



Autonomous stacker reclaimer in Serra Norte stockyard (March 2022)

VALE'S PERFORMANCE IN 1Q22



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Conference call and webcast on Thursday, April 28

In English with simultaneous translation to Portuguese at 11:00 a.m. Brasilia time (10:00 a.m. New York time, 3:00 p.m. London time).

The conference calls will be transmitted live through our website at www.vale.com/investors

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Except where otherwise indicated, the operational and financial information in this release is based on the consolidated figures in accordance with IFRS. Our quarterly financial statements are reviewed by the company's independent auditors. The main subsidiaries that are consolidated are the following: Companhia Portuária da Baía de Sepetiba, Mineração Corumbaense Reunida S.A., Minerações Brasileiras Reunidas S.A. PT Vale Indonesia Tbk, Salobo Metais S.A, Vale Holdings B.V., Vale Canada Limited, Vale International S.A., Vale Manganês S.A., Vale Malaysia Minerals Sdn. Bhd., Vale Moçambique S.A., Vale Oman Pelletizing Company LLC and Vale Oman Distribution Center LLC.

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Cautionary Note to U.S. Investors – Vale currently complies with SEC Industry Guide 7 in its reporting of mineral reserves in SEC filings. SEC Industry Guide 7 permits mining companies, in their filings with the SEC, to disclose only those mineral deposits that a company can economically and legally extract or produce. We present certain information in this presentation that are not permitted in an SEC filing. These materials are not proven or probable reserves, as defined by the SEC, and we cannot assure you that these materials will be converted into proven or probable reserves, as defined by the SEC. Starting in its next annual report on Form 20-F, Vale will comply with Subpart 1300 of Regulation S-K, which will replace SEC Industry Guide 7. Subpart 1300 of Regulation S-K permits mining companies, in their filings with the SEC, to disclose "mineral reserves", "mineral resources" and "exploration targets" that are based upon and accurately reflects information and supporting documentation of a qualified person. We present certain information in this presentation that are not based upon information or documentation of a qualified person, and that will not be permitted in an SEC filing under Subpart 1300 of Regulation S-K. These materials are not mineral reserves, mineral resources or exploration targets, as defined by the SEC, and we cannot assure you that these materials will be converted into mineral reserves, mineral resources or exploration targets, as defined by the SEC. U.S. Investors should consider closely the disclosure in our Annual Report on Form 20-K, which may be obtained from us, from our website or at <http://http://us.sec.gov/edgar.shtml>.

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.

Vale's performance in review

Rio de Janeiro, April 27, 2022 – *“Despite the challenging quarter in our operations, we are on track to deliver on our commitments for 2022. In 1Q22, we faced heavy rainfall in Minas Gerais, licensing delays in the North and performance below par at some assets. Nevertheless, we took the opportunity of the seasonally-lower volumes to concentrate our maintenance activities that will lead the way for a safer operational environment and solid production ahead. Confident about our business outlook, we are announcing a third share-buyback program, as another lever of value creation for our shareholders.”, commented Eduardo Bartolomeo, Chief Executive Officer.*

Highlights of 1Q22

Our operations

- In March, we entered into a multi-year agreement to supply low-carbon nickel products to Swedish lithium-cell producer Northvolt AB, reinforcing our commitment to sustainability in the electric vehicle supply chain and electrification of the broader mining industry and reaffirming our position as a supplier of choice to the fast-growing electric vehicle industry.
- In April, we started the construction works of Tecnored's first commercial plant in the state of Pará. Tecnored is 100% owned by us and focuses on developing a low-carbon pig iron process through energy sources that emit less CO₂ than coal and coke, the traditional iron-making methods. The plant will initially have a capacity of 250 ktpy of green pig iron and may reach 500 ktpy in the future. We plan the start-up for 2025 with an estimated investment of approximately R\$ 1.6 billion.

Our commitments to reparation and society

- The actions provided for in the Integral Reparation Agreement are well in progress. After judicial authorization, Vale began to detail information to implement 9 socio-economic repair projects, selected by the parties based on the results of popular consultation. These projects are part of the Fast Response Package and cover the areas of health, social development, infrastructure, agriculture and livestock, in Brumadinho and in the other 25 municipalities in the Paraopeba basin. The details of the scope of each project will be evaluated by the other parties to the Integral Reparation Agreement and, once approved, will allow the effective execution of the projects.

For further details on the reparation progress, an overview of ongoing works and projects, and the terms of the Integral Reparation Agreement, please visit www.vale.com/esg.

Dam safety

- In February, we signed an agreement with the state of Minas Gerais, regulatory agencies and state and federal public prosecutors, establishing a schedule and reinforcing the commitment to de-characterize all our upstream structures in Brazil. The agreement brings more legal and technical certainty to the process, extending the original deadline for the conclusion and reflecting the required actions to increase safety during the works. We

agreed to hire an independent consulting firm to confirm technical feasibility of deadlines for de-characterizing each structure included in our plan. We will also contribute with a value of R\$ 236 million for investments in social and environmental projects, with disbursement over eight years.

- In April, we began the de-characterization of the Dique Auxiliar da Barragem 5, at the Águas Claras Mine, in Nova Lima (MG). The dike is one of the five upstream structures to be eliminated in 2022. By the end of the year, Vale expects to have eliminated a total of 12 upstream structures under the De-characterization Program in Brazil.

Focusing on the core business

- In February, we concluded the sale of the 50% stake we had at California Steel Industries – CSI to Nucor Corporation, and, in April, we successfully completed the sale of the Moatize coal mine and the Nacala Logistics Corridor to Vulcan Resources, following the completion of all conditions precedent.
- In April, we also entered into a binding agreement to divest our iron ore, manganese ore and logistics assets in the Midwestern System. Under the terms agreed, the enterprise value of the transaction is approximately US\$ 1.2 billion for a set of assets that produced 2.7Mt of iron ore and 0.2Mt of manganese, and that contributed to Vale with US\$ 110 million of adjusted EBITDA in 2021. At closing, we expect to receive approximately US\$ 150 million, in addition to transferring the obligations related to the take-or-pay logistics contracts, subject to the consent of the applicable counterparties and customary conditions precedent.

Sharing value creation

- Aligned with our drive to deliver superior value to our shareholders, we paid dividends of US\$ 3.5 billion and advanced with our share buyback program, which is 84 % complete as of the date of this report¹.
- In continuity with the 2021 share buyback programs, our Board of Directors approved a new program of up to 500 million shares, equivalent to around 10% of the currently outstanding shares of the company, to be executed in the following 18 months and after the conclusion of the current program. Upon conclusion of the third sequential buyback, Vale's shareholders interest in the company's results will have increased by more than 22% since the approval of the first program in 2021.

¹ As of the date of this report, US\$ 3.01 billion was spent to repurchase circa 168 million shares in the October 2021 announced repurchase program. As reflected in our 1Q22 Financial Statement, until March 31, 2022, the Company repurchased approximately 100.2 million common shares and their respective ADRs, corresponding to a total amount of US\$ 1.788 billion.

Vale's performance 1Q22

In 1Q22, Vale reported a proforma adjusted EBITDA from continued operations of US\$ 6.374 billion, US\$ 483 million lower than 4Q21.

Proforma EBITDA from continuing operations 1Q22 vs. 4Q21



¹ Proforma EBITDA from continuing operations.

² Includes the impact of third-party purchase, royalties, distribution center, and leasing.

³ Includes costs and expenses, the impact of trading operations, the impact of by-products, and others.

The main drivers for 1Q22 performance compared to 4Q21 were: (i) the lower sales volume for iron ore and pellets, mainly due to the intense rainy season in 1Q22 and the weaker performance of the northern system (US\$ 2.192 billion), and (ii) the higher realized prices for iron ore and pellets (US\$ 1.812 billion), following the US\$ 32/t increase in the 62% benchmark price and higher quality premium, working to partially offset the weaker iron ore volumes.

Selected financial indicators

US\$ million	1Q22	4Q21	1Q21
Net operating revenues	10,812	13,105	12,553
Total costs and other expenses	(5,124)	(7,228)	(4,660)
Expenses related to Brumadinho event and de-characterization of dams	(160)	(2,115)	(115)
Adjusted EBIT from continuing operations	5,528	3,904	7,778
Adjusted EBIT margin (%)	51%	30%	62%
Adjusted EBITDA from continuing operations	6,214	4,726	8,509
Adjusted EBITDA margin (%)	57%	36%	68%
Proforma adjusted EBITDA from continuing operations ¹	6,374	6,857	8,626
Iron ore - 62% Fe reference price	141.6	109.6	166.9
Net income attributable to Vale's stockholders	4,458	5,427	5,546
Net debt ²	4,911	1,877	(505)
Capital expenditures	1,136	1,751	980

¹ Excluding expenses related to Brumadinho and donations associated with COVID-19.

² Including leases (IFRS 16).

Net income in 1Q22 was US\$ 4.458 billion, US\$ 969 million lower than 4Q21. The seasonally lower EBITDA and the higher 4Q21 financial results explain the decline, which was partially offset by the US\$ 1.1 billion positive impact of the binding agreement to sell the Midwestern iron ore and manganese operations and the provisions for dams' de-characterization and Renova Foundation charged in 4Q21.

In 1Q22, we invested US\$ 1.1 billion in growth projects and sustaining, US\$ 615 million lower than in 4Q21, due to seasonally higher investments during the drier season at the end of the year.

Gross debt and leases totaled US\$ 14.0 billion at the end of 1Q22, in line with 4Q21. Net debt totaled US\$ 4.9 billion, US\$ 3.0 billion higher than 4Q21, mainly due to US\$ 3.5 billion dividends payment, US\$ 1.8 billion in share buyback and US\$ 720 million change in working capital, following the higher production and investments pace in the fourth quarter and disbursements related to profit sharing in the first quarter, partially offset by the stronger accounts receivable collection in the first quarter.

Expanded net debt increased to US\$ 19.4 billion, mainly attributed to the Brazilian Real appreciation effect on the commitments denominated in local currency, partially offset by the mark-to-market gains on the foreign exchange hedge positions. During this quarter, we reviewed with our Board of Directors a change in our optimal leverage from US\$ 15 billion to a range of US\$10 - 20 billion, under the expanded net debt concept. This decision reflects of the proactive liability management performed in the last several months with no relevant financial amortizations due by 2024, a sustainable increase in our production capacity and a very disciplined cost and capex management.

Performance of business segments in 1Q22

Ferrous Minerals EBITDA of US\$ 5.802 billion

- Ferrous Minerals EBITDA was US\$ 578 million lower than 4Q21, mainly from lower sales volumes for iron ore and pellets, partially compensated by higher realized prices.
- Iron ore fines average realized price was US\$ 141.4/t, up US\$ 34.2/t q/q, due to the US\$ 32.0/t higher 62% Fe reference price and US\$ 3.9/t higher quality premium, reflecting the mix of our portfolio of products and a tight supply-demand balance of high grade, low contaminant ores in the global market.
- Vale's C1 cash cost ex-third-party purchases increased by US\$ 2.2/t q/q, mainly driven by (i) lower fixed costs dilution due to seasonally lower volumes; (ii) negative effect of exchange rate on costs; (iii) higher demurrage costs, due the rainy season; and (iv) higher fuel costs, as a result of the increase in diesel price, which were partially compensated by the consumption of inventories with lower costs and cost efficiency initiatives. Freight cost for iron ore fines was US\$ 18.1/t in 1Q22, US\$ 2.7/t lower than in 4Q21, driven by a fueling time-lagged effect on CFR sales and lower exposure to spot market in Q1.

Base Metals EBITDA was US\$ 751 million in 1Q22, US\$ 60 million lower than 4Q21

- Nickel business EBITDA was US\$ 525 million in 1Q22, US\$ 120 million higher q/q, mainly due to the US\$ 121 million effect of higher nickel realized prices, following the 33% higher LME prices, which was partially compensated by the lag effect in pricing mechanism and the negative results from our hedge positions.
- Copper business EBITDA was US\$ 226 million in 1Q22, US\$ 180 million lower q/q, mainly due to the lower sales volumes (US\$ 116 million) and higher stoppage expenses (US\$ 44 million) due to the Sossego maintenance.

Market overview

Iron Ore

Iron ore 62% Fe reference price averaged US\$ 141.6/dmt in 1Q22, 29% higher than 4Q21. Along Q1, steel production gradually increased in China while iron ore supply was limited due to seasonal weather-related events. Iron ore prices followed the steel production growth moving upwards in the first two months of the quarter. By the end of February, the start of the war in Ukraine increased the price volatility on the commodities market, leading iron ore prices to new highs in the year. While prices kept a high volatility along March, iron ore prices managed to keep a strong level through the month.

