	Test operations at the port have been concluded. At the mine, the structural reinforcement of the 3 rd silo has been concluded and cargo tests have been initiated.
Serra Sul +20³ Capacity: 20 Mtpy Start-up: 2H26 Capex: US\$ 2,844 MM	142	46%	67%	All modules of the semi-mobile crusher have been positioned and the critical lifts of the transfer house have been completed. The assembly of the long-distance conveyor belt is in the final stages. Civil construction at the plant should be finished by Q4.
Capanema's Maximization Capacity: 18 Mtpy Start-up: 1H25 Capex: US\$ 913 MM	72	68%	91%	The project is in the final stage of mechanical completion.
Briquettes Tubarão Capacity: 6 Mtpy Start-up: 4Q23 (Plant 1) 1Q25 (Plant 2) Capex: US\$ 342 MM	14	86%	96%	Plant 1 stabilization works continue with focus on quality control, for subsequent replication in Plant 2.
Sustaining projects	Capex 3Q24	Financial progress ¹	Physical progress	Comments
Compact Crushing S11D Capacity: 50 Mtpy Start-up: 2H26 Capex: US\$ 755 MM	38	34%	55%	Civil works on the secondary crusher were completed and the assembly phase was initiated.
N3 – Serra Norte Capacity: 6 Mtpy Start-up: 2H26 Capex: US\$ 84 MM	1	20%	19%	The Installation License and Vegetation Suppression Authorization are pending.
VGR 1 plant revamp³ Capacity: 17 Mtpy Start-up: 3Q24 Capex: US\$ 67 MM	9	71%	100%	The project started commissioning in September, one month ahead of schedule.

¹ CAPEX disbursement until end of 3Q24 vs. CAPEX expected. ² Considering physical progress of mine, plant and logistics. ³ VGR 1 is a program made up of three simultaneous projects, VGR 1 Waste Containment System, Water Adequacy and the VGR 1 Revamp, all aimed at boosting the recovery of production capacity. The progress data provided focuses on the program's main project, the VGR 1 Waste Containment System.

Projects under evaluation

Apolo	Capacity: Under evaluation	Stage: FEL2
Southeastern System (Brazil)	Growth project	
Vale's ownership: 100%	Open pit mine	
Briquette plants	Capacity: Under evaluation	Stage: 2 plants at FEL3; 5 plants at different stages of FEL
Brazil and other regions	Growth project	Investment decision: 2025-2030
Vale's ownership: N/A	Cold agglomeration plant	
Itabira mines	Capacity: 25 Mtpy	Stage: Prefeasibility Study
Southeastern System (Brazil)	Replacement project	
Vale's ownership: 100%	Open pit mine	Diverse pits and tailing and waste stockpile projects aimed at maintaining Itabira's long-term production volumes.
Mega Hubs	Capacity: Under evaluation	Stage: Prefeasibility Study
Middle East	Growth project	
Vale's ownership: N/A	Industrial complexes for iron ore concentration and agglomeration and production of direct reduction metallics	Vale continues to advance in negotiations with world-class players and jointly study the development of Mega Hubs
S11C	Capacity: Under evaluation	Stage: FEL2
Northern System (Brazil)	Replacement project	
Vale's ownership: 100%	Open pit mine	
Serra Norte N1/N2¹	Capacity: Under evaluation	Stage: FEL2
Northern System (Brazil)	Replacement project	
Vale's ownership: 100%	Open pit mine	

¹ Project scope is under review given permitting constraints.



Energy Transition Metals: Copper

Revenues & price realization

	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Volume sold								
Copper ('000 metric tons)	61	62	-2%	58	5%	176	158	11%
Gold as by-product ('000 oz)	85	95	-11%	89	-4%	259	232	12%
Silver as by-product ('000 oz)	202	242	-17%	242	-17%	632	653	-3%
Average prices								
Average LME copper price (US\$/t)	9,210	8,356	10%	9,753	-6%	9,131	8,585	6%
Average copper realized price (US\$/t)	9,016	7,731	17%	9,202	-2%	8,651	7,969	9%
Gold (US\$/oz) ¹	2,591	1,874	38%	2,361	10%	2,346	1,939	21%
Silver (US\$/oz)	30	23	30%	27	11%	27	24	13%
Net revenue (US\$ million)								
Copper	553	478	16%	535	3%	1,522	1,257	21%
Gold as by-product ¹	221	177	25%	209	6%	607	450	35%
Silver as by-product	6	5	20%	7	-14%	17	15	13%
Total	780	660	18%	751	4%	2,146	1,722	25%
PPA adjustments ²	(21)	-	n.a.	24	n.a.	31	-	n.a.
Net revenue after PPA adjustments	759	660	15%	775	-2%	2,177	1,722	26%

