

Vale's performance in 4Q24 and 2024

"We are pleased to report a strong operational and financial performance in 2024, underscored by the highest iron ore production since 2018 and record copper production at Salobo. Our disciplined approach to cost and operational efficiency has driven significant improvements, with our C1 at US\$ 18.8/t in Q4, the lowest level since 2022. Regarding safety and dam management, we have made meaningful progress by eliminating four additional dams in 2024 and completing 57% of our dam decharacterization program. This year, we expect to remove the last dam at emergency level 3. We begin 2025 highly optimistic about our ability to meet our annual targets and advance our strategic priorities. Our robust and flexible portfolio, disciplined capital allocation approach and evolving performance culture will enable us to deliver long-term value to all our stakeholders. We are enhancing our institutional relationships and ensuring that we leave a positive impact on society and the environment." commented Gustavo Pimenta, Chief Executive Officer.

Selected financial indicators

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Net operating revenues	10,124	13,054	-22%	9,553	6%	38,056	41,784	-9%
Total costs and expenses (ex-Brumadinho and dams decharacterization) ¹	(7,263)	(7,278)	0%	(6,802)	7%	(26,936)	(26,014)	4%
Expenses related to Brumadinho and dams decharacterization	(111)	(396)	-72%	(126)	-12%	(277)	(1,083)	-74%
Adjusted EBIT	2,992	5,603	-47%	2,867	4%	11,783	15,531	-24%
Adjusted EBITDA	3,794	6,458	-41%	3,615	5%	14,840	18,601	-20%
Proforma EBITDA^{2,3}	4,119	6,864	-40%	3,773	9%	15,392	19,744	-22%
Proforma EBITDA margin (%)	41%	53%	-12 p.p	39%	+2 p.p	40%	47%	-7 p.p
Free cash flow	(100)	2,986	n.a	587	n.a	5,510	8,313	-34%
Recurring free cash flow	817	3,068	-73%	512	60%	3,710	8,642	-57%
Attributable net income (loss)	(694)	2,418	n.a	2,412	n.a	6,166	7,983	-23%
Attributable proforma net income⁴	872	2,425	-64%	2,433	-64%	7,772	8,023	-3%
Net debt ⁵	10,499	9,560	10%	9,536	10%	10,499	9,560	10%
Expanded net debt	16,466	16,164	2%	16,472	0%	16,466	16,164	2%
Capital expenditures	1,766	2,118	-17%	1,398	26%	6,000	5,920	1%

¹ Includes adjustment of US\$ 113 million in 4Q24, US\$ 94 million in 3Q24, US\$ 356 million in 2024, US\$ 83 million in 4Q23 and US\$ 216 million in 2023 to reflect the performance of the streaming transactions at market price. ² Excluding expenses related to Brumadinho and starting 4Q24 it also excludes non-recurring items. Previous periods were restated. ³ Including the EBITDA from associates and JVs. ⁴ Excluding non-recurring items. ⁵ Including leases (IFRS 16).

Results Highlights

- **Operational performance was solid across all business segments; all guidances met.** Iron ore shipments were flat q/q and 9.1 Mt lower y/y, as a result of portfolio optimization towards higher-margin products.
- As a result, the **all-in premium improved by US\$ 2.9/t q/q and y/y, totaling US\$ 4.6/t**, with the average premium for iron ore fines reaching US\$ 1.0/t in the quarter (vs. US\$ -1.9/t in Q3). The average **realized iron ore fines price was US\$ 93/t, 3% higher q/q**, while realized prices were 21% lower y/y, driven by lower benchmark prices.
- **The C1 cash cost for iron ore fines, ex-third-party purchases, decreased by 9% q/q and 10% y/y, reaching US\$ 18.8/t, the lowest since 1Q22.** In 2024, C1 came in at the low end of the guidance range (US\$ 21.5-23/t) at US\$ 21.8/t, 2% lower y/y. The cost reduction was a result of operational stability, efficiency initiatives and the BRL depreciation.
- **Copper and nickel all-in costs were US\$ 1,098/t and US\$ 13,881/t**, respectively. The all-in cost for copper was the lowest since 4Q20 and for nickel, since 1Q22. In 2024, all-in costs totaled US\$ 2,616/t and US\$ 15,420/t, within guidance.
- **Proforma EBITDA increased by 9% q/q and decreased by 40% y/y, totaling USD 4.1 billion in Q4.** Proforma EBITDA for 2024 was US\$ 15.4 billion, 22% lower y/y, mainly reflecting lower iron ore prices.
- **Capital expenditures of US\$ 6.0 billion in 2024 was stable y/y.** Project efficiencies were identified in the portfolio, triggering the **revision of the CAPEX guidance for 2025 to ~US\$ 5.9 billion** (vs. ~US\$ 6.5 billion previously).
- **Recurring free cash flow was US\$ 817 million**, US\$ 2,251 lower y/y, largely reflecting lower EBITDA generation, and implying a recurring 10% FCF yield for the year.
- **An additional currency hedge of US\$ 3.1 billion was contracted for 2025 at a fixed rate of 6.31 BRL:USD in Q4**, totaling US\$ 5.9 billion for the year at 6.25 BRL:USD, covering a significant portion of the projected BRL cash outflows.
- **Expanded net debt remained stable q/q**, reaching US\$ 16.5 billion as of December 31st, 2024.
- **Approval of US\$ 1.984 billion¹ in dividends and interest on capital to be paid in March 2025**, implying an annualized dividend yield of 10.4%², **along with the renewal of the buyback program by 18 months**, of up to 120 million shares.

¹ US\$ 1.596 billion in dividends approved on February 19th, and US\$ 388 million in interest on capital approved on November 28th, 2024.

² Considering the market cap as of December 31st, 2024, adjusted for interest on capital ex-date.

Business Highlights



Iron Ore Solutions

- The **Capanema project**, which will add 15 Mtpy of iron ore to the Mariana complex, started commissioning in November. The project will produce sinter feed using the natural moisture process, reducing waste and enhancing Vale's product portfolio flexibility.
- Vale has concluded negotiations with the US Department of Energy (DoE) Office of Clean Energy Demonstrations to develop an industrial-scale briquette plant and will commence Phase 1 of the project in Louisiana. In this phase, over US\$ 3.8 million of awarded funds will be used to conduct engineering studies and community engagement throughout 2025.

Energy Transition Metals

- In December, construction and commissioning of the VBME project were completed. The project's production capacity is around 45 ktpy of nickel with another 20 ktpy of copper and 2.6 ktpy of cobalt as by-products, and the full ramp-up is expected by 2H26.

Recent developments

- In February 2025, Vale has launched the Novo Carajás program. The program aims to leverage Carajás' mining potential, including mines in operation and expansions, both in iron ore and copper. It also includes a series of investments in technology, health and safety, operations maintenance, and sustainability, further boosting Vale's positioning in the region.
- In January 2025, Vale Base Metals launched a strategic review related to the nickel operation in Thompson, in order to explore and evaluate a range of business alternatives, including the potential sale of its mining and exploration assets. As part of the review, Thompson's business plan was revised, and an impairment loss of US\$ 1.4 billion was recognized.
- An impairment of US\$ 540 million related to VBME (Voisey's Bay Mine Extension) was also recognized.
- Renegotiation of railway concession contracts. In December 2024, Vale, together with the Brazilian National Land Transportation Agency (ANTT) and the Brazilian Federal Government, through the Ministry of Transportation, set the general basis for the renegotiation of the railway concession contracts. This renegotiation resulted in the recognition of an additional provision of R\$ 1.6 billion (US\$ 256 million). Also in December, Vale made an advance payment of R\$ 4 billion (US\$ 656 million) associated with the railway concessions.

ESG



Tailings Dams

- Vale completed the de-characterization of Area IX dam in December. This was the 17th structure de-characterized since 2019, completing 57% of the Upstream Dam Decharacterization Program.

Decarbonization

- Vale and GreenIron have signed a Memorandum of Understanding (MoU) to collaborate on key initiatives in Brazil and Sweden for the decarbonization of the mining and metals supply chain. Both companies will develop a feasibility study for an innovative direct reduction facility in Brazil to be operated by GreenIron. The MoU also focuses on the supply of Vale's iron ore to GreenIron's commercial operations in Sandviken, Sweden.

Reparation



Brumadinho

- The Brumadinho Integral Reparation Agreement continues to progress, with approximately 75% of the agreed-upon commitments completed by 2024 and in accordance with the deadlines outlined in the settlement. In addition, R\$ 3.8 billion has been paid in individual compensation since 2019.

Mariana

- The Samarco reparation continues to progress, with R\$ 45 billion disbursed and more than 448 thousand people compensated by the end of 2024.
- Definitive settlement related to the Fundão dam collapse. In October, Vale, Samarco and BHP, together with the Brazilian Federal Government, the State Governments of Minas Gerais and Espírito Santo, the Federal and State Public Prosecutors' and Public Defenders' Offices and other Brazilian public entities signed the definitive settlement of claims related to the Fundão dam collapse. The total financial value of the settlement was approximately R\$ 170 billion, comprising past and future obligations, to serve the people, communities and the environment impacted by the dam failure.



Financials

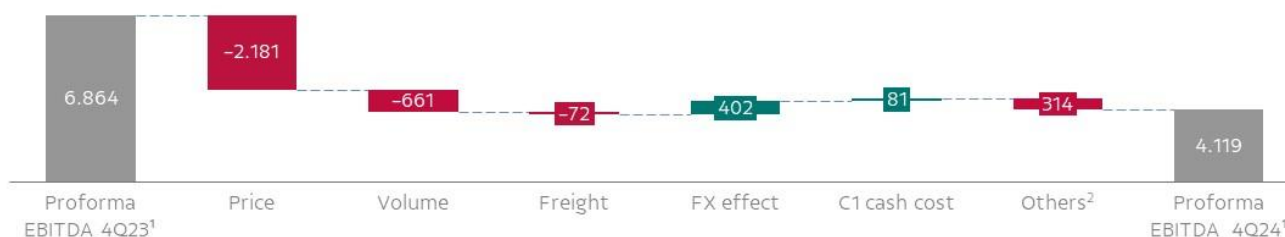
US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Proforma EBITDA								
Net operating revenues	10,124	13,054	-22%	9,553	6%	38,056	41,784	-9%
COGS	(6,268)	(6,891)	-9%	(6,281)	0%	(24,265)	(24,089)	1%
SG&A	(206)	(146)	41%	(139)	48%	(622)	(553)	12%
Research and development	(253)	(231)	10%	(192)	32%	(790)	(723)	9%
Pre-operating and stoppage expenses	(131)	(108)	21%	(89)	47%	(403)	(450)	-10%
Brumadinho & decharacterization of dams ¹	(111)	(396)	-72%	(126)	-12%	(277)	(1,083)	-74%
Non-recurring expenses	(214)	(10)	2,040%	(32)	-164%	(275)	(60)	358%
Other operational expenses (excluding non-recurring expenses) ²	(191)	108	n.a.	(69)	177%	(581)	(139)	318%
EBITDA from associates and JVs	242	223	9%	242	0%	940	844	11%
Adjusted EBIT	2,992	5,603	-47%	2,867	4%	11,783	15,531	-24%
Depreciation, amortization & depletion	802	855	-6%	748	7%	3,057	3,070	0%
Adjusted EBITDA	3,794	6,458	-41%	3,615	5%	14,840	18,601	-20%
Proforma EBITDA^{3,4}	4,119	6,864	-40%	3,773	9%	15,392	19,744	-22%
Reconciliation of Proforma EBITDA to Net Income								
Proforma EBITDA^{3,4}	4,119	6,864	-40%	3,773	9%	15,392	19,744	-22%
Brumadinho & decharacterization of dams ¹ and non-recurring items	(325)	(406)	-20%	(158)	106%	(552)	(1,143)	-52%
Impairment and results on disposal of non-current assets ^{2,5}	(1,960)	(203)	866%	1,050	n.a.	(55)	(482)	-89%
EBITDA from associates and JVs	(242)	(223)	9%	(242)	0%	(940)	(844)	11%
Equity results on associates and JVs and other results	69	(1,152)	n.a.	(574)	n.a.	(269)	(1,108)	-76%
Financial results	(1,760)	(874)	101%	(374)	371%	(3,823)	(1,946)	96%
Income taxes	29	(709)	n.a.	(336)	n.a.	(721)	(3,046)	-76%
Depreciation, depletion & amortization	(802)	(855)	-6%	(748)	7%	(3,057)	(3,070)	0%
Net income (loss)	(872)	2,442	n.a.	2,391	n.a.	5,975	8,105	-26%
Net income (loss) attributable to non-controlling interests	178	(24)	n.a.	21	748%	191	(122)	n.a.
Net income (loss) attributable to Vale's shareholders	(694)	2,418	n.a.	2,412	n.a.	6,166	7,983	-23%
Non-recurring items ⁶	1,566	7	22,271%	21	7,357%	1,606	40	3,915%
Proforma net income (loss) attributable to Vale's shareholders	872	2,425	-64%	2,433	-64%	7,772	8,023	-3%

¹ Find more information of expenses in Annex 4: Brumadinho & Decharacterization. ² Includes adjustment of US\$ 113 million in 4Q24, US\$ 94 million in 3Q24, US\$ 356 million in 2024, US\$ 83 million in 4Q23 and US\$ 216 million in 2023 to reflect the performance of the streaming transactions at market price. ³ Excluding expenses related to Brumadinho and starting 4Q24 it also excludes non-recurring items. Previous periods were restated. 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. ⁶ Includes impairments, non-recurring expenses and income taxes adjustments.

EBITDA

Proforma EBITDA totaled US\$ 4.1 billion, 40% lower y/y and 9% higher q/q, mainly as a result of (i) lower iron ore prices and (ii) lower iron ore sales volumes. These effects were partially by offset iron ore portfolio optimization strategy on price realization and volumes and the continued progress of the efficiency initiatives, resulting in an improved C1 cash cost performance.