MB65% index averaged US\$ 170.19/dmt in 1Q22, 32% higher than 4Q21. With the increase in prices along the quarter, the spread between the MB65% and the 62% iron ore reference price recovered along in line, closing March at around US\$ 25/t, driven by the increase in coal/coke prices and the higher crude steel productivity in China, supporting the high-grade premiums.

Outlook

In the latest Short-Range Outlook, World Steel Association estimates that steel demand in the developed economies will increase by 1.1% and 2.4% in 2022 and 2023 respectively, after recovering by 16.5% in 2021. The emerging economies, excluding China, will continue to face challenges from the worsening external environment, the Russia-Ukraine war, and US monetary tightening, leading to low growth of 0.5% in 2022 and 4.5% in 2023. European car registrations fell further in 2M22 by -13.5% YoY (February alone it was -15.7% YoY),, worsening the weak performance of 2020 and the timid recovery in 2021. There is an accumulative effect of high inflationary environment that is posing caution to consumer behaviour, continuous supply chain disruptions of semiconductors and more recently disruption on supply chain of additional raw materials coming from Ukraine. Besides, there is a boycott of several carmakers to halt or leave production in Russia.

Shortages of natural gas and coal led to volatile prices end of 2021, which was worsened by the war in Ukraine. Natural gas prices have reached new high records of approximately US\$ 60/MMBtu end of March, and it is expected to stabilize in higher levels due to restocking targets of 90% by 1st October to prepare for the next winter. Electricity prices have also increased dramatically, especially in countries such as Portugal and Spain leading the governments to consider capping the cost. Analysts still expect a further increase of around 30% in energy bills by end 2022. Steelmakers are operating EAF's intermittently to avoid periods of peak prices. The production costs for EAF route have increased considerably with raw materials (scrap, HBI) but also due to electricity (from ~8% share in the production cost to ~14%).

In the USA, steel production has been flattish YoY, however pent-up demand from the automotive sector, infrastructure and housing markets have potential to further support output. Solid demand will keep industrial production growing in 2022 with delayed orders for factories with pandemic fading away. Consumer confidence has been deteriorating, especially due to the high inflationary environment which CPI came 8.5% in March (the highest in 40 years). Nevertheless, excess savings of 13% of GDP and low levels of unemployment, most likely will give support for consumer

spending. On the negative side, freight costs have soared since Jan22 due to high prices of energy which will weight on consumer prices in the coming months. Since the exposure of USA imports from Russia and Ukraine is minor, industrial production and services sector continue in a steady recovery trajectory.

In JKT, Japanese manufacturers are seeing renewed expansion in production levels. In March companies saw new order growth regaining some of the momentum lost in Feb as new order growth was held back by a reduction in new export sales, which fell at the sharpest pace since Jul20 on lower demand caused by renewed lockdown restrictions in parts of China and the Russia-Ukraine war. Business confidence regarding output over the months ahead remained positive on hopes that the pandemic would end and boost domestic demand, while an end to the Russia-Ukraine war would boost international demand and stabilize price and supply pressures.

As for Brazil, high inflation is putting pressure on consumer sentiment. Automotive industry has improved in March compared to Feb22, i.e., licensing of light vehicles increased by 10.9% and production by 11.4%. However, the sector fell by 22.5% and 7.8% compared to March 2021, respectively. On the positive note, industrial confidence is still on the expansionary side with 55.4 point, however, also a decrease from 55.8 points in Feb22. Construction sector is optimistic, with confidence index for march is 55.3 points. A poor performance is expected for economic activity in 2022, due to political instability with the upcoming elections, higher interest rates and pressing fiscal deficits - nonetheless, GDP forecast have been recently revised up from 0.1% to 0.9% for the year. In this context, outlook for steel production is expected to grow by 2.2% and sales to 2.5% in 2022, with strong demand in the construction sector, renewable energy infrastructure and agricultural machinery. For automotive sector, Anfavea kept its outlook for the year, with expected growth of 9.4% YoY, however, still -16.5% below 2019 levels.

Nickel

LME nickel prices averaged US\$ 26,395/t in 1Q22, 33% higher quarter over quarter and 50% higher than 1Q21. Due to extreme volatility brought on by Russia's invasion of Ukraine amid a tight nickel market and the resulting massive short squeeze, LME suspended nickel trading for six days in March as prices rose drastically. Another six days of trading were impacted by nickel trades hitting the daily price limit, a tool introduced by the LME in March for all base metals to control volatility. Those days assessed at the next trading day that an official price was published for the purposes of calculating the monthly average settlement price.

Total exchange inventories (LME and SHFE) decreased, closing at 80.1 kt at the end of 1Q22, down 25% in the quarter and 70% year over year. LME inventories stood at 72.6 kt at the end of 1Q22, a decrease of 29.3 kt in the quarter and 187.7 kt year over year. SHFE inventories increased by 2.4 kt in the quarter and decreased 3.3 kt year over year.

Demand/Supply

Global sales of electric vehicles (EV) are on track to increase by 80% in 1Q22 from 1Q21, reaching 2 million EVs sold in the quarter, led by robust growth in China as sales accelerated up 124% despite subsidies being cut by 30% in this period. European sales are expected to increase 35% in 1Q22 compared to 1Q21 as persistent environmental policies to reduce CO2 emissions encourage adoption. Global sales of EVs are on track to decrease by 8% in 1Q22 from 4Q21 led by seasonal declines in Europe and China. It is estimated that nickel

consumption in battery precursors for EV and energy storage increased 129% to 88 kt in 1Q22 compared to 1Q21 and 102% quarter over quarter led by China.

Global stainless-steel production increased 15% in the first quarter when compared to 1Q21 driven by capacity additions in China and Indonesia. Quarter over quarter, global production is set to increase 1%. Increased scrap usage, primarily in China, resulted in total nickel consumption globally in stainless-steel to increase 14% in 1Q22 from 1Q21. Visible Chinese stainless-steel inventories decreased 13% in 1Q22 from 1Q21 led by decreases in 200-series stainless steel. Quarter over quarter inventories increased 34% led by increases in 300 series stainless steel.

The aerospace industry continues to recover from pandemic lows with aircraft deliveries from Boeing and Airbus up 18% in 1Q22 compared to 1Q21. Quarter over quarter deliveries were down 17%. The average global commercial flights in 1Q22 were up 33% from 1Q21, however, seasonality and the Omicron coronavirus subvariant impacted travel in 1Q22 with average global commercial flights down 3% compared to 4Q21.

The oil and gas sector continues to rebound as demand outpaces supply and energy prices surge, exacerbated by sanctions on Russia in response to the war in Ukraine. Oil and gas benchmark prices were up 60% and 69%, respectively, in 1Q22 compared to 1Q21. Rig counts were up 35% in 1Q22 compared to 1Q21 and up 8% quarter over quarter led by increases in North America.

Nickel demand in non-stainless and non-battery applications increased 13% in 1Q22 compared to 1Q21 and 3% quarter over quarter.

1Q22 nickel production increased 14% from 1Q21 on impressive growth in Indonesia and increased 2% from 4Q21. Chinese NPI production decreased 10% in 1Q22, compared to 1Q21 as power cuts ahead of the Winter Olympics in Beijing reduced output. Chinese NPI production increased by 7% in 1Q22 compared to 4Q21 as production rebounded in March on increased supply of ore as the end of the Philippine's rainy season approaches and environmental policies were lifted. Indonesian NPI production increased by 22% in 1Q22 compared to 1Q21 and 7% compared to 4Q21 as new projects continue to come online and ramp up. In February, the first shipments of competitive battery-suitable nickel matte were reportedly successfully converted from NPI in December 2021 and shipped to China.

Outlook

The impacts of the war on Ukraine and resulting sanctions on Russia as well as the strict lockdowns in China due to the spread of the Omicron coronavirus variant are having various impacts on the upstream and downstream nickel markets. These factors will continue to be monitored but have yet to fundamentally change the outlook for the industry.

In the near term, the shift towards the electrification of the world economies will improve demand with solid government incentives and penalty programs continuing to drive EV adoption rates as countries commit to low emission targets. This growth potential should favor high nickel content batteries chemistry due to its higher energy density. The North American supply chain is particularly dependent on this market dynamic, as the commitment to green initiatives, including the development of the EV supply chain, is forcing manufacturers to look critically at the sustainability of upstream suppliers. In the medium term, additions to NPI and HPAL supply planned in Indonesia may supply a large portion of the growth requirements for stainless steel and batteries. However, environmental concerns around the CO₂ intensity of NPI and the push

for geographical diversification of the battery supply chain could result in supply shortages in the longer term.

Our long-term outlook for nickel remains very positive, driven by strong demand in the EV sector with the prevalence of nickel-rich batteries. Additionally, as countries continue to set aggressive decarbonization goals, EV growth and the infrastructure needed to support them are crucial. Markets previously heavily impacted by the pandemic, such as aerospace, are expected to improve with the success of the global COVID-19 vaccine rollout, while energy shortages in Europe and China are putting increased pressure on an expedited shift to renewable energy. In the long term, the global pursuit of net-zero emissions should positively impact nickel demand in the stainless steel, aerospace, automotive and energy markets.

Copper

LME copper prices averaged US\$ 9,997/t in 1Q22, 3% higher quarter over quarter and 18% higher than 1Q21.

Total exchange inventories (LME, SHFE, and COMEX) decreased, closing at 261.3 kt at the end of 1Q21, up 37% in the quarter and down 34% year over year. LME inventories stood at 91.4 kt at the end of 1Q22, increasing 2.5 kt in the quarter and decreasing 53.1 kt year over year. SHFE inventories increased by 63.9 kt in the quarter and decreased 86.3 kt year over year. COMEX inventories increased by 4.6 kt in the quarter and 3.0 kt year over year.

Demand/Supply

Global refined copper demand increased 2% in 1Q22 compared to 1Q21 and decreased 7% quarter over quarter, reaching 5.8 Mt in the period. The decline in comparison with last year figures comes in the context of strong demand growth in 2021 as a result of recovery from pandemic lows in most of the world ex-China. The first quarter of 2022 faced mixed conditions: strong North American consumption; a strong start for Europe, stalled by the crisis in Ukraine with subsequent disruptions in the auto industry and macro uncertainties underlying global trade flows; and, subdued demand from China, as the country deals with Covid lockdowns and property sector challenges for copper consumption.

Global refined copper supply increased 2% in 1Q22 compared to 1Q21 and 1% quarter over quarter, totaling 6.2 Mt. Risks of disruption from community protests and strike action remains high in key copper-producing countries, such as Peru and Chile, whereas current price levels could boost production from current operations. Smelter maintenance programs and growth in concentrate supply have resulted in continued increased in spot treatment and refining charges (TC/RCs), up 22% in the quarter and 163% from 1Q21.

Outlook

In the near term the refined market is expected to be balanced and move into a surplus as projects come online. In the medium term, the accelerated transition towards copper-intensive sustainable energy will support copper demand which, alongside supply-side risks – such as depletion, disruption, potential increases of taxation/royalties and the significant quantity of assets required to replace existing operations – are likely to bring the market back to balance and, eventually, deficit.

Our long-term outlook for copper remains very positive. Copper has a solid long-term growth profile driven by industrialization, construction, and the buildout of electrical network infrastructure. Governments globally have set ambitious decarbonization targets that, coupled with falling costs of renewable energy and stimulus investments in the green economy, will pivot towards more copper-intensive uses in renewable energy and transportation projects related to EVs. Additionally, in view of the current concerns related to energy prices, copper is favored in lieu of energy-intensive aluminum, one of the few potential substitutes in various copper applications. With higher aluminum price levels, there is lower incentive to move away from copper. On the supply side, we expect growth to continue to struggle given declining ore grades, disruption potential in key jurisdictions and the lack of significant discoveries.

Adjusted EBITDA

Adjusted EBITDA

US\$ million	1Q22	4Q21	1Q21
Net operating revenues	10,812	13,105	12,553
COGS	(4,622)	(6,494)	(4,298)
SG&A	(121)	(131)	(104)
Research and development	(121)	(177)	(98)
Pre-operating and stoppage expenses	(154)	(147)	(145)
Expenses related to Brumadinho event & de-characterization of dams	(160)	(2,115)	(115)
Expenses related to COVID-19 donations	-	(16)	(2)
Other operational expenses	(106)	(263)	(13)
Dividends received from associates and JVs	-	142	-
Adjusted EBIT from continuing operations	5,528	3,904	7,778
Depreciation, amortization & depletion	686	822	731
Adjusted EBITDA from continuing operations	6,214	4,726	8,509
Proforma Adjusted EBITDA from continuing operations¹	6,374	6,857	8,626
Discontinued operations - Coal	171	102	(159)
Adjusted EBITDA total	6,385	4,828	8,350
Proforma Adjusted EBITDA total¹	6,545	6,959	8,467

¹ Excluding expenses related to Brumadinho and COVID-19 donations.