¹ Revenues presented above were adjusted to reflect the market prices of products delivered related to the streaming transactions. ² PPA adjustments to be disclosed separately from 1Q24 onwards. On September 30th, 2024, Vale had provisionally priced copper sales from Sossego and Salobo totaling 51,876 tons valued at weighted average LME forward price of US\$ 10,009/t, subject to final pricing over the following months.

Breakdown of copper realized prices

US\$/t	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Average LME copper price	9,210	8,356	10%	9,753	-6%	9,131	8,585	6%
Current period price adjustments ¹	106	(189)	n.a.	(204)	n.a.	(26)	(134)	-81%
Copper gross realized price	9,316	8,167	14%	9,549	-2%	9,105	8,450	8%
Prior period price adjustments ²	203	125	62%	125	62%	45	62	-28%
Copper realized price before discounts	9,518	8,292	15%	9,674	-2%	9,150	8,513	7%
TC/RCS, penalties, premiums and discounts ³	(503)	(560)	-10%	(472)	7%	(499)	(543)	-8%
Average copper realized price	9,016	7,731	17%	9,202	-2%	8,651	7,969	9%

Note: Vale's copper products are sold on a provisional pricing basis, with final prices determined in a future period. The average copper realized price excludes the mark-to-market of open invoices based on the copper price forward curve (unrealized provisional price adjustments) and includes the prior and current period price adjustments (realized provisional price adjustments). ¹ Current-period price adjustments: Final invoices that were provisionally priced and settled within the quarter. ² Prior-period price adjustment: Final invoices of sales provisionally priced in prior quarters. ³ TC/RCS, penalties, premiums, and discounts for intermediate products.

COGS - 3Q24 vs. 3Q23

US\$ million	3Q23	Volume	Exchange rate	Others	3Q24
Costs	341	(4)	(29)	58	366
Depreciation	49	-	(4)	(6)	39
Total	390	(4)	(33)	52	405



Energy Transition Metals: Nickel

Revenues & price realization

	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Volume sold ('000 metric tons)								
Nickel	41	39	4%	34	19%	108	120	-10%
Copper	14	12	17%	18	-22%	52	53	-2%
Gold as by-product ('000 oz)	4	9	-56%	9	-56%	25	31	-19%
Silver as by-product ('000 oz)	209	122	71%	206	1%	660	634	4%
PGMs ('000 oz)	42	41	2%	38	11%	152	204	-25%
Cobalt (metric ton)	464	399	16%	320	45%	1,249	1,679	-26%
Average realized prices (US\$/t)								
Nickel	17,012	21,237	-20%	18,638	-9%	17,478	23,203	-25%
Copper	9,187	7,423	24%	9,137	1%	8,503	7,768	9%
Gold (US\$/oz)	2,748	1,851	48%	2,435	13%	2,305	1,902	21%
Silver (US\$/oz)	31.4	22.5	40%	28.2	11%	27.1	22.4	21%
Cobalt	23,850	35,222	-32%	28,258	-16%	27,454	33,428	-18%
Net revenue by product (US\$ million)								
Nickel	692	833	-17%	639	8%	1,889	2,777	-32%
Copper	127	89	43%	164	-23%	444	409	9%
Gold as by-product ¹	12	17	-29%	22	-45%	58	59	-2%
Silver as by-product	7	3	133%	6	17%	18	14	26%
PGMs	44	54	-19%	38	16%	150	214	-30%
Cobalt ¹	11	14	-21%	9	22%	34	56	-39%
Others	9	13	-31%	5	80%	24	38	-37%
Total	902	1,023	-12%	882	2%	2,616	3,566	-27%
PPA adjustments ²	2	82	-97%	-3	n.a.	3	433	-99%
Net revenue after PPA adjustments	904	1,105	-18%	879	3%	2,619	3,999	-35%

¹ Revenues presented above were adjusted to reflect the market prices of products delivered related to the streaming transactions. ² PPA adjustments started to disclose separately in 1Q24.