Proforma EBITDA 4Q24 vs. 4Q23 – US\$ million



¹ Excluding Brumadinho expenses and one-off events. 4Q23 EBITDA was restated including Associates and JV's EBITDA (US\$ 223 million) and one-off events (US\$ 10 million). ² Including by-products revenues (US\$ 156 million), one-off fiscal credits occurred in 4Q23 (US\$ -212 million), PTVI deconsolidation (US\$ -111 million) and others (US\$ -147 million).

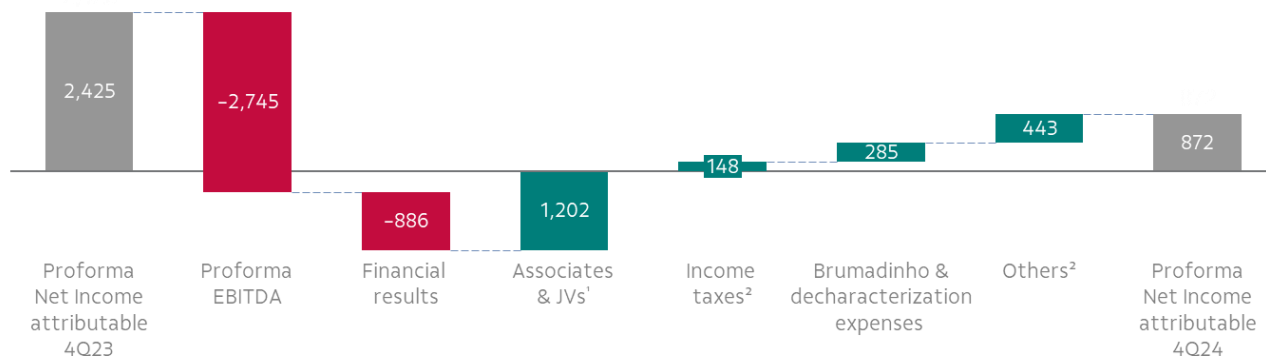


Net Income

Proforma net income was US\$ 0.9 billion in 4Q24, 64% lower y/y, mainly due to (i) lower Proforma EBITDA and (ii) lower financial results, which were impacted by the BRL depreciation effect on the mark-to-market of the obligations' swaps. These effects were partially offset by (i) higher Associates & JVs contributions, as Samarco's dam failure provision impacted 4Q23 results, and (ii) lower income taxes.

Net income attributable to shareholders was negative US\$ 0.7 billion in 4Q24, mainly due to the impact of the recognition of an impairment of US\$ 1.4 billion related to the Thompson nickel operations and US\$ 540 million related to the Voisey's Bay Mine Extension project, following a comprehensive review of VBM assets.

Proforma net income 4Q24 vs. 4Q23 – US\$ million



¹ Considers equity results and EBITDA from associates and JVs. ² Excluding US\$ 590 million in taxes impacted by non-current items results. ³ Including (i) net income/loss attributable to non-controlling interests (US\$ 202 million), (ii) depreciation, depletion & amortization (US\$ 53 million) and (iii) others (US\$ 188 million).



Capital Expenditures

Total CAPEX

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Iron Ore Solutions	1,036	1,320	-22%	1,000	4%	3,943	3,758	5%
Energy Transition Metals	679	759	-11%	376	81%	1,940	1,968	-1%
Nickel	511	604	-15%	298	71%	1,572	1,540	2%
Copper	168	155	8%	78	115%	368	428	-14%
Energy and others	51	39	31%	22	132%	117	194	-40%
Total	1,766	2,118	-17%	1,398	26%	6,000	5,920	1%

Growth Projects

Investments in growth projects totaled US\$ 324 million in Q4, US\$ 157 million (-33%) lower y/y, mainly as a result of lower expenditures at (i) the Serra Sul +20 project as purchasing for the project reduced in the period (ii) the Rio Tocantins Bridge duplication in the Carajás railway, and (iii) the Briquette plants in Tubarão with the plant's physical advancement, as well as a positive q/q exchange rate effect.

The Capanema Maximization iron ore project started commissioning in November 2024. The project will add 15 Mtpy of iron ore at our Mariana complex in Minas Gerais state. The project will produce sinter feed using the natural moisture process, reducing waste and enhancing Vale's product portfolio flexibility.

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Iron Ore Solutions	237	374	-37%	323	-27%	1,173	1,219	-4%
Energy Transition Metals	80	95	-16%	49	63%	268	358	-25%
Nickel	73	84	-13%	46	59%	247	235	5%
Copper	7	11	-36%	3	133%	21	123	-83%
Energy and others	7	12	-42%	4	75%	21	74	-72%
Total	324	481	-33%	376	-14%	1,462	1,651	-11%

Sustaining Investments

Sustaining investments totaled US\$ 1.442 billion in Q4, US\$ 195 million (-12%) lower y/y mainly due to lower expenditures in iron ore railway operations, and in the Energy Transition Metals business with the Voisey's Bay Mine Expansion nickel project completed and lower purchases and replacement of mining equipment at our nickel mines. The exchange rate also contributed positively q/q.

The construction and commissioning of the VBME project were completed in December 2024. Production capacity is around 45 ktpy of nickel, 20 ktpy of copper and 2.6 ktpy of cobalt as by-products. Full ramp-up is expected by 2H26.

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Iron Ore Solutions	799	946	-16%	677	18%	2,770	2,539	9%
Energy Transition Metals	599	664	-10%	327	83%	1,672	1,610	4%
Nickel	438	520	-16%	252	74%	1,325	1,305	2%
Copper	161	144	12%	75	115%	347	305	14%
Energy and others	44	27	63%	18	144%	96	120	-20%
Total	1,442	1,637	-12%	1,022	41%	4,538	4,269	6%



Free cash flow

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Proforma EBITDA	4,119	6,864	-40%	3,773	9%	15,392	19,744	-22%
Working capital	168	(737)	n.a	(428)	n.a	207	(585)	n.a
Capex	(1,766)	(2,118)	-17%	(1,398)	26%	(6,000)	(5,920)	1%
Net financial expenses ¹	(274)	(276)	-1%	(303)	-10%	(1,005)	(948)	6%
Income taxes and REFIS	(416)	(259)	61%	(471)	-12%	(1,859)	(1,890)	-2%
Associates & JVs	(242)	(223)	9%	(242)	0%	(940)	(844)	11%
Brumadinho incurred expenses & dams ²	(226)	(251)	-10%	(232)	-3%	(900)	(912)	-1%
Others	(546)	68	n.a	(187)	192%	(1,185)	(3)	39400%
Recurring Free Cash Flow	817	3,068	-73%	512	60%	3,710	8,642	-57%
Non-recurring events	(887)	(10)	8,770%	(32)	2,672%	(887)	(60)	1378%
Acquisition and disposals of non-current assets, net	(30)	(72)	-58%	107	n.a.	2,687	(269)	n.a.
Free Cash Flow	(100)	2,986	n.a	587	n.a	5,510	8,313	-34%
Brumadinho	(321)	(417)	-23%	(188)	71%	(909)	(1,330)	-32%
Samarco	(504)	(128)	294%	(113)	346%	(808)	(553)	46%
Cash management and others	1,504	(2,109)	n.a.	(2,228)	n.a.	(2,073)	(6,935)	-70%
Increase/(Decrease) in cash & equivalents	579	332	74%	(1,942)	n.a.	1,720	(505)	n.a.

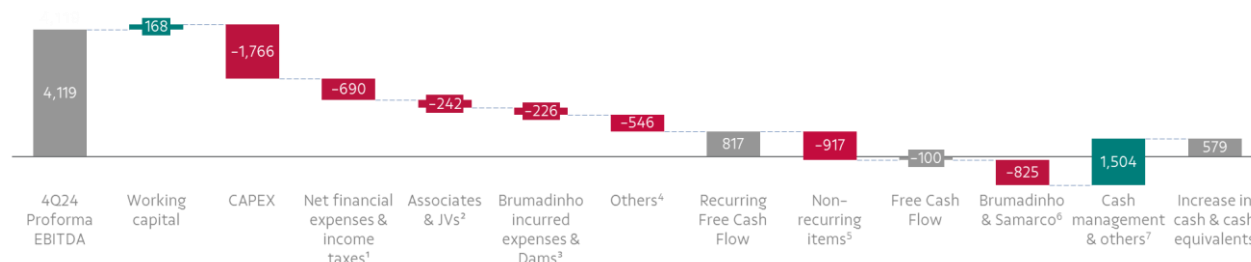
¹Includes interest in loans and borrowings and leasing. ²Includes payments related to dam decharacterization, incurred expenses related to Brumadinho, and others.

Recurring Free Cash Flow generation was US\$ 817 million in 4Q24, US\$ 2.251 billion lower y/y, negatively affected by lower Proforma EBITDA. This was partially offset by a stronger cash collection in Q4 from Q3 iron ore sales.

In the quarter, **Free Cash Flow was negative US\$ 100 million**, most negatively affected by the one-off advance payment in December related to the renegotiation of railway concession contracts in the amount of US\$ 656 million.

Vale's cash position varied according to Free Cash Flow generation and the continuation of debt liability management, with US\$ 1.504 billion net cash raised.

Free Cash Flow 4Q24 - US\$ million



¹Includes interests in loans and borrowings (US\$ -224 million), leasing (US\$ -69 million), other financial expenses/revenues (US\$ 19 million) and income taxes and REFIS (US\$ -416 million). ² Related to Associates and Joint Ventures EBITDA that was included in the Proforma EBITDA. ³ Includes incurred expenses on Brumadinho and decharacterization and payments on decharacterization. ⁴ Includes disbursements related to railway concession contracts (US\$ -134 million), streaming transactions (US\$ -114 million), interest payments on shareholders debentures (US\$ -94 million), net cash paid on settlement of derivatives (US\$ -83 million), and others. ⁵ Includes advance payment of railway concession contracts (US\$ -656 million), acquisition of Minas-Rio (US\$ -30 million) and others. ⁶ Payments related to Brumadinho and Samarco. Excludes incurred expenses. ⁷ Includes US\$ 1.933 billion in new loans, partially offset by US\$ -429 million in debt repayment.



Debt

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q
Gross debt¹	14,792	12,471	19%	13,420	10%
Lease (IFRS 16)	713	1,452	-51%	765	-7%
Gross debt and leases	15,505	13,923	11%	14,185	9%
Cash, cash equivalents and short-term	(5,006)	(4,363)	15%	(4,649)	8%
Net debt	10,499	9,560	10%	9,536	10%
Currency swaps ²	334	(664)	-150%	(128)	-361%
Brumadinho provisions	1,970	3,060	-36%	2,390	-18%
Samarco provisions	3,663	4,208	-13%	4,674	-22%
Expanded net debt	16,466	16,164	2%	16,472	0%
Average debt maturity (years)	8.7	7.9	10%	8.9	-3%
Cost of debt after hedge (% pa)	5.7	5.6	2%	5.6	1%
Total debt and leases / adjusted LTM EBITDA (x)	1.0	0.8	25%	0.8	25%
Net debt / adjusted LTM EBITDA (x)	0.7	0.5	40%	0.5	40%
Adjusted LTM EBITDA / LTM gross interest (x)	17.9	24.1	-26%	22.4	-20%

¹ Does not include leases (IFRS 16). ² Includes interest rate swaps.

Gross debt and leases reached US\$ 15.5 billion as of December 31st, 2024, US\$ 1.3 billion higher q/q, mainly as a result of the net effect of US\$ 1.5 billion of funds raised and debt repayment.

Expanded net debt was relatively stable at US\$ 16.5 billion, as the negative free cash flow generation in Q4 was offset by the positive effect of currency adjustments on the Brumadinho and Samarco's provisions. Vale's expanded net debt target remains at US\$ 10-20 billion.

The average debt maturity declined to 8.7 years at the end of 4Q24 from 8.9 years at the end of 3Q24. The average annual cost of debt after currency and interest rate swaps was 5.7%, slightly above Q3's 5.6%.



Segments' Performance

Proforma EBITDA by business area:

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Iron Ore Solutions	4,008	6,578	-39%	3,731	7%	15,085	18,814	-20%
Fines	3,176	5,535	-43%	2,844	12%	11,598	15,205	-24%
Pellets	770	936	-18%	790	-3%	3,166	3,136	1%
Other Ferrous Minerals	62	107	-42%	97	-36%	321	473	-32%
Energy Transition Metals¹	541	529	2%	248	118%	1,453	1,963	-26%
Nickel	55	152	-64%	(66)	n.a.	114	815	-87%
Copper	526	375	40%	360	46%	1,521	1,100	38%
Other	(40)	2	n.a.	(46)	-13%	(182)	48	n.a.
Others²	(430)	(243)	77%	(206)	109%	(1,146)	(1,033)	11%
Total	4,119	6,864	-40%	3,773	9%	15,392	19,744	-22%

¹ Includes adjustment of US\$ 113 million in 4Q24, US\$ 94 million in 3Q24, US\$ 356 million in 2024, US\$ 83 million in 4Q23 and US\$ 216 million in 2023 to reflect the performance of the streaming transactions at market price, 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 Includes US\$ 79 million in unallocated expenses from Vale Base Metals Ltd ("VBM") in 4Q24 and US\$ 145 million in 2024. Considering the unallocated expenses, VBM's EBITDA was US\$ 462 million in 4Q24 and US\$ 1.308 billion in 2024.