Proforma Adjusted EBITDA from continuing operations, by business area

US\$ million	1Q22	4Q21	1Q21
Ferrous Minerals	5,802	6,380	7,777
Iron ore fines	4,934	5,145	6,886
Pellets	837	1,211	840
Other Ferrous Minerals	31	24	51
Base Metals	751	811	1,011
Nickel	525	405	642
Copper	226	406	369
Others	(179)	(334)	(162)
Total	6,374	6,857	8,626

Net operating revenue by business area

US\$ million	1Q22	%	4Q21	%	1Q21	%
Ferrous Minerals	8,734	80.8%	10,769	82.2%	10,411	82.9%
Iron ore fines	7,255	67.1%	8,764	66.9%	9,060	72.2%
ROM	23	0.2%	8	0.1%	24	0.2%
Pellets	1,364	12.6%	1,889.0	14.4%	1,208	9.6%
Manganese ore	12	0.1%	5	0.0%	29	0.2%
Ferroalloys	3	0.0%	27	0.2%	17	0.1%
Others	77	0.7%	76	0.6%	73	0.6%
Base Metals	1,932	17.9%	2,224	17.0%	1,988	15.8%
Nickel	866	8.0%	851	6.5%	846	6.7%
Copper	534	4.9%	749	5.7%	670	5.3%
PGMs	110	1.0%	64	0.5%	183	1.5%
Gold as by-product	115	1.1%	138	1.1%	135	1.1%
Silver as by-product	8	0.1%	8	0.1%	8	0.1%
Cobalt	32	0.3%	31	0.2%	19	0.2%
Others ¹	267	2.5%	383	2.9%	127	1.0%
Others	146	1.4%	112	0.9%	154	1.2%
Total of continuing operations	10,812	100.0	13,105	100.0	12,553	100.0

¹ Includes marketing activities

COGS by business segment

US\$ million	1Q22	%	4Q21	%	1Q21	%
Ferrous Minerals	3,108	67.2	4,721	72.7	2,857	66.5
Base Metals	1,334	28.9	1,580	24.3	1,188	27.6
Others	180	3.9	193	3.0	253	5.9
Total COGS of continuing operations¹	4,622	100.0	6,494	100.0	4,298	100.0
Depreciation	645		783		688	
COGS of continuing operations, ex-depreciation	3,977		5,711		3,610	

¹ COGS currency exposure in 1Q22 was as follows: 46.7% USD, 46.7% BRL, 6.4% CAD and 0.2% Other currencies.

Operating expenses

US\$ million	1Q22	4Q21	1Q21
SG&A	121	131	104
Administrative	103	116	87
Personnel	54	42	47
Services	23	39	17
Depreciation	11	12	9
Others	15	23	14
Selling	18	15	17
R&D	121	177	98
Pre-operating and stoppage expenses	154	147	145
Expenses related to Brumadinho event and de-characterization of dams	160	2,115	115
Expenses related to COVID-19 donations	-	16	2
Other operating expenses	106	263	13
Total operating expenses	662	2,849	477
Depreciation	41	39	43
Operating expenses, ex-depreciation	621	2,810	434

Cost Efficiency Program

Cost efficiency is one of our key strategic priorities. Given the continuous acceleration of industry-wide inflationary pressure, thus increasing operating costs, we see our program as even more relevant today than when it was announced, in December 2021.

Our key objective for 2022 is to keep our total fixed costs plus sustaining investments flat compared to 2021 (excluding exchange rate variation), by implementing initiatives that will offset the industry-wide inflationary.

We have already identified a series of initiatives to deliver on this goal, such as (i) the redesign of the organizational structure, pursuing a leaner and more functional structure; (ii) improvements in strategic sourcing, reviewing scope and specification; (iii) overhead optimization, and (iv) implementation of digital solutions to drive productivity gains.

Impact of Brumadinho and De-characterization in 1Q22

US\$ million	Provisions balance 31 dez21	EBITDA impact	Payments	FX and other adjustments ²	Provisions balance 31 mar22
De-characterization	3,523	37	(69)	584	4,075
Agreements & donations ¹	3,537	-	(64)	719	4,192
Total Provisions	7,060	37	(133)	1,303	8,267
Incurring Expenses	-	123	(123)	-	-
Total	7,060	160	(256)	1,303	8,267

¹ Includes Integral Reparation Agreement, individual, labor and emergency indemnifications, tailing removal and containment works.

² Includes foreign exchange, present value and other adjustments

Impact of Brumadinho and De-characterization from 2019 until 1Q22

US\$ million	EBITDA impact	Payments	PV & FX adjustment ²	Provisions balance 31 mar22
De-characterization	5,003	(858)	(70)	4,075
Agreements & donations ¹	8,257	(3,972)	(93)	4,192
Total Provisions	13,260	(4,830)	(163)	8,267
Incurring expenses	2,013	(2,013)	-	-
Others	122	-	-	-
Total	15,395	(6,843)	(163)	8,267

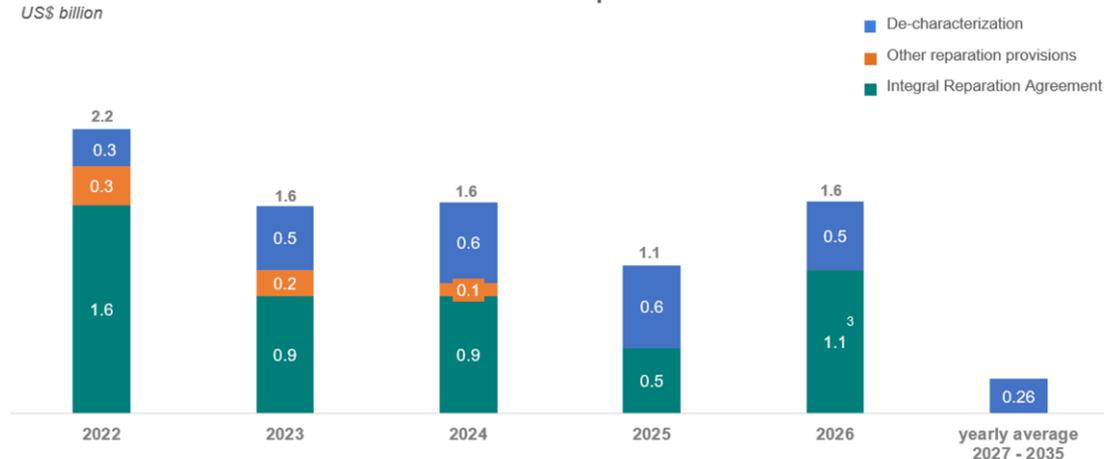
¹ Includes Integral Reparation Agreement, individual, labor and emergency indemnifications, tailing removal and containment works.

² Includes foreign exchange, present value and other adjustments

The aggregate amount of the provisions increased by US\$ 1.207 billion to US\$ 8.267 billion, mainly due to the effect of the Brazilian Real appreciation of 15 % in the quarter.

Cash outflow of Brumadinho and decharacterization provisions^{1,2}

US\$ billion



¹ Estimate cash outflow for 2022 - 2035 period, given BRL-USD exchange rates of 4.7378

² Amounts stated without discount to present value and net of judicial deposits.

³ Comprises US\$ 0.5 billion of inflation adjustments related to performance obligations which projects timeline are not defined by the parties in the Agreement.

Pre-operating and stoppage expenses breakdown

<i>US\$ million</i>	1Q22	4Q21	1Q21
Pre-operating and stoppage expenses	154	147	145
Depreciation	30	25	34
Pre-operating and stoppage expenses, ex-depreciation	124	122	111
Brumadinho - stoppage expenses	80	98	85
Minas Centrais Complex (Brucutu and others)	26	14	22
Mariana Complex (Alegria, Timbopeba and others)	1	1	3
Paraopeba Complex (Mutuca, Fábrica ¹ and others)	31	46	35
Vargem Grande Complex (Vargem Grande ¹ , Pico and others)	22	37	25
Tubarão pellet plants	5	6	7
Others	39	18	19

¹ Including pelletizing plants.

Net income

Reconciliation of proforma EBITDA to net income

US\$ million	1Q22	4Q21	1Q21
EBITDA Proforma	6,545	6,959	8,467
Brumadinho event and de-characterization of dams & COVID-19 donations	(160)	(2,131)	(117)
EBITDA Coal (Discontinued operation)	(171)	(102)	159
Adjusted EBITDA from continuing operations	6,214	4,726	8,509
Impairment & disposal of non-current assets	1,075	(205)	(117)
Dividends received from associates & JVs	-	(142)	-
Equity results	186	(1,010)	(13)
Financial results	(242)	3,158	(78)
Income taxes	(2,091)	(353)	(1,810)
Depreciation, depletion & amortization	(686)	(822)	(731)
Net income from continuing operations attributable to Vale's stockholders	4,456	5,352	5,760
Net income from discontinued operations attributable to Vale's stockholders	2	75	(214)
Net income attributable to Vale's stockholders	4,458	5,427	5,546

Main factors that affected net income for 1Q22 vs. 4Q21

	US\$ million	
4Q21 Net income from continuing operations attributable to Vale's stockholders	5,352	
Δ EBITDA proforma	-414	Caused mainly by the lower sales of iron ore fines and pellets, mostly offset by better realized prices for iron ore, reflecting the \$32/t higher reference price and higher quality premiums.
Δ Brumadinho event and de-characterization of dams & COVID-19 donations	+1,971	Additional provision for the de-characterization of upstream dams of US\$1.7bn in 4Q21.
Δ EBITDA Coal (Discontinued operation)	-69	
Δ Impairment & disposal of non-current assets	+1,280	Binding agreement to divest our iron ore, manganese ore and logistics assets in the Midwestern System
Δ Dividends received	+142	
Δ Equity results	+1,196	Additional Renova Foundation provision in 4Q21 (US\$1.1bn)
Δ Financial results	-3,400	Reclassification of cumulative foreign exchange variation in equity in 4Q21 (US\$3.2bn)
Δ Income taxes	-1,738	Tax regime effect as our monthly income tax is calculated based on revenues and any necessary adjustment is made in the first quarter of the following year.
Δ Depreciation, depletion & amortization	+136	
1Q22 Net income from continuing operations attributable to Vale's stockholders	4,456	

Δ: difference between 1Q22 and 4Q21 figures

Financial results

US\$ million	1Q22	4Q21	1Q21
Financial expenses	(445)	(23)	(1,364)
Gross interest	(161)	(168)	(188)
Capitalization of interest	14	15	16
Shareholder debentures	(249)	393	(983)
Others	(17)	(243)	(202)
Financial expenses (REFIS)	(32)	(20)	(7)
Financial income	150	113	58
Derivatives¹	861	18	(439)
Currency and interest rate swaps	863	7	(482)
Others (commodities, etc)	(2)	11	43
Foreign Exchange	(817)	3,280	1,445
Monetary variation	9	(230)	222
Financial result, net	(242)	3,158	(78)

¹ The cash effect of the derivatives was a loss of US\$ 76 million in 1Q22.

CAPEX

Investments in 1Q22 totaled US\$ 1.136 billion, comprising US\$ 799 million in the maintenance of operations and US\$ 337 million in project execution.

Project Execution and Sustaining by business area

US\$ million	1Q22	%	4Q21	%	1Q21	%
Ferrous Minerals	681	59.9	1,042	59.5	607	61.9
Base Metals	337	29.7	639	36.5	359	36.6
Energy and others	118	10.4	70	4.0	14	1.4
Total	1,136	100.0	1,751	100.0	980	100.0

Growth projects execution

Investments in project execution totaled US\$ 337 million in 1Q22, in line with 4Q21, driven by higher solar photovoltaic panels acquisition in Sol do Cerrado project, which was partially offset by lower disbursements in Salobo in line with project plan.

In Salobo III, a remediation plan is being executed following the landslide occurred in January. This work includes the replacement of the damaged conveyor equipment which will be concluded in May. We do not foresee the impacts of this event modifying the project delivery date beyond 4Q22.

Project execution by business area

US\$ million	1Q22	%	4Q21	%	1Q21	%
Ferrous Minerals	182	54.0	200	56.8	82	53.9
Base Metals	67	19.9	94	26.7	68	44.7
Energy and others	88	26.1	58	16.5	2	1.3
Total	337	100.0	352	100.0	152	100.0

Main project developments in 1Q22

- The Northern System 240 Mtpy Project concluded the civil works of the reclaimer line of the 5th product stockyard and advance on interventions in the conveyor belt.
- Serra Sul 120 Mtpy progressed on the hiring of contractors and equipment purchase, while advances in the project's licensing.
- The Capanema project started the execution of the staking of the secondary crushing area and the foundations reinforcement for the tertiary crushing.
- Salobo III project progressed as planned with the mechanical completion of three of five long distance belt conveyors, assembly of all three HPGR's (High Pressure Grinding Rolls), good progress with the piping and instrumentation at flotation buildings, as well as the energization of secondary substations (e.g. crushing areas).