Breakdown of nickel volumes sold, realized price and premium

	3Q24	3Q23	Δ y/y	2Q24	Δ q/q	9M24	9M23	Δ y/y
Volumes (kt)								
Upper Class I nickel	22.8	21.7	5%	19.0	20%	62.7	68.2	-8%
– of which: EV Battery	1.0	0.2	400%	0.8	25%	2.6	2.4	8%
Lower Class I nickel	6.9	4.6	50%	3.9	77%	14.3	13.1	9%
Class II nickel	10.3	9.4	10%	6.6	56%	21.3	26.8	-21%
Intermediates	0.7	3.6	-81%	4.7	-85%	9.9	11.5	-14%
Total	40.7	39.2	4%	34.3	19%	108.1	119.7	-10%
Nickel realized price (US\$/t)								
LME average nickel price	16,259	20,344	-20%	18,415	-12%	17,072	22,890	-25%
Average nickel realized price	17,012	21,237	-20%	18,638	-9%	17,478	23,202	-25%
Contribution to the nickel realized price by category:								
Nickel average aggregate premium/(discount)	571	123	364%	319	79%	474	77	516%
Other timing and pricing adjustments contributions ¹	182	770	-76%	(97)	n.a.	(68)	234	n.a.
Premium/discount by product (US\$/t)								
Upper Class I nickel	1,080	1,755	-38%	1,260	-14%	1,180	1,710	-31%
Lower Class I nickel	460	1,368	-66%	610	-25%	550	1,320	-58%
Class II nickel	(360)	(2,542)	-86%	290	n.a.	70	(2,540)	n.a.
Intermediates	(1,330)	(4,361)	-70%	(3,650)	-64%	(3,220)	(4,980)	-35%

¹ Comprises (i) the realized quotational period effects (based on sales distribution in the prior three months, as well as the differences between the LME price at the moment of sale and the LME average price), with a positive impact of US\$48/t and (ii) fixed-price sales, with a positive impact of US\$134/t.



Product type by operation

% of sales	North Atlantic ¹	Matsusaka	Onça Puma
Upper Class I	73.7	-	-
Lower Class I	22.2	-	-
Class II	3.2	94.8	97.9
Intermediates	0.9	5.2	2.1

¹ Comprises Sudbury, Clydach and Long Harbour refineries

COGS - 3Q24 vs. 3Q23

US\$ million	3Q23	Volume	Exchange rate	Others	3Q24
Costs	925	139	(15)	(113)	936
Depreciation	213	8	(4)	(50)	167
Total	1,138	147	(19)	(163)	1,103



Energy Transition Metals: Projects Details

Growth projects	Capex 3Q24	Financial progress ¹	Physical progress	Comments
Onça Puma 2nd Furnace Capacity: 12-15 ktpy Start-up: 2H25 Capex: US\$ 555 MM	40	37%	56%	The project is advancing slightly ahead of plan. Major equipment and materials are planned to arrive by the end of 2024, and the assembly of the 2 nd furnace is progressing well.
Sustaining projects	Capex 3Q24	Financial progress ¹	Physical progress	Comments
Voisey's Bay Mine Extension Capacity: 45 ktpy (Ni) and 20 ktpy (Cu) Start-up: 1H21 ² Capex: US\$ 2,940 MM	76	94%	99%	All surface construction completed with commissioning of Reid Brook power plant remaining. In Eastern Deeps Mine, the Bulk Material Handling system achieved mechanical completion in early October and the focus is now on commissioning, with handover to Operations within 2024. Demobilization efforts are ongoing, with Surface contractors already fully demobilized.

¹ CAPEX disbursement until end of 3Q24 vs. CAPEX expected.

² In 2021, Vale achieved the first ore production of Reid Brook deposit, the first of two underground mines to be developed in the project. Eastern Deeps, the second deposit, has started to extract development ore from the deposit and is continuing its scheduled production ramp up.