Segment information 4Q24

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	8,151	(4,099)	(54)	(127)	(80)	217	4,008
Fines	6,503	(3,216)	(24)	(110)	(75)	98	3,176
Pellets	1,440	(729)	(1)	(3)	(2)	65	770
Other ferrous	208	(154)	(29)	(14)	(3)	54	62
Energy Transition Metals	1,973	(1,418)	63	(79)	(21)	24	541
Nickel ²	1,067	(974)	(7)	(36)	(20)	25	55
Copper ³	964	(386)	(13)	(37)	(1)	-	526
Others ⁴	(58)	(58)	83	(6)	-	(1)	(40)
Brumadinho & decharacterization of dams⁵	-	-	(111)	-	-	-	(111)
Non-recurring expenses	-	-	(214)	-	-	-	(214)
Others⁶	-	-	(384)	(47)	-	2	(430)
Total	10,124	(5,517)	(700)	(253)	(102)	242	3,794

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\$ 113 million increasing the adjusted EBITDA in 4Q24, 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 Find more information of expenses in Annex 4: Brumadinho & Decharacterization. ⁶ Includes US\$ 79 million in unallocated expenses from Vale Base Metals Ltd ("VBM") in 4Q24. Considering the unallocated expenses, VBM's EBITDA was US\$ 462 million in 4Q24.

Iron Ore Solutions

Highlights

	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Average Prices (US\$/t)								
Iron ore – 62% Fe price	103.4	128.3	-19%	99.7	4%	109.4	119.8	-9%
Iron ore fines realized price, CFR/FOB	93.0	118.3	-21%	90.6	3%	95.3	108.1	-12%
Iron ore pellets realized price, CFR/FOB	143.0	163.4	-12%	148.2	-3%	154.6	161.9	-5%
Volume sold ('000 metric tons)								
Fines	69,912	77,885	-10%	69,344	1%	260,314	256,789	1%
Pellets	10,067	10,285	-2%	10,143	-1%	38,300	35,840	7%
ROM	1,216	2,158	-44%	2,351	-48%	8,038	8,290	-3%
Total – Iron ore	81,196	90,328	-10%	81,838	-1%	306,652	300,919	2%
Financials indicators (US\$ million)								
Net Revenues	8,151	11,030	-26%	7,970	2%	31,444	34,079	-8%
Costs ¹	(4,099)	(4,568)	-10%	(4,255)	-4%	(16,322)	(15,451)	6%
SG&A and Other expenses ¹	(54)	87	n.a.	(45)	20%	(243)	(14)	1636%
Pre-operating and stoppage expenses ¹	(80)	(80)	0%	(63)	27%	(274)	(338)	-19%
R&D expenses	(127)	(104)	22%	(87)	46%	(391)	(283)	38%
EBITDA Associates & JVs	217	213	2%	211	3%	871	821	6%
Adjusted EBITDA	4,008	6,578	-39%	3,731	7%	15,085	18,814	-20%
Depreciation and amortization	(536)	(549)	-2%	(531)	1%	(2,107)	(1,962)	7%
Adjusted EBIT	3,472	6,029	-42%	3,200	9%	12,978	16,852	-23%

¹ Net of depreciation and amortization.

Adjusted EBITDA per segment

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Fines	3,176	5,535	-43%	2,844	12%	11,598	15,205	-24%
Pellets	770	936	-18%	790	-3%	3,166	3,136	1%
Other ferrous minerals	62	107	-42%	97	-36%	321	473	-32%
Adjusted EBITDA	4,008	6,578	-39%	3,731	7%	15,085	18,814	-20%

Iron Ore Solutions EBITDA was US\$ 4.008 billion, 39% lower y/y, mainly driven by lower iron ore prices (US\$ 2.029 billion) and lower sales volumes (US\$ 640 million), driven by Vale's portfolio optimization decision, based on current market conditions. These effects were partially offset by the positive effect of the BRL depreciation (US\$ 263 million).

In Iron Ore Fines, EBITDA decreased by 43% y/y, totaling US\$ 3.176 billion, mostly explained by lower realized prices (US\$ 1.809 billion), lower sales volumes (US\$ 573 million) and higher freight costs (US\$ 73 million). These effects were partially offset by the positive effect of the BRL depreciation (US\$ 177 million) and lower C1 cash costs (US\$ 81 million).

In Iron Ore Pellets, EBITDA decreased by 18% y/y, totaling US\$ 770 million, mostly explained by lower realized prices (US\$ 199 million), which were partially offset by the positive effect of the BRL depreciation (US\$ 72 million).

EBITDA variation – US\$ million (4Q24 vs. 4Q23)



¹ Includes expenses (US\$ -177 million) and Associates and JVs EBITDA (US\$ 4 million).



Iron ore fines

Product mix

'000 metric tons	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Volume sold								
Fines¹	69,912	77,885	-10%	69,344	1%	260,314	256,789	1%
IOCJ	9,287	13,074	-29%	11,709	-21%	43,578	52,673	-17%
BRBF	43,890	45,199	-3%	34,797	26%	135,130	134,333	1%
Pellet feed – China (PFC1) ²	3,585	3,279	9%	3,328	8%	12,786	13,335	-4%
Lump	1,535	1,871	-18%	1,971	-22%	7,097	7,498	-5%
High-silica products	852	7,466	-89%	8,050	-29%	27,435	25,556 ³	7%
Other fines (60–62% Fe)	10,764	6,996	54%	9,489	14%	34,288	23,393 ³	47%

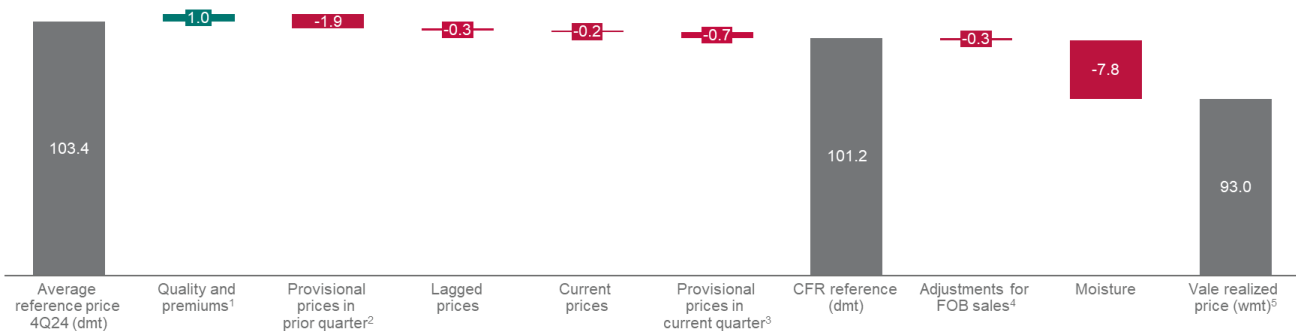
¹ Including third-party purchases. ² Products concentrated in Chinese facilities. ³ Restated from historical figures.

Revenues

The average realized iron ore fines price was **US\$ 93/t**, US\$ 2.4/t higher q/q, largely attributed to higher iron ore benchmark prices (US\$ 3.7/t higher q/q) and higher average premium (US\$ 2.9/t higher q/q), which were partially offset by the negative impact of pricing mechanisms (US\$ -1.9/t) related to provisional price adjustments. In the quarter, the adjustments for FOB sales were positively impacted by the spot rates effect on freight pricing mechanisms.

Iron ore fines quality and premium improved by **US\$ 2.9/t, totaling US\$ 1.0/t**, driven by portfolio optimization based on current market conditions, resulting in high-silica products being predominantly directed to the formation of blended products (BRBF) and concentration plants in China (PFC1). **The all-in premium totaled US\$ 4.6/t in Q4 (vs. US\$ 1.7/t in Q3).**

Price realization iron ore fines – US\$/t. 4Q24



¹ Includes quality (US\$ 1.6/t) and premiums/discounts and commercial conditions (US\$ -0.6/t). ² Adjustment as a result of provisional prices booked in 3Q24 at US\$ 108.8/t. ³ Difference between the weighted average of the prices provisionally set at the end of 4Q24 at US\$ 100.8/t based on forward curves and US\$ 103.4/t from the 4Q24 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	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
C1 cash cost, incl. third-party purchase costs¹	21.4	24.7	-14%	24.0	-11%	25.1	25.7	-2%
C1 cash cost, ex-third-party purchase costs	18.8	20.8	-9%	20.6	-9%	21.8	22.3	-2%
Third-party purchases cost adjustments	2.6	3.9	-35%	3.3	-23%	3.3	3.4	-1%
Freight cost ²	20.0	18.8	6%	20.6	-3%	19.8	18.4	8%
Distribution cost	2.7	2.0	40%	2.5	11%	2.6	2.5	4%
Expenses ³ & royalties	5.8	4.4	33%	5.3	9%	6.0	5.4	11%
Moisture adjustment	4.1	4.1	-1%	4.3	-6%	4.5	4.5	1%
Iron ore fines quality adjustment	(1.0)	1.1	n.a.	1.9	n.a.	1.4	0.2	603%
Iron ore fines all-in costs (US\$/dmt)	53.1	55.1	-4%	58.7	-9%	59.4	56.7	5%
Pellet business contribution	(3.6)	(2.7)	32%	(3.6)	1%	(3.5)	(3.1)	14%
Iron ore fines and pellets all-in costs (US\$/dmt)	49.5	52.3	-5%	55.1	-10%	55.9	53.6	4%
Sustaining investments (fines and pellets)	9.7	10.9	-11%	8.3	17%	9.1	8.8	4%
Iron ore fines and pellets all-in costs⁴ (US\$/dmt)	59.1	63.2	-6%	63.3	-7%	65.0	62.4	4%

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 Including sustaining investment.

Iron ore fines and pellets all-in costs, excluding sustaining investments, decreased by US\$ 5.6/t q/q, reaching US\$ 49.5/t, the lowest level since 4Q22. The reduction was driven by higher all-in premiums (US\$ 2.9/t higher q/q) and lower C1 cash costs (US\$ 2.6/t lower q/q).

In 2024, iron ore fines and pellets all-in costs, excluding sustaining investments, reached US\$ 55.9/t, achieving the guidance for the year. The guidance for 2025 is US\$ 53-57/t, assuming a BRL/USD exchange rate of 5.50.

Iron ore fines C1 production costs

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
C1 production costs, ex-third-party purchase costs	17.9	20.3	-12%	18.5	-3%	21.1	22.4	-6%
C1 cash cost, ex-third-party purchase costs	18.8	20.8	-10%	20.6	-9%	21.8	22.3	-2%

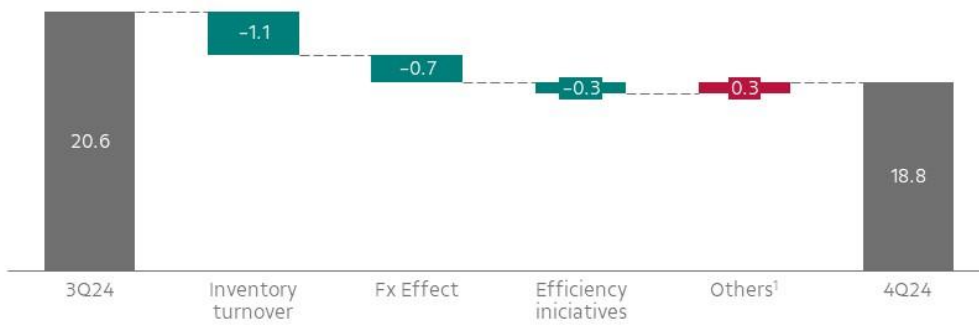
The C1 cash cost, ex-third-party purchases, reached US\$ 18.8/t in Q4, US\$ 1.8/t lower q/q and US\$ 2.0/t lower y/y.

The q/q reduction was driven by (i) the positive impact of the inventory turnover effect, driven by the consumption of inventories from the previous quarter at lower costs, (ii) the positive impact of the BRL depreciation, and (iii) continued results of the efficiency program.

In 2024, Vale's C1 cash cost, ex-third-party purchases, totaled US\$ 21.8/t, achieving the low end of the guidance (US\$ 21.5-23/t) and reducing US\$ 0.5/t y/y despite inflationary impacts. The guidance for 2025 is US\$ 20.5-22/t, assuming a BRL/USD exchange rate of 5.50. For simulation purposes, a 10-cent depreciation of BRL represents around US\$ 0.3/t decrease in the C1 cash cost, ex-third-party purchases, and a US\$ 0.4/t decrease in the all-in cost for 2025.



C1 cash cost, ex-third-party purchase costs – US\$/t, 4Q24 vs. 3Q24



¹ Including demurrage (US\$ 0.1/t) and others (US\$ 0.2/t).

Vale's maritime freight cost averaged US\$ 20.0/t, US\$ 0.6/t lower q/q, mostly driven by lower bunker fuel costs (US\$ 0.5/t lower q/q). Additionally, the lower spot freight rates observed throughout the Q4 are expected to positively impact Vale's freight cost in 1Q25. CFR sales totaled 61.7 Mt in Q4, representing 88% of total iron ore fines sales.

Pellets

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Net revenues	1,440	1,680	-14%	1,502	-4%	5,921	5,803	2%
Cash costs ¹	(729)	(768)	-5%	(747)	-2%	(2,920)	(2,759)	6%
Pre-operational & stoppage expenses	(2)	(5)	-60%	(3)	-33%	(12)	(20)	-40%
Expenses ²	(4)	(7)	-43%	(5)	-20%	(5)	(15)	-67%
Leased pelletizing plants EBITDA	65	36	81%	43	51%	182	127	43%
EBITDA	770	936	-18%	790	-3%	3,166	3,136	1%
Iron ore pellets realized price (CFR/FOB, S\$/t)	143.0	163.4	-12%	148.2	-4%	154.6	161.9	-5%
Cash costs¹ per ton (US\$/t)	72.4	74.7	-3%	73.6	-2%	76.2	77.0	-1%
EBITDA per ton (US\$/t)	76.5	91.0	-16%	77.9	-2%	82.7	87.5	-6%

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

Pellets sales reached 10.1 Mt, 1% lower q/q and 2% lower y/y, mainly due to maintenance activities performed in November and December at the Vargem Grande plant.