Growth projects progress indicator²

Projects	Capacity (per year)	Estimated start-up ¹	Executed capex (US\$ million)		Estimated capex (US\$ million)		Physical progress (%)
			1Q22	Total	2022	Total	
Ferrous Minerals Project							
Northern System 240 Mtpy	10 Mt	2H22	33	411	170	772	94% ¹
Capanema	18 Mt ²	2H23	17	49	129	495	13%
Serra Sul 120 Mtpy ³	20 Mt	1H25	78	230	390	1,502	13%
Base Metals Project							
Salobo III	30-40 kt	2H22	59	721	310	1,056	90%

¹ Considering mine-plant project front physical progress.

² Capanema project adds 14 Mtpy capacity in Timbopeba site expedition in its first years.

³ The project consists of increasing the S11D mine-plant capacity by 20 Mtpy.

Sustaining CAPEX

Investments in sustaining our operations totaled US\$ 799 million in 1Q22, US\$ 600 million lower than in 4Q21. Project execution tends to be seasonally slower in the first quarter, as weather-related conditions reduce the pace of construction works at our sites and projects (e.g. VBME).

Sustaining capex by business area

US\$ million	1Q22	%	4Q21	%	1Q21	%
Ferrous Minerals	499	62.5	842	60.2	525	63.4
Base Metals	270	33.8	545	39.0	291	35.1
Nickel	226	28.3	470	33.6	266	32.1
Copper	44	5.5	75	5.4	25	3.0
Energy and others	30	3.8	12	0.9	12	1.4
Total	799	100	1,399	100	828	100

Sustaining capex by type - 1Q22

US\$ million	Ferrous Minerals	Base Metals	Energy and others	Total
Enhancement of operations	205	146	2	353
Replacement projects	25	88	-	113
Filtration and dry stacking projects	109	-	-	109
Dam management	10	3	-	13
Other investments in dams and waste dumps	35	4	-	39
Health and Safety	51	18	-	69
Social investments and environmental protection	30	6	-	36
Administrative & Others	34	5	28	67
Total	499	269	30	799

² Pre-operating expenses were not included in the estimated capex for the year, although included in the total estimated capex column, in line with Vale's Board of Directors approvals. Estimated capex for the year is only reviewed once a year.

Main project developments in 1Q22

- The Gelado project completed the assembly of the dredger skid, following start of piping in the region, and the assembly off the gallery and mixers of tanks 03 and 04.
- In VBME project, work has continued on the powerplants, paste plant, fuel tanks and remaining civil works. Reid Brook vertical development is progressing, increasing ventilation to the mine. Eastern Deeps surface ore handling precast foundations and erection of surface steel for the Reid Brook conveyor galleries are underway.

Replacement projects progress indicator

Projects	Capacity (per year)	Estimated start-up	Executed capex (US\$ million)		Estimated capex (US\$ million)		Physical progress (%)
			1Q22	Total	2022	Total	
Gelado	9.7 Mt	2H22	13	275	68	428	88%
Voisey's Bay Mine Extension	45 kt	1H21 ¹	83	1,552	575	2,690	70%

¹ In 2Q21, Vale achieved the first ore production of Reid Brook deposit, the first of two underground mines to be developed in the project. The start-up of the second deposit, Eastern Deeps, is expected by 2H22.

Projects under evaluation and growth options

Projects	Project scope / capacity	Comments
Copper		
Alemão	<ul style="list-style-type: none"> 60ktpy Cu + 115 kozpy Au as byproduct Underground mine 	Stage: FEL3 / Invest decision: 2023
South Hub life of mine extension or Upsides	Cristalino <ul style="list-style-type: none"> 80ktpy Replacement project. Maintain Sossego plant operating at full capacity 	Stage: FEL3
	Bacaba: <ul style="list-style-type: none"> 60 - 70 ktpy Cu Open Pit mine Replacement or optionality to increase production 	Stage: FEL3
	118, Visconde and Barão: <ul style="list-style-type: none"> Satellite deposits being developed to assess potential options to increase production 	Stage: FEL 1 / 2 (Barão)
North Hub	<ul style="list-style-type: none"> 70-100ktpy Cu potential in North Hub Growth Project 	Stage: FEL 1
Salobo IV	<ul style="list-style-type: none"> +30ktpy potential Growth project 	Stage: FEL1
Victor	<ul style="list-style-type: none"> 20ktpy Cu + 4ktpy Ni 	JV partnership under discussion Stage: FEL2
Hu'u	<ul style="list-style-type: none"> +300-350ktpy¹ Cu potential + 200koz Au Underground block cave Growth Project 	Stage: FEL2
Nickel		
Onça Puma 2nd furnace	<ul style="list-style-type: none"> +50 yrs LoM +12 - 15ktpy Ni 	Stage: FEL3 / Invest decision: 2022
Bahodopi	<ul style="list-style-type: none"> 20-year mine saprolite ore RKEF FeNi smelter plant Production: 70ktpy Ni 	Mine owned by PTVI, FeNi plant owned through JV Stage: FEL3 / Invest decision: 2022
Pomalaa	<ul style="list-style-type: none"> 30-year mine limonite and saprolite ore HPAL plant Production: 40ktpy Ni + 4ktpy Co as byproduct 	Mine owned by PTVI, HPAL plant owned through JV Stage: FEL3 / Invest decision: 2022
CCM PH 3&4	<ul style="list-style-type: none"> Replacement Underground mine 	Stage: FEL2
Thompson Mine Extension PH2	<ul style="list-style-type: none"> Life extension Underground mine 	Stage: FEL2
Iron ore		
Serra Norte N1/N2	<ul style="list-style-type: none"> Replacement project of 50 Mtpy of ROM in Serra Norte. 	Stage: FEL3 / Invest decision: 2023 Start-up: 2026
New Steel plants	<ul style="list-style-type: none"> Plants in Oman, Fábrica and Fazendão Capacity: 17 Mtpy² 	Stage: FEL2/3 / Invest decision: 2022/23 Start-up: 2024/26
Serra Leste expansion	<ul style="list-style-type: none"> Growth project Project's capacity under evaluation 	Stage: FEL2 / Invest decision: 2022 Start-up: 2026
S11C	<ul style="list-style-type: none"> Expand Serra Sul to ore body C due to S11D depletion. Replacement project. 	Stage: FEL2
Briquetting plants	<ul style="list-style-type: none"> 3 plants under construction (7 Mtpy capacity) 7 other plants under engineering stage 	Stage: FEL3 (two plants) / Invest decision: 2022/2026

¹ Considering full equity in Sumbawa Timur Mining and based on initial studies arising from the ongoing prefeasibility study.

² Including 8.5 Mtpy of Oman project, which is expected to improve pellet feed quality to supply direct reduction plants production.

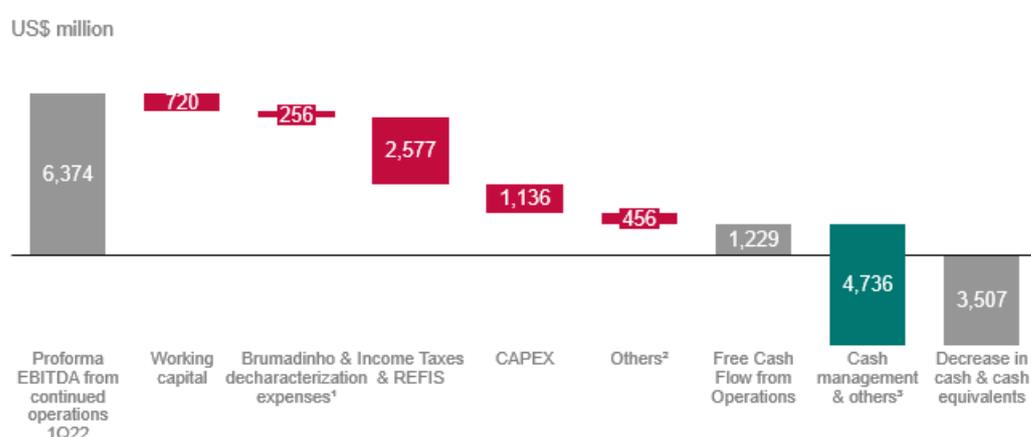
Free cash flow

Free cash flow from operations reached US\$ 1.229 billion in 1Q22, US\$ 1.404 higher than in 4Q21, mainly explained by (i) a lower impact of working capital (US\$ 1.5 billion); (ii) smaller payments related to Brumadinho obligations (US\$ 1.2 billion), and (iii) lower capital expenditures (US\$ 0.6 billion). Those effects were partially compensated by seasonally higher income tax paid at the beginning of the year (US\$ 1.6 billion), considering the difference between the taxes collected throughout the year and the tax due at the end of the year.

Working capital in the quarter was mainly impacted by a decrease in accounts payables given the usual payments to suppliers following higher production and investments in 4Q21 and disbursements related to profit sharing in the first quarter, combined with the increase in inventories balance due to higher average iron ore costs. Such effects were partially offset by the decrease in accounts receivables expected in the first quarter with the strong cash collection of 4Q21 sales.

In 1Q22, Vale distributed US\$ 3.480 billion to shareholders and repurchased US\$ 1.788 billion of its shares. Vale also received US\$ 502 million with the sale of its share in CSI. Cash & cash equivalents position decreased by US\$ 3.507 billion in the quarter.

Free Cash Flow 1Q22



¹ Includes US\$ 133 million of disbursement of Brumadinho provisioned expenses and US\$ 123 million of Brumadinho incurred expenses.

² Includes interest on loans, derivatives, leasing, dividends paid to noncontrolling interest and others.

³ Includes US\$ 3.480 billion of shareholder remuneration, US\$ 1.788 billion of share buyback, US\$ 502 million from the sale of the participation in CSI, US\$ 425 million of debt funding, and US\$ 385 million of debt repayment.

Debt

Net debt was US\$ 4.9 billion as of March 31, 2022, US\$ 3.0 billion higher q/q, mainly due to a \$4.7 billion cash outflow in dividends distribution (US\$ 3.5 billion) and share buyback (US\$ 1.8 billion).

Expanded net debt increased to US\$ 19.4 billion, US\$ 4.3 billion higher q/q, from the higher net debt and the US\$ 2.2 billion effect of Brazilian reais appreciation on the local currency denominated commitments, which was partially offset by higher interest rates. This was partially offset by mark-to-market gains in foreign exchange hedge positions (US\$ 762 million).

The average debt maturity was 8.5 years, slightly lower than the 8.7 years on December 31, 2021. After currency and interest rate swaps, the average cost of debt was 4.89% per annum.

Debt indicators

US\$ million	1Q22	4Q21	1Q21
Gross debt ¹	12,349	12,180	12,176
Lease (IFRS 16)	1,666	1,602	1,631
Gross debt and leases	14,015	13,782	13,807
Cash, cash equivalents and short-term investments	9,104	11,905	14,312
Net debt	4,911	1,877	(505)
Currency swaps ²	(89)	724	1,077
Refis	2,634	2,288	2,432
Brumadinho provisions	4,192	3,537	4,014
De-characterization provisions	4,075	3,523	1,962
Samarco & Renova Foundation provisions	3,649	3,112	1,732
Expanded net debt	19,372	15,061	10,712
Total debt / adjusted LTM EBITDA (x)	0.5	0.4	0.6
Net debt / adjusted LTM EBITDA (x)	0.17	0.06	(0.02)
Adjusted LTM EBITDA / LTM gross interest (x)	46.5	48.1	28.0

¹ Does not include leases (IFRS 16).

² Includes interest rate swaps.

Performance of the business segments

Segment information — 1Q22, as per footnote of financial statements

US\$ million	Net operating revenues	Cost ¹	Expenses			Dividends received from associates and JVs	Adjusted EBITDA
			SG&A and others ¹	R&D ¹	Pre operating & stoppage ¹		
Ferrous Minerals	8,734	(2,723)	(52)	(36)	(121)	-	5,802
Iron ore fines	7,255	(2,119)	(55)	(34)	(113)	-	4,934
Pellets	1,364	(526)	5	(1)	(5)	-	837
Others ferrous	100	(63)	-	-	(1)	-	36
Mn & Alloys	15	(15)	(2)	(1)	(2)	-	(5)
Base Metals	1,932	(1,136)	(2)	(41)	(2)	-	751
Nickel ²	1,458	(909)	(8)	(16)	-	-	525
Copper ³	474	(227)	6	(25)	(2)	-	226
Brumadinho event and de-characterization of dams	-	-	(160)	-	-	-	(160)
Others	146	(118)	(162)	(44)	(1)	-	(179)
Total of continuing operations	10,812	(3,977)	(376)	(121)	(124)	-	6,214
Discontinued operations - Coal	448	(264)	(12)	(1)	-	-	171
Total	11,260	(4,241)	(388)	(122)	(124)	-	6,385

¹ Excluding depreciation, depletion and amortization.