Projects under evaluation

Copper		
Alemão	Capacity: 60 ktpy	Stage: FEL3
Carajás, Brazil	Growth project	Investment decision: 2025
Vale's ownership: 100%	Underground mine	115 kozpy Au as by-product
South Hub extension (Bacaba)	Capacity: 60-80 ktpy	Stage: FEL3¹
Carajás, Brazil	Replacement project	Investment decision: 4Q24
Vale's ownership: 100%	Open pit	Development of mines to feed Sossego mill
Victor	Capacity: 20 ktpy	Stage: FEL3
Ontario, Canada	Replacement project	Investment decision: 2025-2026
Vale's ownership: N/A	Underground mine	5 ktpy Ni as co-product; JV partnership under discussion
Hu'u	Capacity: 300-350 ktpy	Stage: FEL2
Dompou, Indonesia	Growth project	200 kozpy Au as by-product
Vale's ownership: 80%	Underground block cave	
North Hub	Capacity: 70-100 ktpy	Stage: FEL1
Carajás, Brazil	Growth project	
Vale's ownership: 100%	Mines and processing plant	
Nickel		
Creighton Ph. 5	Capacity: 15-20 ktpy	Stage: FEL3
Ontario, Canada	Replacement project	Investment decision: 2025
Vale's ownership: 100%	Underground mine	10-16 ktpy Cu as by-product
CCM Pit	Capacity: 12-15 ktpy	Stage: FEL3
Ontario, Canada	Replacement project	Investment decision: 2025
Vale's ownership: 100%	Open pit mine	7-9 ktpy Cu as by-product
CCM Ph. 3	Capacity: 5-10 ktpy	Stage: FEL3
Ontario, Canada	Replacement project	Investment decision: 2025
Vale's ownership: 100%	Underground mine	7-13 ktpy Cu as by-product
CCM Ph. 4	Capacity: 7-12 ktpy	Stage: FEL2
Ontario, Canada	Replacement project	7-12 ktpy Cu as by-product
Vale's ownership: 100%	Underground mine	
Nickel Sulphate Plant	Capacity: ~25 ktpy	Stage: FEL3
Quebec, Canada	Growth project	Investment decision: 2024-2025
Vale's ownership: N/A		

¹ Refers to the most advanced projects (Bacaba and Cristalino).



Annex 4: Brumadinho & Decharacterization

Brumadinho & Dam decharacterization

US\$ million	Provisions balance 30jun24	EBITDA impact ²	Payments	FX and other adjustments ³	Provisions balance 30sep24
Decharacterization	2,738	-	(154)	99	2,683
Agreements & donations ¹	2,412	48	(188)	118	2,390
Total Provisions	5,150	48	(342)	217	5,073
Incurring Expenses	-	78	(78)	-	-
Total	5,150	126	(420)	217	5,073

¹ Includes Integral Reparation Agreement, individual, labor and emergency indemnifications, tailing removal and containment works. ² Includes the revision of estimates for provisions and incurred expenses, including discount rate effect. ³ Includes foreign exchange, present value and other adjustments.

Impact of Brumadinho and Decharacterization from 2019 to 3Q24

US\$ million	EBITDA impact	Payments	FX and other adjustments ²	Provisions balance 30sep24
Decharacterization	5,060	(2,001)	(376)	2,683
Agreements & donations ¹	9,147	(6,920)	163	2,390
Total Provisions	14,207	(8,921)	(213)	5,073
Incurring expenses	3,248	(3,248)	-	-
Others	180	(178)	(2)	-
Total	17,635	(12,347)	(215)	5,073

¹ Includes Integral Reparation Agreement, individual, labor and emergency indemnifications, tailing removal and containment works. ² Includes foreign exchange, present value and other adjustments.

Cash outflow of Brumadinho & Decharacterization commitments^{1,2}:

US\$ billion	Disbursed from 2019 to 3Q24	4Q24	2025	2026	2027	Yearly average 2028-2035 ³
Decharacterization	(2.0)	0.1	0.5	0.5	0.4	0.2
Integral Reparation Agreement & other reparation provisions	(6.9)	0.5	0.8	0.7	0.3	0.1 ⁴
Incurring expenses	(3.2)	0.3	0.4	0.4	0.3	0.4 ⁵
Total	(12.1)	0.9	1.7	1.6	1.0	-

¹ Estimate cash outflow for 2024-2035 period, given BRL-USD exchange rates of 5.4481. ² Amounts stated without discount to present value, net of judicial deposits and inflation adjustments.

³ Estimate annual average cash flow for Decharacterization provisions in the 2028-2035 period is US\$ 248 million per year. ⁴ Disbursements related to the Integral Reparation Agreement ending in 2031. ⁵ Disbursements related to incurred expenses ending in 2028.