The average realized iron ore pellets price was US\$ 143/t, US\$ 5.2/t lower q/q, mainly due to the negative impact of lagged prices on pricing mechanisms.

Pellets' cash costs per ton was 3% lower y/y, totaling US\$ 72.4/t, mainly due to the positive impact of the BRL depreciation. FOB sales represented 54% of total sales.

Energy Transition Metals

Highlights

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Net Revenues	1,973	1,982	0%	1,583	25%	6,613	7,569	-13%
Costs ¹	(1,419)	(1,443)	-2%	(1,313)	8%	(5,040)	(5,526)	-9%
SG&A and Other expenses ¹	64	65	n.a.	30	113%	122	179	n.a.
Pre-operating and stoppage expenses ¹	(21)	(2)	950%	(1)	2000%	(27)	(6)	350%
R&D expenses	(79)	(78)	1%	(73)	8%	(274)	(265)	3%
EBITDA from associates and JVs ²	23	6	283%	23	0%	59	12	392%
Adjusted EBITDA	541	529	2%	248	118%	1,453	1,963	-26%
Depreciation and amortization	(256)	(292)	-12%	(212)	21%	(872)	(1,054)	-17%
Adjusted EBIT	285	238	20%	36	690%	581	909	-36%

¹ Includes adjustment of US\$ 114 million in 4Q24, US\$ 94 million in 3Q24, US\$ 356 million in 2024, US\$ 82 million in 4Q23 and US\$ 216 million in 2023 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

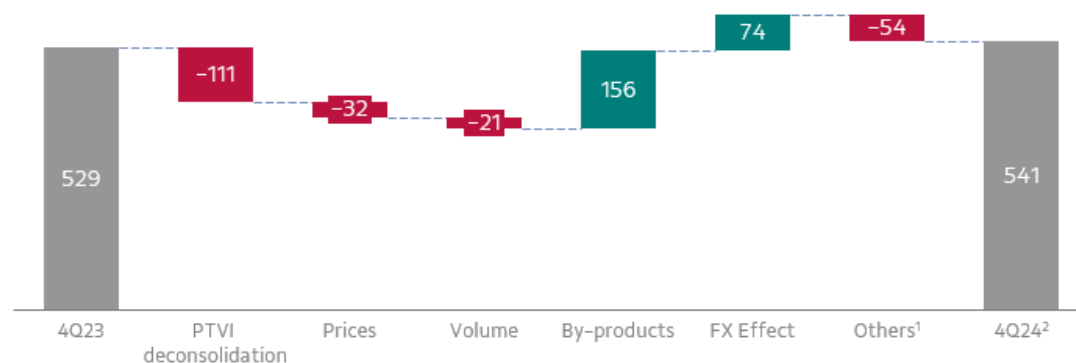
US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Copper	526	375	40%	360	46%	1,521	1,100	38%
Nickel	55	152	-64%	(66)	-183%	114	815	-86%
Others	(40)	2	-2100%	(46)	-13%	(182)	48	-476%
Total	541	529	2%	248	118%	1,453	1,963	-26%

EBITDA increased by 2% y/y, with the copper segment presenting solid results in the quarter.

In Copper, EBITDA increased by 40% y/y, mainly driven by higher realized copper prices (US\$ 93 million) and by-product revenues (US\$ 102 million), largely reflecting the increase in gold prices (US\$ 85 million). These effects were partially offset by a negative effect of provisional prices (US\$ -71 million).

In Nickel, EBITDA decreased by 64% y/y, largely due to lower realized nickel prices (US\$ -125 million), the PTVI deconsolidation (US\$ -111 million) and the negative effect of provisional prices (US\$ -49 million). These impacts were partially offset by a decrease in external feed costs and volumes (US\$ 146 million) and higher by-products revenues (US\$ 54 million).

EBITDA variation – US\$ million (4Q24 vs. 4Q23)



¹ Includes variations of (i) negative US\$ 120 million in provisional prices, (ii) positive US\$ 73 million in costs and expenses, (iii) negative US\$ 7 million in EBITDA from associates and JVs. ² Includes and adjustment of US\$ 114 million increasing the adjusted EBITDA in 4Q24, 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)	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
LME copper price (US\$/t)	9,193	8,159	13%	9,210	0%	9,147	8,478	8%
Average realized copper price (US\$/t)	9,187	7,941	16%	9,016	2%	8,811	7,960	11%
Volume sold – copper (kt)	74	76	-3%	61	21%	250	234	7%
Net Revenues	964	855	13%	759	27%	3,142	2,577	22%
Costs ¹	(387)	(427)	-9%	(366)	6%	(1,473)	(1,357)	9%
Selling and other expenses ¹	(13)	(9)	44%	(3)	333%	(27)	31	n.a.
Pre-operating and stoppage expenses ¹	(1)	(1)	-	-	-	(1)	(5)	-80%
R&D expenses	(37)	(43)	-14%	(30)	23%	(120)	(146)	-18%
Adjusted EBITDA	526	375	40%	360	46%	1,521	1,100	38%
Depreciation and amortization	(42)	(56)	-25%	(39)	8%	(112)	(176)	-36%
Adjusted EBIT	484	319	52%	321	51%	1,409	924	52%

¹ Net of depreciation and amortization.

Adjusted EBITDA

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Salobo	513	326	57%	311	65%	1,391	981	42%
Sossego	123	79	56%	98	26%	282	207	36%
Other ¹	(110)	(30)	267%	(49)	124%	(152)	(88)	73%
Total	526	375	40%	360	46%	1,521	1,100	38%

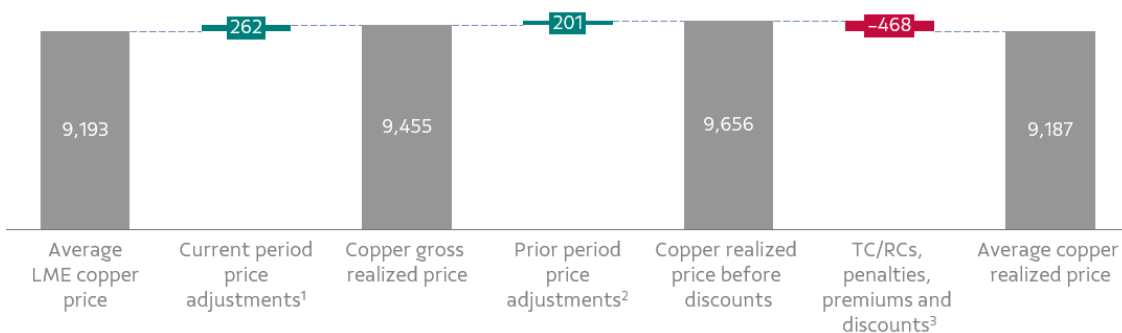
¹ Includes US\$ 21 million in R&D expenses related to the Hu'u project in 4Q24 and the unrealized provisional price adjustments.

Revenues

Net revenues increased by 13% y/y, driven by the increase in realized copper prices and higher by-products revenues, partially offset by lower copper sales volumes. The positive impact of the by-product revenues reflects better realized gold prices and higher gold grades in copper concentrates.

The average realized copper price was up 16% y/y, largely because of the higher average LME price. On a sequential basis, the realized copper price was up 2%, mainly as a result of period price adjustments and lower TC/RC discounts.

Average realized copper price 4Q24 – 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	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
COGS	5,205	5,613	-7%	5,962	-13%	5,885	5,803	1%
By-product revenues	(4,721)	(3,269)	44%	(3,710)	27%	(3,898)	(3,055)	28%
COGS after by-product revenues	484	2,344	-79%	2,252	-79%	1,987	2,748	-28%
Other expenses ¹	145	305	-52%	96	51%	139	140	-1%
Total costs	629	2,649	-76%	2,348	-73%	2,126	2,888	-26%
TC/RCs, penalties, premiums and discounts	469	563	-17%	503	-7%	490	550	-11%
EBITDA breakeven^{2,3}	1,098	3,212	-66%	2,850	-61%	2,616	3,438	-24%

¹ Includes sales expenses, R&D associated with Salobo and Sossego, pre-operating and stoppage expenses and other expenses. From 1Q24 onwards, excludes Hu'u. ² Considering only the cash effect of streaming transactions, copper operations EBITDA break-even would increase to US\$ 2,778/t in 4Q24. ³ The realized price to be compared to the EBITDA break-even should be the copper realized price before discounts (US\$ 9,656/t), given that TC/RCs, penalties, and other discounts are already part of the EBITDA break-even build-up.

All-in costs decreased by 66% y/y, primarily due to higher unit by-products revenues.

Unit COGS decreased by 7% y/y, mainly driven by higher fixed cost dilution at Salobo and higher proportion of Salobo products in the mix.

Unit COGS, net of by-products, decreased by 79% y/y, mainly reflecting the positive impact of by-product revenues, at both Salobo and Sossego.

Unit COGS, net of by-products revenues

US\$/t	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Salobo	(269)	1,783	n.a.	1,623	n.a.	1,263	2,171	-42%
Sossego	2,683	3,822	-30%	3,648	-26%	4,171	4,285	-3%

Unit expenses were 52% lower y/y, mainly as a result of lower R&D expenses in Salobo.



Nickel

US\$ million (unless otherwise stated)	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
LME nickel price	16,038	17,247	-7%	16,259	-1%	16,812	21,474	-22%
Average realized nickel price	16,163	18,420	-12%	17,012	-5%	17,078	21,830	-22%
Volume sold – nickel (kt)	47	48	-2%	41	16%	155	168	-8%
Volume sold – copper (kt)	25	22	11%	14	77%	77	74	4%
Net Revenues	1,067	1,177	-9%	904	18%	3,687	4,742	-22%
Costs ¹	(974)	(980)	-1%	(936)	4%	(3,415)	(3,739)	-9%
Selling and other expenses ¹	(6)	(9)	-33%	(17)	-65%	(53)	(67)	-21%
Pre-operating and stoppage expenses ¹	(21)	(1)	2000%	(1)	2000%	(26)	(2)	1200%
R&D expenses	(35)	(35)	0%	(34)	3%	(121)	(119)	2%
EBITDA from associates and JVs ²	24	-	n.a.	18	33%	42	-	n.a.
Adjusted EBITDA	55	152	n.a.	(66)	n.a.	114	815	-86%
Depreciation and amortization	(201)	(236)	-15%	(167)	21%	(738)	(876)	-16%
Adjusted EBIT	(146)	(84)	74%	(233)	-37%	(624)	(61)	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	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Sudbury ^{1,2}	54	88	-39%	16	237%	149	507	-71%
Voisey's Bay & Long Harbour ²	(45)	(34)	32%	(56)	-20%	(211)	(210)	0%
Standalone Refineries ³	23	(19)	n.a.	9	156%	47	20	135%
Onça Puma	30	(24)	-227%	17	n.a.	(16)	27	n.a.
PTVI (historical)	-	100	-100%	-	n.a.	137	500	-73%
Others ^{2,4}	(7)	41	n.a.	(52)	n.a.	8	(29)	n.a.
Total	55	152	-64%	(66)	n.a.	114	815	-86%

¹ Includes the Thompson operations. ² Restated from historical figures. ³ Comprises the sales results for Clydach and Matsusaka refineries. ⁴ Includes intercompany eliminations, provisional price adjustments, inventories adjustments Associates and JVs. Hedge results have been relocated to each nickel business operation. ⁵ Includes proportionate EBITDA from PTVI, starting from 3Q24. Historical figures include the consolidated results from PTVI.

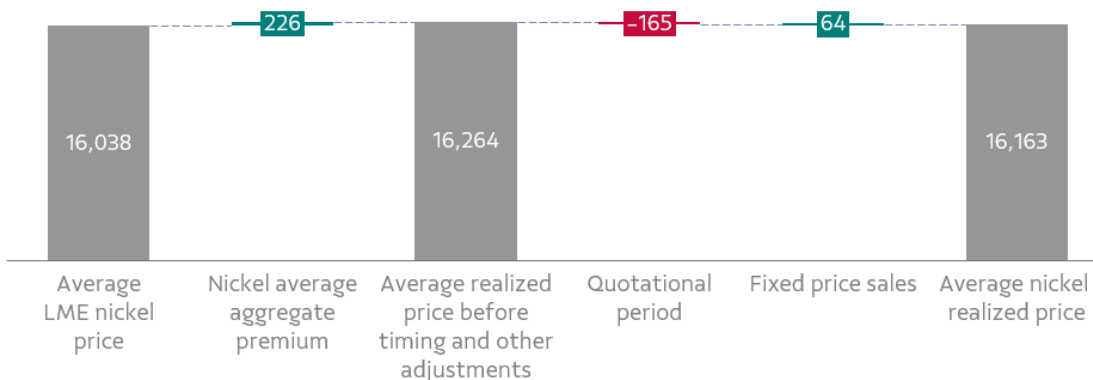
Revenues

Net revenues decreased by 9% y/y, impacted by lower nickel prices, offset by stronger by-product revenues, which resulted primarily from higher copper sales and prices.

The average realized nickel price was down 12% y/y, driven by a 7% lower LME nickel average price. On a sequential basis, the realized nickel price was down 5%, mainly as a result of 1% lower LME prices.

In 4Q24, the average realized nickel price was in line with LME average, mainly due to lower average aggregate premium/discount, totaling US\$ 226/t.