² Including copper, by-products from our nickel operations and marketing activities.

³ Including by-products from our copper operations.

Ferrous Minerals

Ferrous Minerals adjusted EBITDA totaled US\$ 5.802 billion in 1Q22, down 9% q/q, driven by seasonally lower sales volumes for iron ore fines and pellets, which were partially compensated by higher realized prices, supported by stronger benchmark prices and premiums.

The adjusted EBITDA per ton for Ferrous Minerals, excluding Manganese and Ferroalloys, totaled US\$ 97.8/t, an increase of US\$ 29.0/t compared to 4Q21.

On April 6th, Vale announced a binding agreement to sell the Midwestern System in line with its strategy of portfolio simplification. The completion of the transaction is subject to regulatory approvals and compliance with the usual precedent conditions. The Midwestern System are reported in Others segment and previous quarters Ferrous Minerals results were adjusted accordingly.

Ferrous Minerals EBITDA variation – US\$ million (1Q22 x 4Q21)



¹ Including the negative effect of higher costs and expenses, excluding FX and volume effect (US\$ 152 million), FX impact (US\$ 108 million) and dividends received (US\$ 59 million), and the positive effect of lower freight costs (US\$ 121 million).

The share of premium products in total sales was 84% in 1Q22, in line with 4Q21.

Iron ore premium reached US\$ 9.1/t³ in 1Q22, US\$ 4.4/t higher than in 4Q21, due to (i) higher spread of 65% Fe and low alumina ore indexes vs. 62% Fe benchmark index; and (ii) better quality mix of products as some high silica ores are being concentrated in Chinese beneficiation plants before the final sale. These effects were partially offset by the lagged price effect on pellet price realization and the absence of the seasonal dividends from our pellet's JVs.

Iron ore fines and pellets quality premium

US\$/t	1Q22	4Q21	1Q21
Iron ore fines quality premium	4.4	0.5	7.0
Pellets weighted average contribution	4.7	4.2	1.4
Iron ore fines and pellets total quality premium	9.1	4.7	8.5
Share of premium products¹ (%)	84%	82%	91%

¹ Composed of pellets, Carajás (IOCJ), Brazilian Blend Fines (BRBF) and pellet feed.

³ Previously, in Production and Sales Report of 1Q22, Vale announced an iron ore premium of US\$ 9.0/t, which includes Midwestern System.

Volume sold

'000 metric tons	1Q22	4Q21	1Q21
Iron ore fines	51,311	81,749	57,631
ROM	1,035	607	426
Pellets	7,011	10,351	6,271

Net operating revenue by product

US\$ million	1Q22	4Q21	1Q21
Iron ore fines	7,255	8,764	9,060
ROM	23	8	24
Pellets	1,364	1,889	1,208
Others	92	108	119
Total	8,734	10,769	10,411

Iron ore fines (excluding Pellets and ROM)

Iron ore fines EBITDA variation – US\$ million (1Q22 x 4Q21)



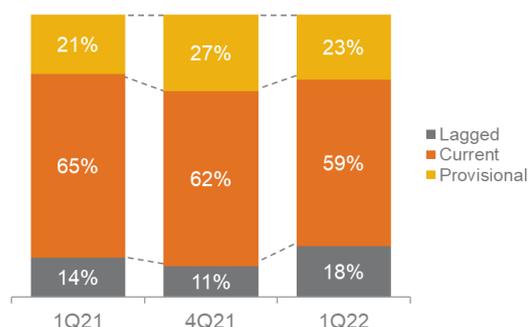
¹ Including the negative effect of higher costs and expenses, excluding FX and volume effect (US\$ 127 million), FX impact (US\$ 77 million) and dividends received (US\$ 10 million), and the positive effect of lower freight costs (US\$ 110 million).

Revenues and sales volumes

Iron ore fines' net revenues of US\$ 7,255 million in 1Q22 was 17% lower q/q, largely explained by the 37% lower sales volumes in the quarter (US\$ 3.2 billion), mainly due to the usual weather seasonality in the first quarter of the year, which was partially offset by higher realized prices (US\$ 1.7 billion).

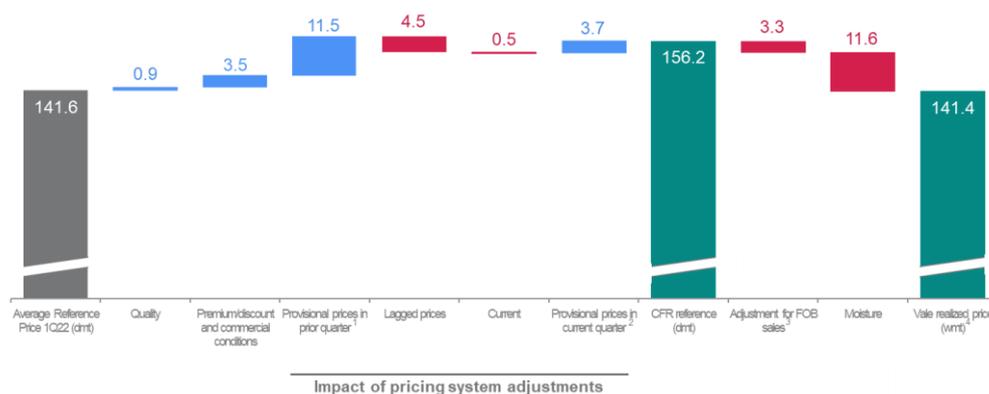
CFR sales totaled 40.5 Mt in 1Q22, representing 79% of total sales volumes in 1Q22, driven by seasonally lower sales to Chinese customers.

Pricing system breakdown (%)



Vale's realized price reached US\$ 141.4/t, US\$ 34.20/t higher than in 4Q21 mainly due to (i) the US\$ 32.0/t increase of the 62% Fe reference price, and also (ii) the positive effect of the adjustments of sales from previous quarter (US\$ 13.9/t); and (iii) higher premiums (US\$ 3.9/t); which were partially offset by (i) the negative effect of lagged price sales (US\$ 11.5/t), which represented a seasonally larger share in Q1 ; (ii) the increase of FOB sales share (US\$ 2.3/t); and (iii) the natural moisture adjustment (US\$ 1.9/t), which is an effect of higher prices.

Price realization iron ore fines – US\$/t, 1Q22



¹ Adjustment as a result of provisional prices booked in 4Q21 at US\$ 120.3/t.

² Difference between the weighted average of the prices provisionally set at the end of 1Q22 at US\$ 158.1/t based on forward curves and US\$ 141.6/t from the 1Q22 62% Fe reference price.

³ Includes freight pricing mechanisms of CFR sales freight recognition.

⁴ Vale's price is net of taxes.

Average prices

US\$/ metric ton	1Q22	4Q21	1Q21
Iron ore - Metal Bulletin 65% index	170.2	128.8	191.2
Iron ore - Metal Bulletin 62% low alumina index	146.6	111.8	167.9
Iron ore - 62% Fe reference price	141.6	109.6	166.9
Provisional price at the end of the quarter	158.1	120.3	159.9
Iron ore fines Vale CFR reference (dmt)	156.2	120.3	166.4
Iron ore fines Vale CFR/FOB realized price	141.4	107.2	157.2
Pellets CFR/FOB (wmt)	194.6	182.6	192.6

Costs

Iron ore COGS - 4Q21 x 1Q22

US\$ million	4Q21	Variance drivers			Total variation	1Q22
		Volume	Exchange rate	Others		
C1 cash costs	1,488	(580)	66	114	(400)	1,088
Freight	1,498	(655)	-	(110)	(765)	733
Distribution costs	88	(32)	-	31	(1)	87
Royalties & others	362	(135)	1	(17)	(151)	211
Total costs before depreciation and amortization	3,436	(1,402)	67	18	(1,317)	2,119
Depreciation	339	(128)	3	43	(82)	257
Total	3,775	(1,530)	70	61	(1,399)	2,376

Vale's C1 cash cost ex-third-party purchases increased by US\$ 2.2/t q/q, mainly driven by (i) lower fixed costs dilution due to seasonally lower volumes; (ii) negative effect of exchange rate on costs; (iii) higher demurrage costs, due the rainy season; and (iv) higher fuel costs, as a result of the increase in diesel price, which were partially compensated by the consumption of inventories with lower costs and cost efficiency initiatives. Vale expects C1 costs ex-third-party purchases for 2022 to total US\$ 18.5-19.0/t (vs. US\$ 16.5/t in 2021) mainly due an appreciation of BRL FX to 5.0, and an increase in oil brent to US\$100/bbl.

C1 cash cost variation (excluding 3rd party purchases) – US\$/t (1Q22 x 4Q21)



Vale's C1 cash cost totaled US\$ 21.2/t, an increase of US\$ 3.0/t vs. 4Q21.

Vale's unit maritime freight cost was US\$ 18.1/t in 1Q22, US\$ 2.7/t lower than in 4Q21, driven by a fueling time-lagged effect on CFR sales and lower exposure to spot market in Q1. Vale expects an increase of freight costs in 2Q22 driven by the recent hikes of brent oil price globally.

Iron ore fines cash cost and freight

	1Q22	4Q21	1Q21
Costs (US\$ million)			
Vale's iron ore fines C1 cash cost (A)	1,088	1,488	983
Third-party purchase costs ¹ (B)	181	194	198
Vale's C1 cash cost ex-third-party volumes (C = A – B)	907	1,294	786
Sales volumes (Mt)			
Volume sold (ex-ROM) (D)	51.3	81.7	57.6
Volume sold from third-party purchases (E)	2.7	3.2	2.8
Volume sold from own operations (F = D – E)	48.6	78.5	54.8
Iron ore fines cash cost (ex-ROM, ex-royalties), FOB (US\$/t)			
Vale's C1 cash cost ex-third-party purchase cost (C/F)	18.7	16.5	14.3
Average third-party purchase C1 cash cost (B/E)	67.0	61.6	70.8
Vale's iron ore cash cost (A/D)	21.2	18.2	17.1
Freight			
Maritime freight costs (G)	733	1,498	735
% of CFR sales (H)	79%	88%	81%
Volume CFR (Mt) (I = D x H)	40.5	71.9	46.9
Vale's iron ore unit freight cost (US\$/t) (G/I)	18.1	20.8	15.7

¹ Includes logistics costs related to third-party purchases.

EXPENSES

Iron ore fines expenses, net of depreciation, amounted to US\$ 202 million in 1Q22, in line with 4Q21.

Expenses - Iron Ore fines

US\$ millions	1Q22	4Q21	1Q21
SG&A	13	10	12
R&D	34	69	33
Pre-operating and stoppage expenses	113	102	91
Brumadinho stoppage expenses	79	92	78
Others	34	10	13
Other expenses	42	12	11
Total expenses	202	193	147

Iron ore pellets

Adjusted EBITDA for pellets declined 31% q/q, due to lower sales volumes following the usual seasonality. These effects were partially offset by higher realized prices as a result of higher 65% Fe price index and higher contractual premiums.

Iron ore pellets EBITDA variation – US\$ million (1Q22 x 4Q21)



¹ Including the negative effect of lower dividends received (US\$ 49 million), higher costs and expenses, excluding FX and volume effect (US\$ 34 million), FX impact (US\$ 25 million) and the positive effect of lower freight costs (US\$ 11 million).

Realized prices in 1Q22 averaged US\$ 194.6/t, US\$ 12.1/t higher than in 4Q21, mainly due to the higher 65% Fe price index and contractual pellet premiums, which were largely offset by a negative impact from lagged prices sales.

FOB pellets sales totalled 4.2 Mt in 1Q22, representing 60% of total pellets sales.

Costs totalled US\$ 526 million (or US\$ 622 million with depreciation charges) in 1Q22. Excluding the impact of lower sales volumes (US\$ 248 million) and considering FX variation, costs increased by US\$ 58 million when compared with 4Q21 mainly due to higher leasing costs as a result of higher pellet premiums.

Pellets - EBITDA

	1Q22		4Q21	
	US\$ million	US\$/wmt	US\$ million	US\$/wmt
Net revenues / Realized price	1,364	194.6	1,889	182.6
Dividends received (Leased pelletizing plants)	-	-	49	4.7
Cash costs (Iron ore, leasing, freight, overhead, energy and other)	(526)	(75.0)	(716)	(69.3)
Pre-operational & stoppage expenses	(5)	(0.7)	(11)	(1.0)
Expenses (Selling, R&D and other)	4	0.6	-	-
EBITDA	837	119.4	1,211	117.0

Iron ore fines and pellets cash break-even⁴

Iron ore and pellets cash break-even landed in China¹

US\$/t	1Q22	4Q21	1Q21
Vale's C1 cash cost ex-third-party purchase cost	18.7	16.5	14.3
Third party purchases cost adjustments	2.5	1.7	2.8
Vale's iron ore cash cost (ex-ROM, ex-royalties), FOB (US\$/t)	21.2	18.2	17.1
Iron ore fines freight cost (ex-bunker oil hedge)	18.1	20.8	15.7
Iron ore fines distribution cost	1.7	1.1	1.3
Iron ore fines stoppage expenses ² related to Brumadinho	1.8	1.1	1.4
Iron ore fines expenses ² & royalties	6.2	5.5	5.2
Iron ore fines moisture adjustment	4.4	4.1	3.5
Iron ore fines quality adjustment	(4.4)	(0.5)	(7.0)
Iron ore fines EBITDA break-even (US\$/dmt)	49.0	50.4	37.1
Iron ore fines pellet adjustment	(4.7)	(4.2)	(1.4)
Iron ore fines and pellets EBITDA break-even (US\$/dmt)	44.3	46.2	35.7
Iron ore fines sustaining investments	8,9	9,5	8,5
Iron ore fines and pellets cash break-even landed in China (US\$/dmt)	53.2	55.6	44.2

¹ Measured by unit cost + expenses + sustaining investment adjusted for quality

² Net of depreciation and includes dividends received

Volume sold by destination – Iron ore and pellets

'000 metric tons	1Q22	4Q21	1Q21
Americas	8,624	8,373	8,020
Brazil	7,761	7,164	6,518
Others	863	1,209	1,502
Asia	43,366	77,249	50,525
China	33,560	64,603	40,798
Japan	5,436	6,823	4,422
Others	4,370	5,823	5,305
Europe	5,019	3,799	4,622
Germany	980	949	1,087
France	1,085	706	783
Others	2,954	2,144	2,752
Middle East	1,079	1,681	276
Rest of the World	1,270	1,604	885
Total	59,358	92,706	64,328

⁴ Does not include the impact from the iron ore fines and pellets pricing system mechanism.

Selected financial indicators - Ferrous Minerals

US\$ million	1Q22	4Q21	1Q21
Net Revenues	8,734	10,769	10,411
Costs ¹	(2,723)	(4,244)	(2,499)
SG&A and Other expenses ¹	(52)	(14)	7
Pre-operating and stoppage expenses ¹	(121)	(118)	(108)
R&D expenses	(36)	(72)	(34)
Dividends received from associates and JVs	-	59	-
Adjusted EBITDA	5,802	6,380	7,777
Depreciation and amortization	(416)	(504)	(392)
Adjusted EBIT	5,386	5,876	7,385
Adjusted EBIT margin (%)	61.7	54.6	70.9

¹ Net of depreciation and amortization

Selected financial indicators - Iron ore fines

	1Q22	4Q21	1Q21
Adjusted EBITDA (US\$ million)	4,934	5,145	6,886
Volume Sold (Mt)	51.3	81.7	57.6
Adjusted EBITDA (US\$/t)	96	63	119

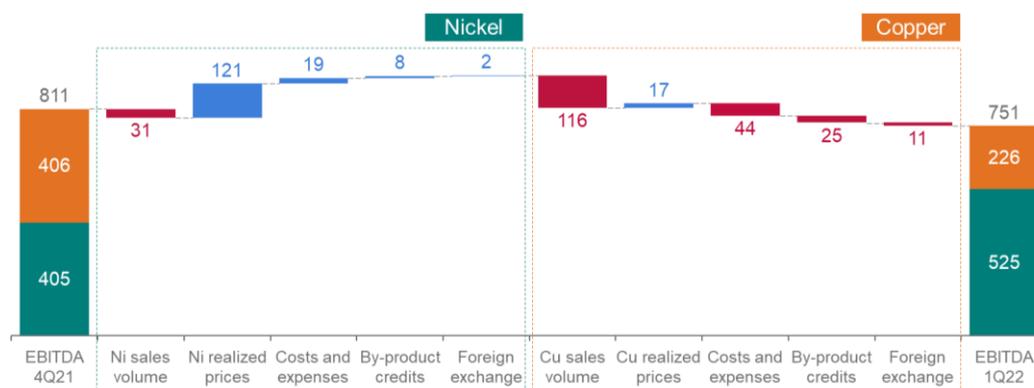
Selected financial indicators - Pellets

	1Q22	4Q21	1Q21
Adjusted EBITDA (US\$ million)	837	1,211	840
Volume Sold (Mt)	7.0	10.4	6.3
Adjusted EBITDA (US\$/t)	119	117	134

Base Metals

Base Metals adjusted EBITDA was US\$ 751 million in 1Q22, US\$ 60 million lower than 4Q21.

Base Metals EBITDA variation – US\$ million (1Q22 x 4Q21)



The lower EBITDA in the quarter can be mainly attributed to:

- Lower copper sales volumes and higher costs in Copper business as a result of the scheduled SAG mill extended maintenance at Sossego.
- Lower nickel sales volumes derived from lower production and the inventory build-up strategy to cover sales commitments for 2Q22, during planned maintenance of the Sudbury surface plant.

These effects were partially offset by:

- Higher nickel realized prices mainly due to soaring LME prices.

Base Metals EBITDA overview – 1Q22

US\$ million	North Atlantic	PTVI (site)	Onça Puma	Sossego	Salobo	Others	Subtotal Base Metals	Marketing activities	Total Base Metals
Net Revenues	990	235	81	76	398	(108)	1,672	260	1,932
Costs	(600)	(119)	(43)	(83)	(144)	83	(906)	(230)	(1,136)
Selling and other expenses	(2)	1	(1)	(1)	8	(7)	(2)	-	(2)
Pre-operating and stoppage expenses	-	-	-	-	(2)	-	(2)	-	(2)
R&D	(15)	(1)	-	(7)	-	(18)	(41)	-	(41)
EBITDA	373	116	37	(15)	260	(50)	721	30	751

Average prices

US\$/ metric ton	1Q22	4Q21	1Q21
Nickel - LME	26,395	19,821	17,570
Copper - LME	9,997	9,699	8,504
Nickel - realized prices	22,195	19,088	17,630
Copper - realized prices ¹	10,848	10,229	9,493
Gold (US\$/oz)	1,862	1,795	1,781
Silver (US\$/oz)	23.47	21.32	24.58
Cobalt (US\$/t)	78,085	63,079	44,834

¹Considers Salobo and Sossego operations.

Nickel operations

Nickel operations, ex-marketing activities – EBITDA by operation

US\$ million	1Q22	4Q21	1Q21
North Atlantic operation ¹	373	254	509
PTVI	116	106	89
Onça Puma	37	8	53
Others ²	(31)	33	(9)
Total	495	401	642

¹ Includes the operations in Canada and in the United Kingdom.

² Includes the PTVI, intercompany sales eliminations, purchase of finished nickel. Hedge results have been relocated to each nickel business operation.

North Atlantic operations' EBITDA was sequentially higher in 1Q22 mainly due to stronger nickel realized price. This effect was partially compensated by more purchased feed at higher prices.

PTVI's EBITDA was higher in 1Q22 compared to 4Q21 mainly due to higher nickel prices, which was partially compensated by lower sales volumes due to planned furnace rebuild which started in December and is expected to be finished in 2Q22.

Onça Puma's EBITDA was higher in 1Q22 compared to 4Q21 mainly due higher nickel realized prices and nickel sales volumes.

Nickel Revenue and Realized Price

Net revenue by product - Nickel operations, ex-marketing activities

US\$ million	1Q22	4Q21	1Q21
Nickel	866	851	846
Copper	164	210	239
Gold as by-product	14	11	16
Silver as by-product	5	5	4
PGMs	110	64	183
Cobalt	32	31	19
Others	7	3	6
Total	1,198	1,175	1,313

Volume sold - Nickel operations

'000 metric tons	1Q22	4Q21	1Q21
Nickel ¹	39	45	48
Upper Class I	20	22	25
- of which: EV Battery	1.3	2.5	
Lower Class I nickel	5	6	8
Class II nickel	9	13	12
Intermediates	5	4	3
Copper	16	21	26
Gold as by-product ('000 oz)	8	6	10
Silver as by-product ('000 oz)	215	224	163
PGMs ('000 oz)	49	33	60
Cobalt (metric ton)	415	483	423

¹ Nickel sales volumes were adjusted in the financial report to reflect VNC divestment

Nickel realized price

US\$/t	1Q22	4Q21	1Q21
LME average nickel price	26,395	19,821	17,570
Average nickel realized price	22,195	19,088	17,630
Contribution to the nickel realized price by category:			
Nickel average aggregate premium	(110)	140	(10)
Other timing and pricing adjustments contribution	(4,090)	(873)	70

Nickel realized price in 1Q22 increased 16% q/q mainly due to 33% higher LME nickel average price. The positive effect was partially offset by US\$ 250/t lower Nickel aggregate premium and US\$ 3,217/t lower timing and pricing adjustments contributions.

Premiums / discount by nickel product

US\$/t	1Q22	4Q21	1Q21
Upper Class I nickel	1,250	900	820
Lower Class I nickel	550	180	140
Class II nickel	90	20	(750)
Intermediates	(6,480)	(3,840)	(3,860)

Other timing and pricing adjustments had an aggregate negative impact of US\$ 4,090/t in 1Q22, due to (i) the 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\$ 1,969/t, (ii) fixed-price sales, with a negative impact of US\$ 224/t and (iii) the effect of the hedging on Vale's nickel price realization, with a negative impact of US\$ 1,899/t⁵ in the quarter.

Product type by operation

% of source sales	North Atlantic	PTVI	Onça Puma	Total 1Q22	Total 4Q21
Upper Class I	73.6	-	-	50.2	50.0
Lower Class I	19.9	-	-	13.5	12.6
Class II	3.6	51.9	100	23.4	28.5
Intermediates	2.9	48.1	-	12.9	8.9

⁵ Vale has put in place derivatives positions related to the Nickel Revenue Hedging Program to provide stable cash generation during a period of significant investments. As of March 31st, 2022, the average strike price for the forward position was US\$ 21,436/t.

Nickel Costs and Expenses

Nickel COGS, excluding marketing activities - 4Q21 x 1Q22

US\$ million	Variance drivers				Total variation	1Q22
	4Q21	Volume	Exchange rate	Others		
Nickel operations	718	(76)	(0)	36	(40)	678
Depreciation	211	(36)	(2)	(8)	(46)	165
Total	929	(112)	(2)	28	(86)	843

Nickel operations – unit cash cost of sales, net of by-product credits

US\$/t	1Q22	4Q21	1Q21
North Atlantic operations ¹	9,505	11,110	3,774
PTVI	8,792	8,946	7,836
Onça Puma	11,919	13,612	7,763

¹ North Atlantic figures include Clydach refining costs.

North Atlantic operations' unit cash cost was positively impacted q/q by higher by-products credits and negatively impacted y/y by lower fixed cost dilution and by-products credits.

PTVI's unit cash cost was positively affected in 1Q22 by lower maintenance costs and lower fuel consumption due to the furnace rebuild, which is mostly sustaining investment.

Onça Puma's unit cash cost decreased mainly due to higher dilution of fixed costs, which were partially offset by the corrective maintenance on the electrical furnace that occurred in February.

Selling expenses and other expenses totaled US\$ 8 million in 1Q22 (includes US\$ 4million related to mines placed in care and maintenance in North Atlantic).

R&D expenses were US\$ 16 million in 1Q22, lower than 4Q21. These expenses encompass R&D initiatives for further operational improvements in North Atlantic.