Average realized nickel price 4Q24 – US\$/t





Costs & Expenses

All-in costs (EBITDA breakeven)

US\$/t	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
COGS ex-external feed	24,679	19,329	28%	28,066	-12%	24,218	21,268	14%
COGS ¹	20,670	20,320	2%	23,019	-10%	21,772	22,274	-2%
By-product revenues ¹	(7,269)	(6,003)	21%	(5,140)	41%	(6,890)	(6,421)	7%
COGS after by-product revenues	13,401	14,317	-6%	17,879	-25%	14,882	15,853	-6%
Other expenses ²	1,215	919	32%	1,208	1%	1,207	1,117	8%
EBITDA from associates & JVs ³	(509)	-	n.a.	(442)	15%	(271)	-	n.a.
Total Costs	14,107	15,236	-7%	18,644	-24%	15,818	16,970	-7%
Nickel average aggregate (premium) discount	(226)	(215)	5%	(571)	-60%	(398)	(117)	240%
EBITDA breakeven⁴	13,881	15,021	-8%	18,073	-23%	15,420	16,854	-9%

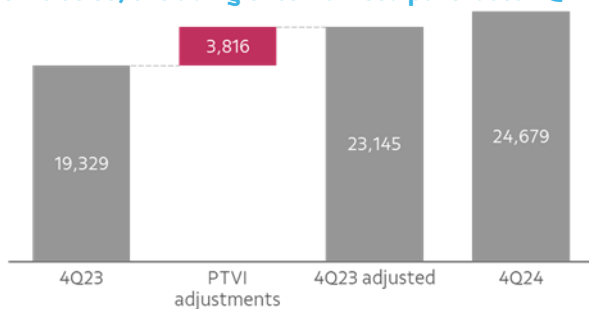
¹ Excluding marketing activities. ² Includes R&D, sales expenses and pre-operating & stoppage. ³ Starting from 3Q24, it includes the proportionate results from PTVI (33.9% owned by VBM). ⁴ Considering only the cash effect of streaming transactions, nickel operations EBITDA break-even would increase to US\$ 14,271/t in 4Q24.

All-in costs decreased by 8% y/y, primarily due to higher by-product revenues, driven by higher copper prices. Q/q, they were 23% lower, reflecting the decrease in unit costs and higher proportion of copper to nickel sales.

Unit COGS, excluding external feed purchases, were 28% higher y/y, as a result of PTVI deconsolidation and higher payroll costs, partially offset by higher fixed cost dilution at Onça Puma as 4Q23 was impacted by the furnace rebuild. On a sequential basis, unit COGS decreased by 12%, mainly reflecting lower maintenance costs.

Removing the impact of the PTVI deconsolidation, unit COGS were 7% higher y/y.

Unit COGS, excluding external feed purchases 4Q24 vs. 4Q23 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 were up 2% y/y as a result of higher own-source unit COGS³, partially offset by lower acquisition costs for external feed in the refineries and Canadian operations, due to lower nickel prices and the continued ramp-up of Voisey's Bay underground mines.

Unit by-product revenues were 21% higher y/y and 40% q/q, driven by higher copper prices and higher proportion of copper on nickel sales.

Unit COGS, net of by-products, by operation

US\$/t	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Sudbury ^{1,2}	11,853	12,891	-8%	15,175	-22%	13,177	14,275	-8%
Voisey's Bay & Long Harbour ²	20,678	21,656	-5%	21,953	-6%	23,182	27,187	-15%
Standalone refineries ^{2,3}	15,433	19,509	-21%	16,876	-9%	17,055	21,392	-20%
Onça Puma	8,106	17,430	-53%	10,318	-21%	13,615	13,219	3%

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 COGS for Clydach and Matsusaka refineries.

Expenses were higher y/y, mainly due to higher stoppage expenses associated with the Onça Puma furnace resumption after the rebuild and the resumption of the Stobie mine, which was previously on care and maintenance.

³ Unit COGS excluding third-party feed.

Webcast information

Vale will host a webcast on

Thursday	February 20th, 2025	At 9:00 a.m. (NY) 11:00 a.m. (BRT) 2:00 p.m. (GMT)
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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:
vale.com

Investor Relations

Vale.RI@vale.com

Thiago Lofiego
thiago.lofiego@vale.com

Mariana Rocha
mariana.rocha@vale.com

Luciana Oliveti
luciana.oliveti@vale.com

Pedro Terra
pedro.terra@vale.com

Patrícia Tinoco
patricia.tinoco@vale.com

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, Salobo Metais S.A, Tecnoed 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	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Net operating revenue	10,124	13,054	-22%	9,553	6%	38,056	41,784	-9%
Cost of goods sold and services rendered	(6,268)	(6,891)	-9%	(6,281)	0%	(24,265)	(24,089)	1%
Gross profit	3,856	6,163	-37%	3,272	18%	13,791	17,695	-22%
Gross margin (%)	38.1	47.2	-19%	34.3	11%	36.2	42.3	-14%
Selling and administrative expenses	(206)	(146)	41%	(139)	48%	(622)	(553)	12%
Research and development expenses	(253)	(231)	10%	(192)	32%	(790)	(723)	9%
Pre-operating and operational stoppage	(131)	(108)	21%	(89)	47%	(403)	(450)	-10%
Other operational expenses, net	(629)	(380)	66%	(321)	96%	(1,489)	(1,498)	-1%
Impairment reversal (impairment and disposals) of non-current assets, net	(1,847)	(121)	1,426%	1,144	n.a.	301	(266)	n.a.
Operating income	790	5,177	-85%	3,675	-79%	10,788	14,205	-24%
Financial income	106	105	1%	129	-18%	422	432	-2%
Financial expenses	(396)	(380)	4%	(373)	6%	(1,473)	(1,459)	1%
Other financial items, net	(1,470)	(599)	145%	(130)	1,031%	(2,772)	(919)	202%
Equity results and other results in associates and joint ventures	69	(1,152)	n.a.	(574)	n.a.	(269)	(1,108)	-76%
Income (loss) before income taxes	(901)	3,151	n.a.	2,727	n.a.	6,696	11,151	-40%
Current tax	(315)	(475)	-34%	(320)	-2%	(2,007)	(1,375)	46%
Deferred tax	344	(234)	n.a.	(16)	n.a.	1,286	(1,671)	n.a.
Net income (loss)	(872)	2,442	n.a.	2,391	n.a.	5,975	8,105	-26%
Net income (loss) attributable to noncontrolling interests	(178)	24	n.a.	(21)	748%	(191)	122	n.a.
Net income (loss) attributable to Vale's shareholders	(694)	2,418	n.a.	2,412	n.a.	6,166	7,983	-23%
Net income (loss)	(872)	2,442	n.a.	2,391	n.a.	5,975	8,105	-26%
Net income (Loss) attributable to Vale's to noncontrolling interests	(178)	24	n.a.	(21)	748%	(191)	122	n.a.
Net income (loss) attributable to Vale's shareholders	(694)	2,418	n.a.	2,412	n.a.	6,166	7,983	-23%
Earnings per share (attributable to the Company's shareholders - US\$)								
Basic and diluted earnings per share (attributable to the Company's shareholders - US\$)	(0.16)	0.56	n.a.	0.56	n.a.	1.44	1.83	-21%

Equity income (loss) by business segment

US\$ million	4Q24	%	4Q23	%	Δ y/y	3Q24	%	Δ q/q	2024	%	2023	%	Δ y/y
Iron Ore Solutions	80	186%	21	53%	281%	88	111%	-9%	335	111%	101	70%	232%
Energy Transition Metals	(34)	-79%	-	-	n.a.	5	6%	n.a.	(29)	-10%	-	-	n.a.
Others	(3)	-7%	19	47%	n.a.	(14)	-17%	-79%	(4)	-1%	43	30%	n.a.
Total	43	100%	40	100%	8%	79	100%	-46%	302	100%	144	100%	110%



Balance sheet					
US\$ million	12/31/2024	12/31/2023	Δ y/y	9/30/2024	Δ q/q
Assets					
Current assets	13,481	18,700	-28%	13,800	-2%
Cash and cash equivalents	4,953	3,609	37%	4,596	8%
Short term investments	53	51	4%	53	0%
Accounts receivable	2,358	4,197	-44%	3,001	-21%
Other financial assets	53	271	-80%	223	-76%
Inventories	4,605	4,684	-2%	4,946	-7%
Recoverable taxes	1,100	900	22%	714	54%
Judicial deposits	-	611	n.a.	-	n.a.
Other	359	444	-19%	267	34%
Non-current assets held for sale	-	3,933	n.a.	-	n.a.
Non-current assets	11,626	13,587	-14%	13,378	-13%
Judicial deposits	537	798	-33%	606	-11%
Other financial assets	82	593	-86%	155	-47%
Recoverable taxes	1,297	1,374	-6%	1,385	-6%
Deferred income taxes	8,244	9,565	-14%	9,875	-17%
Other	1,466	1,257	17%	1,357	8%
Fixed assets	55,045	61,899	-11%	61,708	-11%
Total assets	80,152	94,186	-15%	88,886	-10%
Liabilities					
Current liabilities	13,090	14,655	-11%	15,174	-14%
Suppliers and contractors	4,234	5,272	-20%	5,353	-21%
Loans, borrowings and leases	1,020	824	24%	842	21%
Leases	147	197	-25%	157	-6%
Other financial liabilities	1,543	1,676	-8%	1,550	0%
Taxes payable	574	1,314	-56%	1,257	-54%
Settlement program ("REFIS")	353	428	-18%	396	-11%
Provisions for litigation	119	114	4%	117	2%
Employee benefits	1,012	964	5%	887	14%
Liabilities related to associates and joint ventures	1,844	837	120%	2,322	-21%
Liabilities related to Brumadinho	714	1,057	-32%	978	-27%
De-characterization of dams and asset retirement obligations	833	1,035	-20%	937	-11%
Dividends payable	330	-	n.a.	-	n.a.
Other	367	376	-2%	378	-3%
Liabilities associated with non-current assets held for sale	-	561	n.a.	-	n.a.
Non-current liabilities	32,534	38,550	-16%	34,000	-4%
Loans, borrowings and leases	13,772	11,647	18%	12,578	9%
Leases	566	1,255	-55%	608	-7%
Participative shareholders' debentures	2,217	2,874	-23%	2,406	-8%
Other financial liabilities	2,347	3,373	-30%	2,654	-12%
Settlement program (REFIS)	1,007	1,723	-42%	1,229	-18%
Deferred income taxes	445	870	-49%	966	-54%
Provisions for litigation	894	885	1%	814	10%
Employee benefits	1,118	1,381	-19%	1,284	-13%
Liabilities related to associates and joint ventures	1,819	3,590	-49%	2,352	-23%
Liabilities related to Brumadinho	1,256	2,003	-37%	1,412	-11%
Decharacterization of dams and asset retirement obligations	4,930	6,694	-26%	5,511	-11%
Streaming transactions	1,882	1,962	-4%	1,945	-3%
Others	281	293	-4%	241	17%
Total liabilities	45,624	53,205	-14%	49,174	-7%
Shareholders' equity	34,528	40,981	-16%	39,712	-13%
Total liabilities and shareholders' equity	80,152	94,186	-15%	88,886	-10%



Cash flow								
US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Cash flow from operations	4,065	5,591	-27%	2,757	47%	13,767	17,252	-20%
Interest on loans and borrowings paid	(224)	(200)	12%	(247)	-9%	(868)	(743)	17%
Cash received (paid) on settlement of derivatives, net	(83)	325	n.a.	(30)	177%	11	567	-98%
Payments related to Brumadinho	(321)	(417)	-23%	(188)	71%	(909)	(1,330)	-32%
Payments related to decharacterization of dams	(128)	(145)	-12%	(154)	-17%	(533)	(458)	16%
Interest on participative shareholders debentures paid	(94)	(106)	-11%	-	n.a.	(243)	(233)	4%
Income taxes (including settlement program) paid	(416)	(259)	61%	(471)	-12%	(1,859)	(1,890)	-2%
Net cash generated by operating activities	2,799	4,789	-42%	1,667	68%	9,366	13,165	-29%
Cash flow from investing activities								
Short-term investment	(136)	47	n.a.	67	n.a.	(85)	127	n.a.
Acquisition of property, plant and equipment and intangible assets	(2,213)	(2,118)	4%	(1,398)	58%	(6,447)	(5,920)	9%
Advanced payment related to renegotiation of railway concession contracts	(656)	-	n.a.	-	n.a.	(656)	-	n.a.
Payments related to Samarco dam failure	(504)	(128)	294%	(113)	346%	(808)	(553)	46%
Dividends received from joint ventures and associates	27	99	-73%	12	125%	81	204	-60%
Cash received (paid) from disposal and acquisition of investments, net	(30)	(72)	-58%	107	n.a.	2,687	(139)	n.a.
Other investment activities, net	(136)	(55)	147%	(3)	4433%	(140)	(38)	268%
Net cash used in investing activities	(3,648)	(2,227)	64%	(1,328)	175%	(5,368)	(6,319)	-15%
Cash flow from financing activities								
Loans and financing:								
Loans and borrowings from third parties	1,933	-	n.a.	962	101%	4,855	1,950	149%
Payments of loans and borrowings from third parties	(429)	(25)	1,616%	(1,584)	-73%	(2,605)	(658)	296%
Payments of leasing	(69)	(94)	-27%	(48)	44%	(202)	(233)	-13%
Payments to shareholders:								
Dividends and interest on capital paid to Vale's shareholders	-	(2,040)	n.a.	(1,586)	n.a.	(3,914)	(5,513)	-29%
Dividends and interest on capital paid to noncontrolling interest	-	(33)	n.a.	-	n.a.	-	(41)	n.a.
Share buyback program	-	(44)	n.a.	(20)	n.a.	(409)	(2,714)	-85%
Acquisition of additional stake in VOPC	-	-	n.a.	-	n.a.	-	(130)	n.a.
Net cash used in financing activities	1,435	(2,236)	n.a.	(2,276)	n.a.	(2,275)	(7,339)	-69%
Net increase (decrease) in cash and cash equivalents	586	326	80%	(1,937)	n.a.	1,723	(493)	n.a.
Cash and cash equivalents in the beginning of the period	4,596	3,967	16%	6,479	-29%	3,609	4,736	-24%
Effect of exchange rate changes on cash and cash equivalents	(229)	19	n.a.	(21)	990%	(454)	69	n.a.
Effect of transfer PTVI to non-current assets held of sale	-	(703)	n.a.	-	n.a.	-	(703)	n.a.
Cash and cash equivalents from subsidiaries acquired and sold, net	-	-	n.a.	75	n.a.	75	-	n.a.
Cash and cash equivalents at the end of period	4,953	3,609	37%	4,596	8%	4,953	3,609	37%
Non-cash transactions:								
Additions to property, plant and equipment - capitalized loans and borrowing costs	12	4	200%	11	9%	36	19	89%
Cash flow from operating activities								
Income before income taxes	(901)	3,151	n.a.	2,727	n.a.	6,696	11,151	-40%
Adjusted for:								
Provisions related to Brumadinho	88	137	-36%	48	-100%	116	461	-75%
Provisions for de-characterization of dams	(75)	153	n.a.	-	n.a.	(206)	153	n.a.
Equity results and other results in associates and joint ventures	(69)	1,152	n.a.	574	n.a.	269	1,108	-76%
(Impairment), reversal of impairment and gains (losses) on disposal of non-current assets, net	1,847	121	1,426%	(1,144)	n.a.	(301)	266	n.a.
Depreciation, depletion and amortization	802	855	-6%	748	7%	3,057	3,070	0%
Financial results, net	1,760	874	101%	374	371%	3,823	1,946	96%
Change in assets and liabilities								
Accounts receivable	572	(832)	n.a.	(672)	n.a.	1,668	197	747%
Inventories	57	403	-86%	(145)	n.a.	(549)	(214)	157%
Suppliers and contractors	(681)	(308)	121%	471	n.a.	(360)	637	n.a.
Other assets and liabilities, net	665	(115)	n.a.	(224)	n.a.	(446)	(1,523)	-71%
Cash flow from operations	4,065	5,591	-27%	2,757	47%	13,767	17,252	-20%