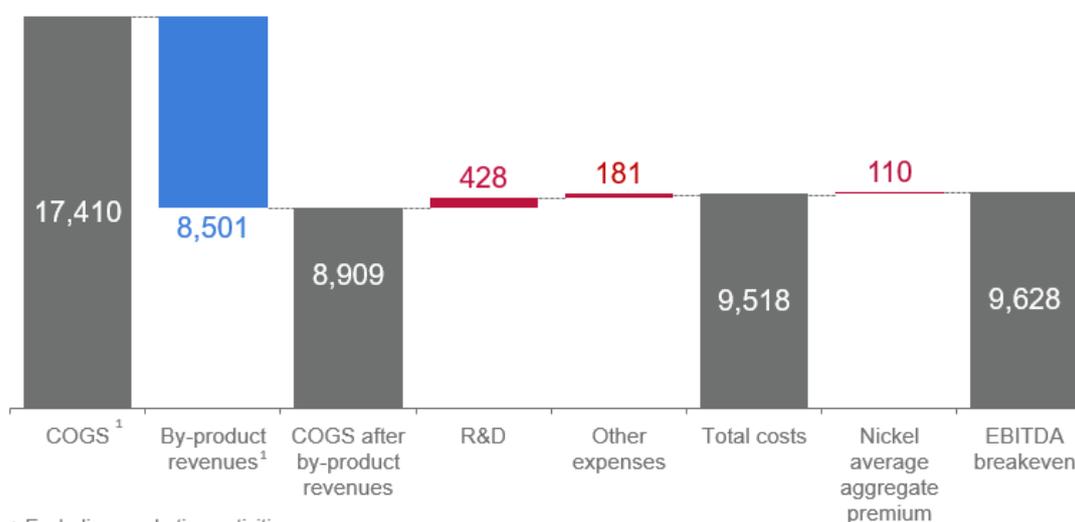
Selected financial indicators - Nickel operations, ex- marketing activities

US\$ million	1Q22	4Q21	1Q21
Net Revenues	1,198	1,175	1,313
Costs ¹	(679)	(718)	(650)
SG&A and other expenses ¹	(8)	(27)	(10)
Pre-operating and stoppage expenses ¹	-	(1)	-
R&D expenses	(16)	(28)	(11)
Adjusted EBITDA	495	401	642
Depreciation and amortization	(165)	(212)	(220)
Adjusted EBIT	330	189	422
Adjusted EBIT margin (%)	27.6	16.1	32.1

¹ Net of depreciation and amortization

EBITDA break-even – nickel operations⁶

US\$/t, 1Q22



¹ Excluding marketing activities

Copper operations – Salobo and Sossego

Copper – EBITDA by operation

US\$ million	1Q22	4Q21	1Q21
Salobo	260	253	284
Sossego	(15)	163	101
Others Copper ¹	(19)	(10)	(15)
Total	226	406	369

¹ Includes research expenses related to the Hu'u project.

Salobo's EBITDA increase is mainly attributed to the high-cost base in 4Q21 due to the conveyor belt fire in October.

Sossego's negative EBITDA in 1Q22 is mainly associated to the SAG mill scheduled maintenance, resulting in higher costs and significantly lower production and sales volumes.

⁶ Considering only the cash effect of US\$ 400/oz that Wheaton Precious Metals pays for 70% of Sudbury's gold by-product, nickel operations EBITDA break-even would increase to US\$ 10,123/t.

Copper revenue and realized price

Net operating revenue by product - Copper operations

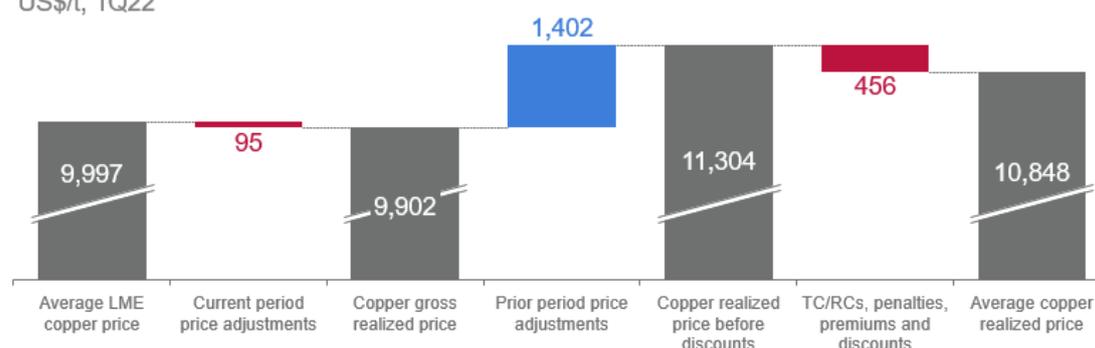
US\$ million	1Q22	4Q21	1Q21
Copper	370	539	431
Gold as by-product	101	127	119
Silver as by-product	3	3	4
Total	474	669	554

Volume sold - Copper operations

'000 metric tons	1Q22	4Q21	1Q21
Copper	34	53	45
Gold as by-product ('000 oz)	54	71	66
Silver as by-product ('000 oz)	126	128	152

Price realization – copper operations

US\$/t, 1Q22



Vale's copper products are sold on a provisional pricing basis⁷ during the quarter, with final prices determined in a future period, generally one to four months forward.

- Current period price adjustments: at the end of the quarter, mark-to-market of open invoices based on the copper price forward curve⁸
- Prior period price adjustment: based on the difference between the price used in final invoices (and in the mark-to-market of invoices from previous quarters still open at the end of the quarter) and the provisional prices used for sales in prior quarters
- TC/RCs, penalties, premiums and discounts for intermediate products

The positive effects of the prior period price adjustments of US\$ 1,402/t, partially offset by current period price adjustments of negative US\$ 95/t, were mainly due to the forward price increase during the first quarter.

⁷ On March 31st, 2022, Vale had provisionally priced copper sales from Sossego and Salobo totaling 44,494 tons valued at an LME forward price of US\$ 10,386/t, subject to final pricing over the following months.

⁸ Includes a small number of final invoices that were provisionally priced and settled within the quarter.

Copper Costs and Expenses

Salobo unit cash costs after by-products have decreased mainly due to higher dilution of fixed costs and lower costs after the conveyor belt fire in 4Q21, which were partially offset by planned and corrective maintenance in the mill liners. Sossego unit cash cost has increased as a result of the ongoing SAG mill extended scheduled maintenance.

Copper COGS - 4Q21 x 1Q22

US\$ million	Variance drivers					1Q22
	4Q21	Volume	Exchange rate	Others	Total variation	
Copper operations	241	(70)	11	45	(13)	228
Depreciation	34	(14)	4	9	(1)	33
Total	275	(84)	15	54	(14)	261

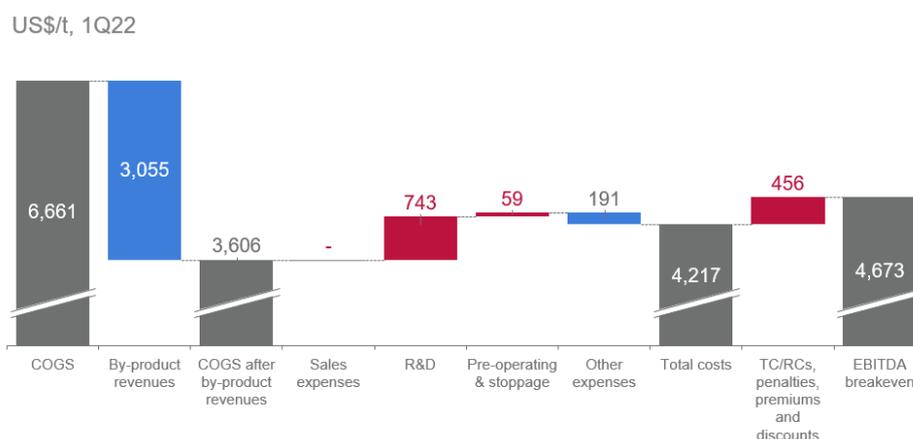
Copper operations – unit cash cost of sales, net of by-product credits

US\$/t	1Q22	4Q21	1Q21
Salobo	1,624	1,992	106
Sossego	13,917	2,255	2,711

Selling and other expenses were a revenue of US\$ 6 million mainly due to the sale of mineral rights (US\$ 11 million). Pre-operational and stoppage expenses totaled US\$ 2 million in 1Q22. Research and development expenses were US\$ 25 million in 1Q22, with Hu'u-related expenditures amounting to US\$ 18 million and Sossego-related expenses amounting to US\$ 7 million.

EBITDA break-even – copper operations⁹

The realized price to be compared to the EBITDA break-even should be the copper realized price before discounts (US\$ 11,304/t), given that TC/RCs, penalties and other discounts are already part of the EBITDA break-even build-up.



⁹ Considering only the cash effect of US\$ 400/oz that Wheaton Precious Metals pays for 75% of Salobo's gold by-product, copper operations EBITDA break-even would increase to US\$ 6,499/t.

Selected financial indicators - Copper operations, ex-marketing activities

<i>US\$ million</i>	1Q22	4Q21	1Q21
Net Revenues	474	669	554
Costs ¹	(227)	(241)	(166)
SG&A and other expenses ¹	6	(2)	-
Pre-operating and stoppage expenses ¹	(2)	(1)	(1)
R&D expenses	(25)	(19)	(18)
Adjusted EBITDA	226	406	369
Depreciation and amortization	(33)	(34)	(31)
Adjusted EBIT	193	372	338
Adjusted EBIT margin (%)	40.7	55.6	61.0

¹ Net of depreciation and amortization

Coal – Discontinued Operations

Volume sold

'000 metric tons	1Q22	4Q21	1Q21
Metallurgical coal	793	959	474
Thermal coal	1,012	1,691	541
Total	1,805	2,650	1,015

Net operating revenue by product

US\$ million	1Q22	4Q21	1Q21
Metallurgical coal	284	277	58
Thermal coal	163	195	34
Total¹	448	478	92

¹ Includes US\$ 4 million from general cargo in 1Q22 and US\$ 6 million in 4Q21

Coal prices

US\$/ metric ton	1Q22	4Q21	1Q21
Metallurgical coal index price ¹	487.8	368.7	127.1
Vale's metallurgical coal realized price	357.4	288.8	122.1
Thermal coal index price ²	238.0	138.7	90.8
Vale's thermal coal realized price	160.7	115.1	62.7
Vale's average realized price	247.1	178.0	90.4

¹ Reference price Premium Low Vol Hard Coking Coal FOB Australia.

² McCloskey FOB Richards Bay

Pro-forma cash cost

US\$/ metric ton	1Q22	4Q21	1Q21
Pro-forma operational costs ¹ (A)	147.6	123.8	99.4
Nacala non-operational tariff ² (B)	n.a.	n.a.	29.9
Other costs (C) ³	(7.1)	5.6	(10.4)
Cost at Nacala Port (D = A+B+C)	140.5	129.4	118.9
NLC's debt service to Vale (E)	n.a.	n.a.	77.1
Pro-forma C1 cash cost (F = D-E)	140.5	129.4	41.8
Idle capacity	-	-	205.1
Total	140.5	129.4	246.9

¹ Includes the inferred NLC tariff components related to fixed and variable costs and excludes royalties in 1Q21.

² Up until 2Q21, it included the inferred NLC tariff components related to sustaining capex, working capital, taxes and other financial items.

³ Average costs of inventories are monthly tested vs. the expected sales prices leading to positive or negative variations, depending on previous provisions recorded.

Selected financial indicators - Coal

US\$ million	1Q22	4Q21	1Q21
Net Revenues	448	478	92
Costs ^{1 2}	(264)	(351)	(329)
Expenses ¹	(12)	(23)	2
R&D expenses	(1)	(2)	(2)
Dividends received from associates and JVs	-	-	78
Adjusted EBITDA	171	102	(159)
Depreciation and amortization	-	-	-
Adjusted EBIT	171	102	(159)
Adjusted EBIT margin (%)	38	21	(173)

¹ Net of depreciation and amortization

² Including idle capacity

ANNEXES

SIMPLIFIED FINANCIAL STATEMENTS

Income Statement

<i>US\$ million</i>	1Q22	4Q21	1Q21
Net operating revenue	10,812	13,105	12,553
Cost of goods sold and services rendered	(4,622)	(6,494)	(4,298)
Gross profit	6,190	6,611	8,255
Gross margin (%)	57.3	50.4	65.8
Selling and administrative expenses	(121)	(131)	(104)
Research and evaluation expenses	(121)	(177)	(98)
Pre-operating and operational stoppage	(154)	(147)	(145)
Brumadinho event and de-characterization of dams	(160)	(2,115)	(115)
Other operational expenses, net	(106)	(279)	(15)
Impairment reversal (impairment and disposals) of non-current assets	1,072	(205)	(117)
Operating income	6,600	3,557	7,661
Financial income	150	113	58
Financial expenses	(445)	(23)	(1,364)
Other financial items, net	53	3,068	1,228
Equity results and other results in associates and joint ventures	211	(955)	(1)
Income before income taxes	6,569	5,760	7,582
Current tax	(253)	(483)	(1,515)
Deferred tax	(1,838)	130	(295)
Net income from continuing operations	4,478	5,407	5,772
Net income attributable to noncontrolling interests	22	55	12
Net income from continuing operations attributable to Vale's stockholders	4,456	5,352	5,760
Discontinued operations			
Net income (Loss) from discontinued operations	2	89	(295)
Net income (Loss) from discontinued operations attributable to noncontrolling interests	-	14	(81)
Net income (Loss) from discontinued operations attributable to Vale's stockholders	2	75	(214)
Net income	4,480	5,496	5,477
Net income (Loss) attributable to Vale's to noncontrolling interests	22	69	(69)
Net income attributable to Vale's stockholders	4,458	5,427	5,546
Earnings per share (attributable to the Company's stockholders - US\$):			
Basic and diluted earnings per share (attributable to the Vale's stockholders - US\$)	0.93	1.07	1.08