Reconciliation of IFRS and “non-GAAP” information

(a) Adjusted EBIT

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q
Net operating revenues	10,124	13,054	-22%	9,553	6%
COGS	(6,268)	(6,891)	-9%	(6,281)	0%
Sales and administrative expenses	(206)	(146)	41%	(139)	48%
Research and development expenses	(253)	(231)	10%	(192)	32%
Pre-operating and stoppage expenses	(131)	(108)	21%	(89)	47%
Brumadinho event and dam decharacterization of dams	(111)	(396)	-72%	(126)	-12%
Other operational expenses, net ¹	(405)	98	n.a.	(101)	301%
EBITDA from associates and JVs	242	223	9%	242	0%
Adjusted EBIT	2,992	5,603	-47%	2,867	4%

¹ Includes adjustment of US\$ 113 million in 4Q24, US\$ 94 million in 3Q24 and US\$ 83 million in 4Q23 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	4Q24	4Q23	Δ y/y	3Q24	Δ q/q
Adjusted EBITDA	3,794	6,458	-41%	3,615	5%
Working capital:					
Accounts receivable	572	(832)	n.a.	(672)	-185%
Inventories	57	403	-86%	(145)	n.a.
Suppliers and contractors	(681)	(308)	121%	471	n.a.
Review of estimates related to Brumadinho	88	137	-36%	48	83%
Review of estimates related to decharacterization of dams	(75)	153	n.a.	-	n.a.
Others	310	(420)	n.a.	(560)	n.a.
Cash flow	4,065	5,591	-27%	2,757	47%
Income taxes paid (including settlement program)	(416)	(259)	61%	(471)	-12%
Interest on loans and borrowings paid	(224)	(200)	12%	(247)	-9%
Payments related to Brumadinho event	(321)	(417)	-23%	(188)	71%
Payments related to decharacterization of dams	(128)	(145)	-12%	(154)	-17%
Interest on participative shareholders' debentures paid	(94)	(106)	-11%	-	n.a.
Cash received on settlement of Derivatives, net	(83)	325	n.a.	(30)	177%
Net cash generated by operating activities	2,799	4,789	-42%	1,667	68%



Reconciliation between adjusted EBITDA and net income (loss)

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q
Adjusted EBITDA	3,794	6,458	-41%	3,615	5%
Depreciation, depletion and amortization	(802)	(855)	-6%	(748)	7%
EBITDA from associates and joint ventures	(242)	(223)	9%	(242)	0%
Impairment reversal (impairment) and results on disposals of non-current assets, net ¹	(1,960)	(203)	866%	1,050	n.a.
Operating income	790	5,177	-85%	3,675	-79%
Financial results	(1,760)	(874)	101%	(374)	371%
Equity results and other results in associates and joint ventures	69	(1,152)	n.a.	(574)	n.a.
Income taxes	29	(709)	n.a.	(336)	n.a.
Net income (loss)	(872)	2,442	n.a.	2,391	n.a.
Net income (loss) attributable to noncontrolling interests	(178)	24	n.a.	(21)	748%
Net income (loss) attributable to Vale's shareholders	(694)	2,418	n.a.	2,412	n.a.

¹ Includes adjustment of US\$ 113 million in 4Q24, US\$ 94 million in 3Q24 and US\$ 83 million in 4Q23, to reflect the performance of the streaming transactions at market price.

(c) Net debt

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q
Gross debt	14,792	12,471	19%	13,420	10%
Leases	713	1,452	-51%	765	-7%
Cash and cash equivalents	(5,006)	(4,363)	15%	(4,649)	8%
Net debt	10,499	9,560	10%	9,536	10%

(d) Gross debt / LTM Adjusted EBITDA

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q
Gross debt and leases / LTM Adjusted EBITDA (x)	1.0	0.8	25%	0.8	25%
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	4Q24	4Q23	Δ y/y	3Q24	Δ q/q
Adjusted LTM EBITDA / LTM gross interest (x)	17.9	24.1	-26%	22.4	-20%
LTM adjusted EBITDA / LTM interest payments (x)	17.1	24.2	-29%	23.0	-26%

(f) US dollar exchange rates

R\$/US\$	4Q24	4Q23	Δ y/y	3Q24	Δ q/q
Average	5.8369	4.9553	18%	5.5454	5%
End of period	6.1923	4.8413	28%	5.4481	14%



Revenues and volumes

Net operating revenue by business area

US\$ million	4Q24	%	4Q23	%	Δ y/y	3Q24	%	Δ q/q	2024	%	2023	%	Δ y/y
Iron Ore Solutions	8,151	81%	11,030	84%	-26%	7,970	83%	2%	31,444	83%	34,079	82%	-8%
Fines	6,503	64%	9,212	71%	-29%	6,281	66%	4%	24,805	65%	27,760	66%	-11%
ROM	18	0%	29	0%	-38%	33	0%	-45%	105	0%	122	0%	-14%
Pellets	1,440	14%	1,680	13%	-14%	1,502	16%	-4%	5,921	16%	5,803	14%	2%
Others	190	2%	109	1%	74%	154	2%	23%	613	2%	394	1%	56%
Energy Transition	1,973	19%	1,982	15%	0%	1,583	17%	25%	6,613	17%	7,569	18%	-13%
Nickel	762	8%	888	7%	-14%	692	7%	10%	2,652	7%	3,763	9%	-30%
Copper	885	9%	767	6%	15%	680	7%	30%	2,852	7%	2,432	6%	17%
PGMs	83	1%	71	1%	17%	44	0%	89%	233	1%	285	1%	-18%
Gold as by-product ¹	258	3%	143	1%	80%	144	2%	79%	695	2%	371	1%	87%
Silver as by-product	17	0%	13	0%	31%	13	0%	31%	52	0%	42	0%	24%
Cobalt ¹	13	0%	10	0%	30%	8	0%	63%	33	0%	47	0%	-30%
Others ²	(46)	0%	90	n.a.	-151%	2	0%	n.a.	96	0%	629	2%	-85%
Others	-	0%	42	0%	n.a.	-	0%	-	-	0%	136	0%	n.a.
Total	10,124	100%	13,054	100%	-22%	9,553	100%	6%	38,056	100%	41,784	100%	-9%

¹ Exclude the adjustment of US\$ 113 million in 4Q24, US\$ 94 million in 3Q24, US\$ 356 million in 2024, US\$ 83 million in 4Q23 and US\$ 216 million in 2023, related to the performance of streaming transactions at market price. ² Includes marketing activities.

Net operating revenue by destination

US\$ million	4Q24	%	4Q23	%	Δ y/y	3Q24	%	Δ q/q	2024	%	2023	%	Δ y/y
North America	392	4%	473	4%	-17%	347	4%	13%	1,601	4%	2,078	5%	-23%
USA	287	3%	358	3%	-20%	291	3%	-1%	1,075	3%	1,623	4%	-34%
Canada	105	1%	115	1%	-9%	56	1%	88%	526	1%	455	1%	16%
South America	897	9%	1,014	8%	-12%	1,010	11%	-11%	4,009	11%	4,197	10%	-4%
Brazil	794	8%	927	7%	-14%	897	9%	-11%	3,565	9%	3,755	9%	-5%
Others	103	1%	87	1%	18%	113	1%	-9%	444	1%	442	1%	0%
Asia	6,863	68%	9,497	73%	-28%	6,422	67%	7%	25,312	67%	28,104	67%	-10%
China	5,118	51%	7,672	59%	-33%	4,770	50%	7%	18,556	49%	21,577	52%	-14%
Japan	709	7%	863	7%	-18%	732	8%	-3%	3,049	8%	3,219	8%	-5%
South Korea	303	3%	390	3%	-22%	335	4%	-10%	1,126	3%	1,365	3%	-18%
Others	733	7%	572	4%	28%	585	6%	25%	2,581	7%	1,943	5%	33%
Europe	1,256	12%	1,282	10%	-2%	1,142	12%	10%	4,486	12%	5,028	12%	-11%
Germany	442	4%	368	3%	20%	413	4%	7%	1,467	4%	1,351	3%	9%
Italy	90	1%	96	1%	-6%	83	1%	8%	226	1%	509	1%	-56%
Others	724	7%	818	6%	-11%	646	7%	12%	2,793	7%	3,168	8%	-12%
Middle East	366	4%	343	3%	7%	281	3%	30%	1,164	3%	1,014	2%	15%
Rest of the World	350	3%	445	3%	-21%	351	4%	0%	1,484	4%	1,363	3%	9%
Total	10,124	100%	13,054	100%	-22%	9,553	100%	6%	38,056	100%	41,784	100%	-9%



Operating Expenses

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
SG&A	206	146	41%	139	48%	622	553	12%
Administrative	181	121	50%	115	57%	532	463	15%
Personnel	88	47	87%	40	120%	226	197	15%
Services	40	41	-2%	34	18%	147	131	12%
Depreciation	23	10	130%	14	64%	56	47	19%
Others	30	23	30%	27	11%	103	88	17%
Selling	25	25	0%	24	4%	90	90	0%
R&D	253	231	10%	192	32%	790	723	9%
Pre-operating and stoppage expenses	131	108	21%	89	47%	403	450	-10%
Expenses related to Brumadinho event and decharacterization of dams	111	396	-72%	126	-12%	277	1,083	-74%
Other operating expenses	518	(16)	n.a.	195	166%	1,212	415	192%
Total operating expenses	1,219	865	41%	741	65%	3,304	3,224	2%
Depreciation	52	35	49%	36	44%	154	154	0%
Operating expenses, ex-depreciation	1,167	830	41%	705	66%	3,150	3,070	3%

Other operating expenses – breakdown by segment

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Iron Ore Solutions	15	(105)	n.a.	12	25%	95	(54)	n.a.
Fines	14	(111)	n.a.	1	1,300%	92	(78)	n.a.
Pellets	(1)	3	n.a.	1	n.a.	(8)	9	n.a.
Other ferrous	2	3	-33%	10	-80%	11	15	-27%
Energy Transition Metals	19	17	12%	26	-27%	98	16	513%
Nickel	(3)	8	n.a.	8	n.a.	29	48	-40%
Copper	13	9	44%	3	333%	26	(32)	n.a.
Others	9	-	n.a.	15	-40%	43	-	n.a.
Others	484	72	572%	157	208%	1,019	453	125%
TOTAL - Other operating expenses	518	(16)	n.a.	321	61%	1,212	415	192%



Financial results

Financial results

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Financial expenses, of which:	(396)	(380)	4%	(373)	6%	(1,473)	(1,459)	1%
Gross interest	(237)	(187)	27%	(208)	14%	(827)	(744)	11%
Capitalization of interest	12	4	200%	11	9%	36	19	89%
Others	(152)	(163)	-7%	(155)	-2%	(591)	(586)	1%
Financial expenses (REFIS)	(19)	(34)	-44%	(21)	-10%	(91)	(148)	-39%
Financial income	106	105	1%	129	-18%	422	432	-2%
Shareholder Debentures	(190)	(483)	-61%	92	n.a.	(175)	(179)	-2%
Derivatives¹	(804)	199	n.a.	64	n.a.	(1,209)	903	n.a.
Currency and interest rate swaps	(787)	218	n.a.	69	n.a.	(1,187)	900	n.a.
Others (commodities, etc)	(17)	(19)	-11%	(5)	240%	(22)	3	n.a.
Foreign exchange	(111)	(77)	44%	4	n.a.	(82)	(324)	-75%
Monetary variation	(365)	(238)	53%	(290)	26%	(1,306)	(1,319)	-1%
Foreign exchange and monetary variation	(476)	(315)	51%	(286)	66%	(1,388)	(1,643)	-16%
Financial result, net	(1,760)	(874)	101%	(374)	371%	(3,823)	(1,946)	96%

¹ The cash effect of the derivatives was a lost of US\$ 83 million in 4Q24.

Sustaining Investments by type

US\$ million	Iron Ore Solutions	Energy Transition Metals	Energy and others	Total
Enhancement of operations	460	340	9	809
Replacement projects	9	126	0	135
Filtration and dry stacking projects	49	0	0	49
Dam management	27	26	0	53
Other investments in dams and waste dumps	48	32	0	80
Health and safety	70	42	3	115
Social investments and environmental protection	73	8	0	81
Administrative & others	63	25	33	121
Total	799	598	45	1,442



Annex 2: Segment information

Segment results 4Q24

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	8,151	(4,099)	(54)	(127)	(80)	217	4,008
Fines	6,503	(3,216)	(24)	(110)	(75)	98	3,176
Pellets	1,440	(729)	(1)	(3)	(2)	65	770
Other ferrous	208	(154)	(29)	(14)	(3)	54	62
Energy Transition Metals	1,973	(1,419)	64	(79)	(21)	23	541
Nickel²	1,067	(974)	(6)	(35)	(21)	24	55
Sudbury	547	(479)	5	(19)	-	-	54
Voisey's Bay & Long Harbour	195	(225)	(4)	(11)	-	-	(45)
Standalone Refineries	259	(236)	-	-	-	-	23
Onça Puma	83	(46)	(1)	(0)	(6)	-	30
Other ³	(17)	12	(6)	(5)	(15)	24	(7)
Copper⁴	964	(387)	(13)	(37)	(1)	-	526
Salobo	809	(289)	(4)	(2)	(1)	-	513
Sossego	225	(98)	-	(4)	-	-	123
Other	(70)	-	(9)	(31)	-	-	(110)
Others⁵	(58)	(58)	83	(6)	-	(1)	(40)
Brumadinho and decharacterization of dams	-	-	(111)	-	-	-	(111)
Non-recurring expenses	-	-	(214)	-	-	-	(214)
Others⁶	-	-	(384)	(48)	-	2	(430)
Total	10,124	(5,517)	(700)	(253)	(102)	242	3,794

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\$ 113 million increasing the adjusted EBITDA in 4Q24, 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 Others EBITDA includes US\$ 79 million in unallocated expenses from Vale Base Metals Ltd ("VBM") in 4Q24. Considering the unallocated expenses, VBM's EBITDA was US\$ 462 million in 4Q24.



Segment results 4Q23

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	11,030	(4,568)	87	(104)	(80)	213	6,578
Fines	9,212	(3,704)	95	(90)	(67)	89	5,535
Pellets	1,680	(768)	(4)	(3)	(5)	36	936
Other ferrous	138	(96)	(4)	(11)	(8)	88	107
Energy Transition Metals	1,982	(1,443)	65	(78)	(2)	6	529
Nickel²	1,177	(980)	(9)	(35)	(1)	-	152
Sudbury	556	(457)	8	(19)	-	-	88
Voisey's Bay & Long Harbour	170	(198)	3	(9)	-	-	(34)
Standalone Refineries	317	(336)	-	-	-	-	(19)
Onça Puma	69	(87)	(5)	-	(1)	-	(24)
PTVI (historical)	294	(188)	(4)	(2)	-	-	100
Other	(229)	286	(11)	(5)	-	-	41
Copper³	855	(427)	(9)	(43)	(1)	-	375
Salobo	656	(315)	(2)	(13)	-	-	326
Sossego	199	(114)	(1)	(5)	-	-	79
Other	-	-	(6)	(24)	-	-	(30)
Others⁴	(50)	(36)	83	-	-	6	3
Brumadinho and decharacterization of dams	-	-	(396)	-	-	-	(396)
Non-recurring expenses	-	-	(10)	-	-	-	(10)
Others	42	(61)	(178)	(49)	(1)	4	(243)
Total	13,054	(6,072)	(433)	(231)	(83)	223	6,458

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 4Q23, 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 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	(73)	(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)	-	(1)	-	17
PTVI (historical)	-	-	-	-	-	-	-
Other	(109)	52	(12)	(2)	-	18	(52)
Copper³	759	(366)	(3)	(30)	-	-	360
Salobo	574	(262)	(1)	-	-	-	311
Sossego	206	(104)	(1)	(3)	-	-	98
Other	(21)	-	(1)	(27)	-	-	(49)
Others⁴	(80)	(11)	50	(10)	-	5	(46)
Brumadinho and decharacterization of dams	-	-	(126)	-	-	-	(126)
Non-recurring expenses	-	-	(32)	-	-	-	(32)
Others⁵	-	-	(179)	(32)	(3)	8	(206)
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 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.



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	31,444	(16,322)	(243)	(391)	(274)	871	15,085
Fines	24,805	(12,846)	(144)	(338)	(237)	358	11,598
Pellets	5,921	(2,920)	3	(8)	(12)	182	3,166
Other ferrous	718	(556)	(102)	(45)	(25)	331	321
Energy Transition Metals	6,613	(5,040)	122	(274)	(27)	59	1,453
Nickel²	3,687	(3,415)	(53)	(121)	(26)	42	114
Sudbury	1,954	(1,734)	(1)	(70)	-	-	149
Voisey's Bay & Long Harbour	661	(830)	(9)	(33)	-	-	(211)
Standalone Refineries	976	(929)	-	-	-	-	47
Onça Puma	176	(170)	(10)	(1)	(11)	-	(16)
PTVI (historical)	479	(338)	(1)	(3)	-	-	137
Other	(559)	586	(32)	(14)	(15)	42	8
Copper³	3,142	(1,473)	(27)	(120)	(1)	-	1,521
Salobo	2,501	(1,091)	(11)	(7)	(1)	-	1,391
Sossego	680	(382)	(2)	(14)	-	-	282
Other	(39)	-	(14)	(99)	-	-	(152)
Others⁴	(216)	(153)	203	(33)	-	17	(182)
Brumadinho and decharacterization of dams	-	-	(277)	-	-	-	(277)
Non-recurring expenses	-	-	(275)	-	-	-	(275)
Others⁵	-	-	(1,027)	(126)	(4)	10	(1,147)
Total	38,056	(21,362)	(1,699)	(790)	(305)	940	14,840

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\$ 856 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 Others EBITDA includes one-off effects such as donations, divestment effects, and provisions related to communities' programs. Includes US\$ 145 million in unallocated expenses from Vale Base Metals Ltd ("VBM") in 2024. Considering the unallocated expenses, VBM's EBITDA was US\$ 1.308 billion in 2024.



Segment information 2023

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	34,079	(15,451)	(14)	(283)	(338)	821	18,814
Fines	27,760	(12,357)	13	(256)	(293)	338	15,205
Pellets	5,803	(2,759)	(10)	(5)	(20)	127	3,136
Other ferrous	516	(335)	(17)	(22)	(25)	356	473
Energy Transition Metals	7,569	(5,526)	180	(265)	(7)	12	1,963
Nickel²	4,742	(3,739)	(67)	(119)	(2)	-	815
Sudbury	2,522	(1,940)	(6)	(69)	-	-	507
Voisey's Bay & Long Harbour	721	(860)	(45)	(25)	-	-	(210)
Standalone Refineries	1,119	(1,099)	-	-	-	-	20
Onça Puma	306	(263)	(13)	(1)	(2)	-	27
PTVI (historical)	1,231	(715)	(5)	(11)	-	-	500
Other	(1,156)	1,139	2	(13)	(1)	-	(29)
Copper³	2,577	(1,357)	31	(146)	(5)	-	1,100
Salobo	1,971	(992)	25	(19)	(4)	-	981
Sossego	606	(366)	(7)	(26)	-	-	207
Other	-	-	13	(101)	-	-	(88)
Others⁴	249	(430)	216	-	-	12	48
Brumadinho and decharacterization of dams	-	-	(1,083)	-	-	-	(1,083)
Non-recurring expenses	-	-	(60)	-	-	-	(60)
Others⁵	136	(196)	(808)	(175)	(2)	11	(1,034)
Total	41,784	(21,173)	(1,785)	(723)	(346)	844	18,601

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\$ 216 million increasing the adjusted EBITDA in 2023, 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 Others EBITDA includes one-off effects such as donations, divestment effects, and provisions related to communities' programs.

Annex 3: Additional information by business segment

Iron Ore Solutions: Financial results detailed

Volumes, prices, premium and revenues breakdown

	4Q24	% total	4Q23	% total	3Q24	% total	2024	% total	2023	% total
Volume sold ('000 metric tons)										
Fines¹	69,912	86%	77,885	86%	69,344	85%	260,314	85%	256,789	85%
IOCI	9,287	11%	13,074	14%	11,709	14%	43,578	14%	52,673	18%
BRBF	43,890	54%	45,199	50%	34,797	43%	135,130	44%	134,333	45%
Pellet feed - China (PFC1) ²	3,585	4%	3,279	4%	3,328	4%	12,786	4%	13,335	4%
Lump	1,535	2%	1,871	2%	1,971	2%	7,097	2%	7,498	2%
High-silica products	852	1%	7,466	8%	8,050	14%	27,435	9%	25,556 ⁴	8%
Other fines (60-62% Fe)	10,764	13%	6,996	8%	9,489	10%	34,288	11%	23,393 ⁴	8%
Pellets	10,067	12%	10,285	11%	10,143	12%	38,300	12%	35,840	12%
ROM	1,216	1%	2,158	2%	2,351	3%	8,038	3%	8,290	3%
Total - Iron ore sales	81,196	100%	90,328	100%	81,838	100%	306,652	100%	300,919	100%
Share of premium products ³ (%)		82%		80%		73%		75%		78%

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

	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Average prices (US\$/t)								
Iron ore - 62% Fe price index	103.4	128.3	-19%	99.7	4%	109.4	119.8	-9%
Iron ore - 62% Fe low alumina index	103.9	128.4	-19%	100.6	3%	110.1	121.6	-9%
Iron ore - 65% Fe index	118.3	138.8	-15%	114.1	4%	123.4	132.2	-7%
Provisional price at the end of the quarter	100.8	139.1	-28%	108.8	-7%	100.8	139.1	-28%
Iron ore fines Vale's CFR reference (dmt)	101.2	131.6	-23%	101.2	0%	105.7	120.5	-12%
Iron ore fines realized price, CFR/FOB (wmt)	93.0	118.3	-21%	90.6	3%	95.3	108.1	-12%
Iron ore pellets realized price, CFR/FOB (wmt)	143.0	163.4	-12%	148.2	-3%	154.6	161.9	-5%
Iron ore fines and pellets quality premium (US\$/t)								
Iron ore fines quality and premiums	1.0	(1.1)	n.a.	(1.9)	n.a.	(1.4)	(0.2)	603%
Pellets business' weighted average contribution	3.6	2.7	32%	3.6	1%	3.5	3.1	14%
All-in premium - Total	4.6	1.7	174%	1.7	172%	2.1	2.9	-27%
Net operating revenue by product (US\$ million)								
Fines	6,503	9,212	-29%	6,281	4%	24,805	27,760	-11%
ROM	18	29	-38%	33	-45%	105	122	-14%
Pellets	1,440	1,680	-14%	1,502	-4%	5,921	5,803	2%
Others	190	109	74%	154	23%	613	394	56%
Total	8,151	11,030	-26%	7,970	2%	31,443	34,079	-8%



Volume sold by destination – Fines, pellets and ROM

'000 metric tons	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Americas	8,773	9,667	-9%	10,317	-15%	38,840	40,431	-4%
Brazil	7,453	8,912	-16%	9,410	-21%	34,602	36,512	-5%
Others	1,320	755	75%	907	46%	4,238	3,919	8%
Asia	64,663	73,341	-12%	64,179	1%	238,071	232,818	2%
China	51,321	60,180	-15%	50,290	2%	187,342	185,522	1%
Japan	6,270	6,825	-8%	6,419	-2%	24,297	24,956	-3%
Others	7,072	6,336	12%	7,470	-5%	26,432	22,340	18%
Europe	3,362	2,941	14%	3,528	-5%	14,406	14,430	0%
Germany	1,121	654	71%	1,395	-20%	4,477	2,538	76%
France	38	685	-94%	108	-65%	1,325	2,696	-51%
Others	2,203	1,602	38%	2,025	9%	8,604	9,196	-6%
Middle East	2,208	1,815	22%	1,666	33%	6,667	5,483	22%
Rest of the World	2,190	2,564	-15%	2,148	2%	8,668	7,757	12%
Total	81,196	90,328	-10%	81,838	-1%	306,652	300,919	2%

Iron ore fines pricing

Pricing system breakdown (%)

	4Q24	4Q23	3Q24
Lagged	14	12	15
Current	58	50	51
Provisional	28	38	34
Total	100	100	100

Price realization

US\$/t	4Q24	4Q23	Δ y/y	3Q24	Δ q/q
Average reference price (dmt)	103.4	128.3	-19%	99.7	4%
Quality and premiums ¹	1.0	(1.1)	n.a.	(1.9)	n.a.
Impact of pricing system adjustments	(3.1)	4.4	n.a.	3.4	n.a.
Provisional prices in prior quarter ²	(1.9)	1.7	n.a.	(1.2)	58%
Lagged prices	(0.3)	(2.3)	-87%	1.8	n.a.
Current prices	(0.2)	0.9	n.a.	(0.3)	-33%
Provisional prices in current quarter ³	(0.7)	4.1	n.a.	3.1	n.a.
CFR reference (dmt)	101.2	131.6	-23%	101.2	0%
Adjustments for FOB sales ⁴	(0.3)	(3.3)	-91%	(2.7)	-89%
Moisture	(7.8)	(10.0)	-22%	(8.0)	-3%
Vale realized price (wmt)⁵	93.0	118.3	-21%	90.6	3%