Equity income (loss) by business segment

<i>US\$ million</i>	1Q22	%	4Q21	%	1Q21	%
Ferrous Minerals	16	62	36	19	15	(115)
Base Metals	2	8	1	1	-	-
Others	8	30	154	80	(28)	215
Total	26	100	191	100	(13)	100

Balance sheet

US\$ million	3/31/2022	12/31/2021	3/31/2021
Assets			
Current assets	19,465	22,360	23,173
Cash and cash equivalents	9,061	11,721	12,883
Short term investments	43	184	1,429
Accounts receivable	3,123	3,914	3,515
Other financial assets	268	111	289
Inventories	5,038	4,377	4,274
Recoverable taxes	832	862	466
Others	291	215	317
Non-current assets held for sale	809	976	-
Non-current assets	15,181	14,389	14,217
Judicial deposits	1,455	1,220	1,146
Other financial assets	390	143	2,111
Recoverable taxes	1,157	935	1,107
Deferred income taxes	11,192	11,441	9,207
Others	987	650	646
Fixed assets	58,503	52,693	49,594
Total assets	93,149	89,442	86,984
Liabilities			
Current liabilities	14,668	15,198	11,827
Suppliers and contractors	3,446	3,475	3,113
Loans, borrowings and leases	1,103	1,204	989
Other financial liabilities	2,362	1,962	2,082
Taxes payable	927	2,177	830
Settlement program (REFIS)	387	324	311
Provisions	750	1,045	721
Liabilities related to associates and joint ventures	2,361	1,785	846
Liabilities related to Brumadinho	1,385	1,156	1,847
De-characterization of dams and asset retirement obligations	646	621	549
Dividends and interest on capital	-	-	21
Others	845	1,094	518
Liabilities associated with non-current assets held for sale	456	355	-
Non-current liabilities	39,992	38,938	39,728
Loans, borrowings and leases	12,912	12,578	12,818
Participative stockholders' debentures	4,299	3,419	4,045
Other financial liabilities	2,348	2,571	4,418
Settlement program (REFIS)	2,247	1,964	2,121
Deferred income taxes	1,830	1,881	1,944
Provisions	2,782	3,419	3,589
Liabilities related to associates and joint ventures	1,288	1,327	886
Liabilities related to Brumadinho	2,807	2,381	2,167
De-characterization of dams and asset retirement obligations	7,610	7,482	5,451
Streaming transactions	1,683	1,779	1,986
Others	186	137	303
Total liabilities	54,660	54,136	51,555
Stockholders' equity	38,489	35,306	35,429
Total liabilities and stockholders' equity	93,149	89,442	86,984

Cash flow

US\$ million	1Q22	4Q21	1Q21
Cash flow from operations	5,531	4,228	9,071
Interest on loans and borrowings paid	(179)	(94)	(288)
Cash paid on settlement of Derivatives, net	(76)	(80)	(199)
Payments related to Brumadinho	(64)	(1,004)	(65)
Payments related to de-characterization of dams	(69)	(84)	(84)
Interest on participative stockholders debentures paid	-	(225)	-
Income taxes (including settlement program)	(2,577)	(951)	(1,164)
Net cash provided by operating activities from continuing operations	2,566	1,790	7,271
Net cash provided by operating activities from discontinued operations	41	90	(249)
Net cash provided by operating activities	2,607	1,880	7,022
Cash flows from investing activities			
Short term investment	2	331	(716)
Capital expenditures	(1,136)	(1,751)	(980)
Additions to investment	-	-	(42)
Proceeds from disposal of Mosaic shares	-	1,259	-
Dividends received from associates and JVs	65	142	-
Disbursement related to VNC sale	-	-	(555)
Proceeds from disposal of CSI	437	-	-
Other investment activities, net	-	(276)	(93)
Net cash used in investing activities from continuing operations	(632)	(295)	(2,386)
Net cash used in investing activities from discontinued operations	(38)	(81)	40
Net cash used in investing activities	(670)	(376)	(2,346)
Cash flows from financing activities			
Loans and financing:			
Loans and borrowings from third-parties	425	630	290
Payments of loans and borrowings from third-parties	(395)	(404)	(1,233)
Payments of leasing	(41)	(63)	(51)
Payments to stockholders:			
Dividends and interest on capital paid to stockholders	(3,480)	-	(3,884)
Dividends and interest on capital paid to noncontrolling interest	(3)	(21)	(3)
Share buyback program	(1,788)	(701)	-
Net cash used in financing activities from continuing operations	(5,282)	(559)	(4,881)
Net cash used in financing activities from discontinued operations	(11)	(3)	(4)
Net cash used in financing activities	(5,293)	(562)	(4,885)
Increase (decrease) in cash and cash equivalents	(3,356)	942	(209)
Cash and cash equivalents in the beginning of the period	11,721	10,857	13,487
Effect of exchange rate changes on cash and cash equivalents	707	(78)	(395)
Cash and cash equivalents from subsidiaries sold, net	(11)	-	-
Cash and cash equivalents at the end of period	9,061	11,721	12,883
Non-cash transactions:			
Additions to property, plant and equipment - capitalized loans and borrowing costs	14	15	16
Cash flows from operating activities			
Income before income taxes	6,569	5,760	7,582
Adjusted for:			
Provisions related to Brumadinho	-	201	-
Provision for de-characterization of dams	37	1,725	-
Equity results and other results in associates and joint ventures	(211)	955	1
Impairment and disposal of non-current assets	(1,072)	205	117
Depreciation, depletion and amortization	686	821	731
Financial results, net	242	(3,158)	78
Change in assets and liabilities			
Accounts receivable	877	(3,142)	1,402
Inventories	(304)	423	(191)
Suppliers and contractors	(672)	(103)	(302)
Provision - Payroll, related charges and other remunerations	(328)	170	(283)
Other assets and liabilities, net	(293)	371	(64)
Cash flow from operations	5,531	4,228	9,071

REVENUES, VOLUMES SOLD, PRICES AND MARGINS

Net operating revenue by destination

US\$ million	1Q22	%	4Q21	%	1Q21	%
North America	479	4.4	464	3.5	481	3.8
USA	313	2.9	366	2.8	383	3.1
Canada	166	1.5	98	0.7	98	0.8
South America	1,307	12.1	1,101	8.4	1,353	10.8
Brazil	1,128	10.4	919	7.0	1,134	9.0
Others	179	1.7	182	1.4	219	1.7
Asia	7,067	65.4	9,607	73.3	8,516	67.8
China	5,389	49.8	7,119	54.3	6,953	55.4
Japan	861	8.0	1,402	10.7	623	5.0
South Korea	255	2.4	518	4.0	337	2.7
Others	562	5.2	568	4.3	603	4.8
Europe	1,462	13.5	1,286	9.8	1,932	15.4
Germany	508	4.7	432	3.3	635	5.1
Italy	182	1.7	118	0.9	144	1.1
Others	772	7.1	736	5.6	1,153	9.2
Middle East	242	2.2	322	2.5	59	0.5
Rest of the World	255	2.4	325	2.5	212	1.7
Total	10,812	100.0	13,105	100.0	12,553	100.0

Volume sold - Minerals and metals

'000 metric tons	1Q22	4Q21	1Q21
Iron ore fines	51,311	81,749	57,631
ROM	1,035	607	426
Pellets	7,011	10,351	6,271
Thermal coal	1,012	1,691	541
Metallurgical coal	793	959	474
Nickel	39	45	48
Copper	50	74	71
Gold as by-product ('000 oz)	62	77	76
Silver as by-product ('000 oz)	341	352	315
PGMs ('000 oz)	49	33	60
Cobalt (metric ton)	415	483	428

Average realized prices

US\$/ton	1Q22	4Q21	1Q21
Iron ore fines Vale CFR reference (dmt)	141.6	109.6	166.9
Iron ore fines Vale CFR/FOB realized price	141.4	107.2	157.2
Pellets CFR/FOB (wmt)	194.6	182.6	192.6
Thermal coal	160.7	115.1	62.7
Metallurgical coal	357.4	288.8	122.1
Nickel	22,195	19,088	17,630
Copper	10,619	10,166	9,409
Gold (US\$/oz)	1,862	1,795	1,781
Silver (US\$/oz)	23.47	21.32	24.58
Cobalt (US\$/t)	78,085	63,079	44,834

Operating margin by segment (EBIT adjusted margin)

%	1Q22	4Q21	1Q21
Ferrous Minerals	61.7	54.6	70.9
Base Metals	28.6	25.4	38.2
Total	51.1	29.8	62.0

RECONCILIATION OF IFRS AND “NON-GAAP” INFORMATION

(a) Adjusted EBIT

US\$ million	1Q22	4Q21	1Q21
Net operating revenues	10,812	13,105	12,553
COGS	(4,622)	(6,494)	(4,298)
Sales and administrative expenses	(121)	(131)	(104)
Research and development expenses	(121)	(177)	(98)
Pre-operating and stoppage expenses	(154)	(147)	(145)
Brumadinho event and dam de-characterization of dams	(160)	(2,115)	(115)
Other operational expenses, net	(106)	(279)	(15)
Dividends received from associates and JVs	-	142	-
Adjusted EBIT from continuing operations	5,528	3,904	7,778

(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 dividends received and interest from 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 show 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	1Q22	4Q21	1Q21
Adjusted EBITDA from continuing operations	6,214	4,726	8,509
Working capital:			
Accounts receivable	877	(3,142)	1,402
Inventories	(304)	423	(191)
Suppliers and contractors	(672)	(103)	(302)
Provision - Payroll, related charges and other remunerations	(328)	170	(283)
Provisions related to Brumadinho	-	201	-
Provision for de-characterization of dams	37	1,725	-
Others	(293)	228	(64)
Cash provided from continuing operations	5,531	4,228	9,071
Income taxes paid - including settlement program	(2,577)	(951)	(1,164)
Interest on loans and borrowings paid	(179)	(94)	(288)
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Payments related to de-characterization of dams	(69)	(84)	(84)
Interest on participative shareholders' debentures paid	-	(225)	-
Cash received (paid) on settlement of Derivatives, net	(76)	(80)	(199)
Net cash provided by operating activities from continuing operations	2,566	1,790	7,271
Net cash provided by operating activities from discontinued operations	41	90	(249)
Net cash provided by (used in) operating activities	2,607	1,880	7,022

Reconciliation between adjusted EBITDA and net income (loss)

<i>US\$ million</i>	1Q22	4Q21	1Q21
Adjusted EBITDA from continuing operations	6,214	4,726	8,509
Depreciation, depletion and amortization	(686)	(822)	(731)
Dividends received and interest from associates and joint ventures	-	(142)	-
Impairment reversal (impairment and disposals) of non-current assets	1,072	(205)	(117)
Operating income	6,600	3,557	7,661
Financial results	(242)	3,158	(78)
Equity results and other results in associates and joint ventures	211	(955)	(1)
Income taxes	(2,091)	(353)	(1,810)
Net income from continuing operations	4,478	5,407	5,772
Net income (loss) attributable to noncontrolling interests	22	55	12
Net income attributable to Vale's stockholders	4,456	5,352	5,760

(c) Net debt

<i>US\$ million</i>	1Q22	4Q21	1Q21
Gross debt	12,349	12,180	12,176
Leases	1,666	1,602	1,631
Cash and cash equivalents ¹	9,104	11,905	14,312
Net debt	4,911	1,877	(505)

¹ Including financial investments

(d) Gross debt / LTM Adjusted EBITDA

<i>US\$ million</i>	1Q22	4Q21	1Q21
Gross debt and leases / LTM Adjusted EBITDA (x)	0.5	0.4	0.5
Gross debt and leases / LTM operational cash flow (x)	0.6	0.5	0.6

(e) LTM Adjusted EBITDA / LTM interest payments

<i>US\$ million</i>	1Q22	4Q21	1Q21
Adjusted LTM EBITDA / LTM gross interest (x)	46.5	48.1	28.0
LTM adjusted EBITDA / LTM interest payments (x)	33.4	32.0	27.8

(f) US dollar exchange rates

<i>R\$/US\$</i>	1Q22	4Q21	1Q21
Average	5.2299	5.5860	5.4833
End of Period	4.7378	5.5805	5.6973