¹ Includes quality (US\$ 1.6/t) and premiums/discounts and commercial conditions (US\$ -0.6/t). ² Adjustment as a result of provisional prices booked in 3Q24 at US\$ 108.8/t. ³ Difference between the weighted average of the prices provisionally set at the end of 4Q24 at US\$ 100.8/t based on forward curves and US\$ 103.4/t from the 4Q24 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 – 4Q23 vs. 4Q24

US\$ million	4Q23	Volume	Exchange rate	Others	Total variation	4Q24
C1 cash costs	1,924	(176)	(173)	(81)	(430)	1,494
Freight	1,258	(97)	-	73	(24)	1,234
Distribution costs	153	(16)	-	55	39	192
Royalties & others	369	(39)	-	(34)	(73)	296
Total costs before depreciation and amortization	3,704	(328)	(173)	13	(488)	3,216
Depreciation	377	(33)	(42)	34	(41)	336
Total	4,081	(361)	(215)	47	(529)	3,552

Cash cost and freight

	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
C1 cash cost (US\$ million)								
C1 cash cost, including third-party purchase costs (A)	1,494	1,924	-22%	1,662	-10%	6,537	6,606	-1%
Third-party purchase cost adjustment ¹ (B)	278	468	-41%	377	-26%	1,411	1,412	0%
C1 cash cost, ex-third-party purchase costs (C = A – B)	1,216	1,456	-17%	1,285	-5%	5,127	5,194	-1%
Sales volumes (Mt)								
Volume sold ² (D)	69.9	77.9	-10%	69.3	1%	260.3	256.8	1%
Volume sold from third-party purchases (E)	5.3	7.8	-32%	7.1	-26%	25.2	23.6	7%
Volume sold from own operations (F = D – E)	64.6	70.1	-8%	62.2	4%	235.1	233.2	1%
C1 cash cost², FOB (US\$/t)								
C1 cash cost, ex-third-party purchase costs (C/F)	18.8	20.8	-9%	20.6	-9%	21.8	22.3	-2%
Average third-party purchase C1 cash cost (B/E)	52.6	59.9	-12%	52.9	-1%	56.0	59.9	-7%
Iron ore cash cost (A/D)	21.4	24.7	-14%	24.0	-11%	25.1	25.7	-2%
Freight								
Maritime freight costs (G)	1,234	1,258	-2%	1,232	0%	4,441	3,929	13%
CFR sales (%) (H)	88%	86%	0 p.p.	86%	1 p.p.	86%	83%	3 p.p.
Volume CFR (Mt) (I = D x H)	61.7	66.9	-8%	59.8	3%	224.4	213.9	5%
Freight unit cost (US\$/t) (G/I)	20.0	18.8	6%	20.6	-3%	19.8	18.4	8%

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

Expenses

US\$ million	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
SG&A	9	15	-40%	13	-31%	47	47	0%
R&D	110	90	22%	76	45%	338	256	32%
Pre-operating and stoppage expenses	75	67	12%	58	29%	237	293	-19%
Other expenses	15	(110)	n.a.	2	650%	97	(60)	n.a.
Total expenses	209	62	237%	149	40%	719	536	34%



Iron Ore Solutions: Projects Details

Growth projects	Capex 4Q24	Financial progress ¹	Physical progress	Comments
Serra Sul +20 Capacity: 20 Mtpy Start-up: 2H26 Capex: US\$ 2,844 MM	85	49%	69%	The semi-mobile crushers at the mine have started isolated load tests. Assembly of the new long-distance conveyor belt is ongoing and should be completed in 1H25. Key civil works at the plant are complete and assembly packages are being mobilized.
Capanema's Maximization Capacity: 18 Mtpy Start-up: 1H25 Capex: US\$ 913 MM	69	76%	96%	Hot commissioning started in November 2024, and the site is expected to reach its full capacity in 2026.
Briquettes Tubarão Capacity: 6 Mtpy Start-up: 4Q23 (Plant 1) 2025 (Plant 2) Capex: US\$ 342 MM	15	90%	96%	Plant 1 produced the first trial lot in 4Q24 and Plant 2 is preparing to implement the stabilizing works.
Sustaining projects	Capex 4Q24	Financial progress ¹	Physical progress	Comments
Compact Crushing S11D Capacity: 50 Mtpy Start-up: 2H26 Capex: US\$ 755 MM	48	40%	64%	The walls of the primary crusher are being constructed and the assembly of the secondary crusher is ongoing.

¹ CAPEX disbursement until end of 4Q24 vs. CAPEX expected.

Projects under evaluation

Apolo	Capacity: 14 Mtpy	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: projects at different phases of FEL1 and FEL2
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: 10 Mtpy	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

	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Volume sold								
Copper ('000 metric tons)	74	76	-3%	61	21%	250	234	7%
Gold as by-product ('000 oz)	121	114	6%	85	42%	380	346	10%
Silver as by-product ('000 oz)	257	286	-10%	202	27%	889	939	-5%
Average prices								
Average LME copper price (US\$/t)	9,193	8,159	13%	9,210	0%	9,147	8,478	8%
Average copper realized price (US\$/t)	9,187	7,941	16%	9,016	2%	8,811	7,960	11%
Gold (US\$/oz) ¹	2,834	2,131	33%	2,591	9%	2,501	2,002	25%
Silver (US\$/oz)	34	24	42%	30	13%	29	24	21%
Net revenue (US\$ million)								
Copper	683	606	13%	553	24%	2,205	1,862	18%
Gold as by-product ¹	342	243	41%	221	55%	950	692	37%
Silver as by-product	9	7	29%	6	50%	26	22	18%
Total	1,034	855	21%	782	32%	3,181	2,577	23%
PPA adjustments ²	(70)	(0)	n.a.	(22)	223%	(39)	(0)	n.a.
Net revenue after PPA adjustments	964	855	13%	759	27%	3,142	2,577	22%

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 December 31st, 2024, Vale had provisionally priced copper sales from Sossego and Salobo totaling 40,610 tons valued at weighted average LME forward price of US\$ 8,915/t, subject to final pricing over the following months.

Breakdown of copper realized prices – copper operations

US\$/t	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Average LME copper price	9,193	8,159	13%	9,210	0%	9,147	8,478	8%
Current period price adjustments ¹	262	546	-52%	106	147%	62	56	11%
Copper gross realized price	9,455	8,705	9%	9,316	1%	9,209	8,533	8%
Prior period price adjustments ²	201	(201)	n.a.	203	n.a.	91	(24)	n.a.
Copper realized price before discounts	9,656	8,504	14%	9,518	1%	9,300	8,510	9%
TC/RCS, penalties, premiums and discounts ³	(468)	(563)	-17%	(503)	-7%	(490)	(550)	-11%
Average copper realized price	9,187	7,941	16%	9,016	2%	8,811	7,960	11%

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.



Energy Transition Metals: Nickel

Revenues & price realization

	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Volume sold ('000 metric tons)								
Nickel	47	48	-2%	41	16%	155	168	-8%
Copper	25	21	19%	14	79%	77	74	4%
Gold as by-product ('000 oz)	9	11	-18%	4	125%	34	42	-19%
Silver as by-product ('000 oz)	224	227	-1%	209	7%	884	861	3%
PGMs ('000 oz)	72	60	20%	42	71%	224	263	-15%
Cobalt (metric ton)	700	492	42%	464	51%	1,949	2,172	-10%
Average realized prices (US\$/t)								
Nickel	16,163	18,420	-12%	17,012	-5%	17,078	21,830	-22%
Copper	8,222	7,602	8%	9,187	-11%	8,413	7,720	9%
Gold (US\$/oz)	2,694	2,065	30%	2,748	-2%	2,408	1,946	24%
Silver (US\$/oz)	35.2	25.2	40%	31.4	12%	29.2	23.1	26%
Cobalt	26,575	35,438	-25%	23,850	11%	27,139	34,426	-21%
Net revenue by product (US\$ million)								
Nickel	762	888	-14%	692	10%	2,652	3,664	-28%
Copper	202	161	25%	127	59%	646	570	13%
Gold as by-product ¹	24	24	0%	12	100%	82	82	-1%
Silver as by-product	8	6	33%	7	14%	26	20	30%
PGMs	83	71	17%	44	89%	233	285	-18%
Cobalt ¹	19	17	12%	11	73%	53	75	-29%
Others	8	10	-20%	9	-11%	31	46	-33%
Total	1,105	1,177	-6%	902	23%	3,722	4,742	-22%
PPA adjustments ²	-37	-	n.a.	2	n.a.	-35	-	n.a.
Net revenue after PPA adjustments	1,068	1,177	-9%	904	18%	3,687	4,742	-22%

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

	4Q24	4Q23	Δ y/y	3Q24	Δ q/q	2024	2023	Δ y/y
Volumes (kt)								
Upper Class I nickel	25.5	25.7	-1%	22.8	12%	88.2	93.9	-6%
– of which: EV Battery	2.1	0.6	250%	1.0	110%	4.7	3.0	57%
Lower Class I nickel	5.9	7.2	-18%	6.9	-14%	20.1	20.3	-1%
Class II nickel	14.3	9.9	44%	10.3	39%	35.6	36.8	-3%
Intermediates	1.5	5.4	-72%	0.7	114%	11.3	16.9	-33%
Total	47.1	48.2	-2%	40.7	16%	155.2	167.9	-8%
Nickel realized price (US\$/t)								
LME average nickel price	16,038	17,247	-7%	16,259	-1%	16,812	21,474	-22%
Average nickel realized price	16,163	18,420	-12%	17,012	-5%	17,078	21,830	-22%
Contribution to the nickel realized price by category:								
Nickel average aggregate premium/(discount)	226	215	5%	571	-60%	398	116	243%
Other timing and pricing adjustments contributions ¹	(101)	958	n.a.	182	-155%	(132)	240	n.a.

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 negative impact of US\$165/t and (ii) fixed-price sales, with a positive impact of US\$64/t.



Product type by operation

% of sales	North Atlantic ¹	Matsusaka	Onça Puma
Upper Class I	73.3	-	-
Lower Class I	16.8	-	-
Class II	5.8	99.1	100
Intermediates	4.1	0.9	-

¹ Comprises Sudbury, Clydach and Long Harbour refineries

Energy Transition Metals: Projects Details

Growth projects	Capex 4Q24	Financial progress ¹	Physical progress	Comments
Onça Puma 2nd Furnace Capacity: 12-15 ktpy Start-up: 2H25 Capex: US\$ 555 MM	68	49%	75%	Major equipment and materials were received during Q4, and the assembly of the 2 nd furnace is progressing as planned. Commissioning activities have begun.

¹ CAPEX disbursement until end of 4Q24 vs. CAPEX expected.

Projects under evaluation

Copper		
Alemão	Capacity: 60 -70 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: FEL3
Carajás, Brazil	Replacement project	Investment decision: 1H25
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
Dompur, Indonesia	Growth project	200 kozpy Au as by-product
Vale's ownership: 80%	Underground block cave	
Paulo Afonso (North Hub)	Capacity: 70-100 ktpy	Stage: FEL2
Carajás, Brazil	Growth project	
Vale's ownership: 100%	Mines and processing plant	
Salobo Expansion	Capacity: 20-30 ktpy	Stage: FEL2
Carajás, Brazil	Growth project	Investment decision: 2026-2027
Vale's ownership: 100%	Processing plant	
Nickel		
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: 2025
Vale's ownership: N/A		

Annex 4: Brumadinho, Samarco & Dam Decharacterization

Brumadinho & Dam decharacterization

US\$ million	Provisions balance 30sep24	EBITDA impact ²	Payments	FX and other adjustments ³	Provisions balance 31dec24
Decharacterization	2,683	(75)	(128)	(267)	2,213
Agreements & donations ¹	2,390	88	(321)	(187)	1,970
Total Provisions	5,073	13	(449)	(454)	4,183
Incurring Expenses	-	98	(98)	-	-
Total	5,073	111	(547)	(454)	4,183

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 4Q24

US\$ million	EBITDA impact	Payments	FX and other adjustments ²	Provisions balance 31dec24
Decharacterization	4,985	(2,129)	(643)	2,213
Agreements & donations ¹	9,235	(7,241)	(24)	1,970
Total Provisions	14,220	(9,370)	(667)	4,183
Incurring expenses	3,346	(3,346)	-	-
Others	180	(178)	(2)	-
Total	17,746	(12,894)	(669)	4,183

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 2024	2025	2026	2027	Yearly average 2028-2035 ³
Decharacterization	(2.1)	0.5	0.5	0.3	0.2
Integral Reparation Agreement & other reparation provisions	(7.2)	0.8	0.6	0.4	0.2 ⁴
Incurring expenses	(3.3)	0.4	0.4	0.3	0.4 ⁵
Total	(12.6)	1.7	1.5	1.0	-

¹ Estimate cash outflow for 2024-2035 period, given BRL-USD exchange rates of 6.1923. 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\$ 216 million per year. ⁴ Disbursements related to the Integral Reparation Agreement ending in 2031. ⁵ Disbursements related to incurred expenses ending in 2028.

Cash outflow of Samarco commitments¹:

	Already disbursed	2025	2026	2027	2028	2029	2030	Yearly average 2031-2043
Mariana reparation – 100%	45.0	23.8	11.6	6.5	5.9	5.4	5.8	5.1
Vale's contribution (R\$ billion)		11.5	5.8	3.2	2.2	1.8	1.4	-
Vale's contribution² (US\$ billion)		1.9	0.9	0.5	0.4	0.3	0.2	-

¹ Amounts stated in real terms. ² BRL-USD exchange final rate of December 31, 2024 of 6.19.