



Tailings' filtration plant at Vargem Grande complex, delivered in March 2021

# VALE'S PERFORMANCE IN 1Q21



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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 Nouvelle-Calédonie SAS, Vale Oman Pelletizing Company LLC and Vale Oman Distribution Center LLC.

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Cautionary Note to U.S. Investors - The SEC 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, including 'measured resources,' 'indicated resources,' 'inferred resources,' 'geologic resources', which would not be 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. 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://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 1Q21 performance in review

Rio de Janeiro, April 26, 2021 – *"I am confident that our positive financial results reflect our consistency in delivering our promises in de-risking Vale. In the first three months of the year the Global Settlement of Brumadinho became effective in a process conducted with transparency, legitimacy and legal certainty. In the same period, we concluded the sale of our operations of Vale New Caledonia, an important milestone in divesting non-core assets and shortly thereafter our Board of Director approved a share buyback program demonstrating the management confidence in Vale's potential to consistently create and share value."*, commented Eduardo Bartolomeo, Chief Executive Officer.

In 1Q21 we advanced in de-risking Vale, despite the aggravation of COVID-19 situation in some regions where we operate.

### Reparation of Brumadinho

The Global Settlement, entered into in February and certified by court decision in April, ensures the continuity of initiatives that are being implemented since 2019 and provides for a concrete plan to repair the socio-environmental and socio-economic collective damage resulting from the B-1 dam rupture. In addition to the direct payments to be made by Vale, the company also has a portfolio of projects to be executed, part of those already defined and under implementation and other that will result from demands by the communities. In 2021, we expect to disburse US\$ 1.5 billion under the Global Settlement (including US\$ 1.2 billion in direct payments).

In the socio-environmental front, among other initiatives, we are working to ensure water availability for the 22 municipalities within the regions of the Paraopeba river basin and Belo Horizonte (MG):

- We are commissioning 11 kilometers and 5,000 liters/second system of water pipelines and reservoirs to ensure the current water demand of the metropolitan area of Belo Horizonte;
- While works to recover the Paraopeba river are ongoing, Vale continues to build water wells for riverside communities, expecting to conclude all the 136 water wells agreed upon by 2022.

In the socio-economic front, we are working together with the communities to rebuild infrastructure and foster means of living:

- Construction of a community center for the victims' families, serving approximately 200 people per day since February 2021, providing support services and an environment of comfort to pay honor to their beloved ones;
- Ongoing works of Parque Território, a combined effort with residents for urban redevelopment of Córrego do Feijão;
- Implementation of a sanitation system for the Pires community, covering 470 people;
- Capacity building for 52 social organizations, promoting fundraising for 30 projects and directly benefiting more than 12,000 people;
- Income generation support for small entrepreneurs, professional qualification in civil construction or gardening, and expansion of productive capacity for 230 farmers.

Additionally, over 100 thousand people that were covered by emergency payments will now be part of the Income Transfer Program under the scope of the agreement.

In the individual indemnification front, we were able to reach agreements with more 470 people in 1Q21 and, as of April 2021, over 10,200 people have been individually indemnified in civil and labor agreements.

For updated information on the advance of the reparation initiatives, please visit [www.vale.com/brumadinho](http://www.vale.com/brumadinho).

## Renova Foundation indemnities

After implementing of the Simplified Indemnity System approved by a Brazilian Federal Court in August 2020, the Renova Foundation accelerated payments to people who cannot offer proof of individual damages caused by the breach of the Fundão dam. During 1Q21, through the new system, the Foundation reached agreements with over 7,500 people. Since the Court decision, over 11,700 people and R\$ 1 billion were paid in 22 locations covered by joined the new System.

## Donations for fighting against COVID-19

Following the deterioration worsening of the COVID-19 outbreak in Brazil in 2021 and the shortage of supplies for ICUs, Vale and a pool of companies have joined forces to donate 3.4 million critical medicines for intubation, enough to manage 500 hospital beds for one month and a half. Sedatives, muscle neuroblocks and opioid analgesics, imported from China, are being delivered to the Brazilian Federal Government for later distribution through the public healthcare system (SUS).

Since 2Q20 Vale has donated US\$ 111 million to the fight against COVID-19 in the regions where it operates.

## Governance evolution

Changes to Vale's Bylaws enabling a more proactive and effective Board of Directors were approved at the Extraordinary General Meeting held in March 2021. With the proposal by the Board of Directors with the support of the Nomination Committee:

- The Board may now be composed of 11 to 13 individually elected directors, with no alternate members<sup>1</sup>;
- 7 members must be independent under a stricter concept of independence;
- Chairman and the Vice-Chairman will be elected by the General Meeting, with the adoption of a Lead Independent Director in case of election of a non-independent Chairman.

The next Annual General Meeting will be held on April 30, 2021.

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<sup>1</sup> Except for the member elected by Vale's employees, who will continue to have an alternate.

## First Integrated Report

Vale published its first Integrated Report, containing results attained in material topics selected after consultation with our main stakeholders. Adherence to the Integrated Reporting Council (IIRC) standard in addition to the Global Reporting Initiative (GRI) standard - adopted since 2007 by the company for its Sustainability report - aims to make Vale's ESG connection to its business model clearer, with a greater emphasis on risk management and the impacts created by its operations and activities.

Vale invites its shareholders to get to know the Integrated Report, and the ESG databook, available [here](#).

## Improvements in dams' safety

After the conclusion of works for stability improvements in 1Q21, the dams Itabiruçu, Capim Branco, Menezes II and Taquaras, all of them in the state of Minas Gerais, had their Emergence Level 1 protocol removed and their positive Stability Condition Declarations issued. We are working on safety improvements for the 29 tailings storage facilities which remain at Emergency Levels and expect to gradually achieve satisfactory safety conditions for all of them by the end of 2025.

## Resumption of production

We continued to progress with the Iron Ore production stabilization plan:

- We started commissioning 3 additional beneficiation lines at the processing plant in Timbopeba site, increasing wet processing production capacity to 12 Mtpy, adding 7 Mtpy to its current capacity.
- We also started-up Vargem Grande's tailings filtration plant, the first of four filtration plants to be built in Minas Gerais, reducing the dependence on dams and improving the average quality of our product portfolio by using wet processing at the site. The addition of 4 Mtpy of production capacity will take place from the 3Q21 along with the start-up of the Maravilhas III dam, which is in its final construction stage and will receive slime from the plant, equivalent to approximately 30% of the total tailings generated from this operation. The second plant, located in Itabira, is expected to start operation by the end of 2021.

For further details on our resumption plan and operational performance in 1Q21, please see the Production and Sales report published on April 19, 2021.

## Divestment of non-core assets

We have achieved two important milestones in our path to focus on our core business and control our cash drains.

On March 31, 2021 we concluded the sale of Vale New Caledonia - VNC to the Prony Resources New Caledonia Consortium, fulfilling our commitment to withdraw from New Caledonia in an orderly and responsible manner. We have disbursed US\$ 555 million as part of a US\$ 1.1 billion package to provide VNC with the means to build a path for sustainable operations.

In April, we completed the maintenance activities in our coal business in Mozambique and progressed with the commissioning of the revamped equipment. Mine and plant ramp-up is expected to be carried out in 2Q21 and should achieve a production run-rate of 15 Mtpy in 2H21.

We signed a definitive agreement to acquire Mitsui's stakes in Moatize coal mine and Nacala Logistics Corridor. We expect to close the transaction throughout 2021, after which we will begin the divesting process, once again guided by the preservation of its operational continuity, finding a responsible buyer for those assets.

## Sharing value creation

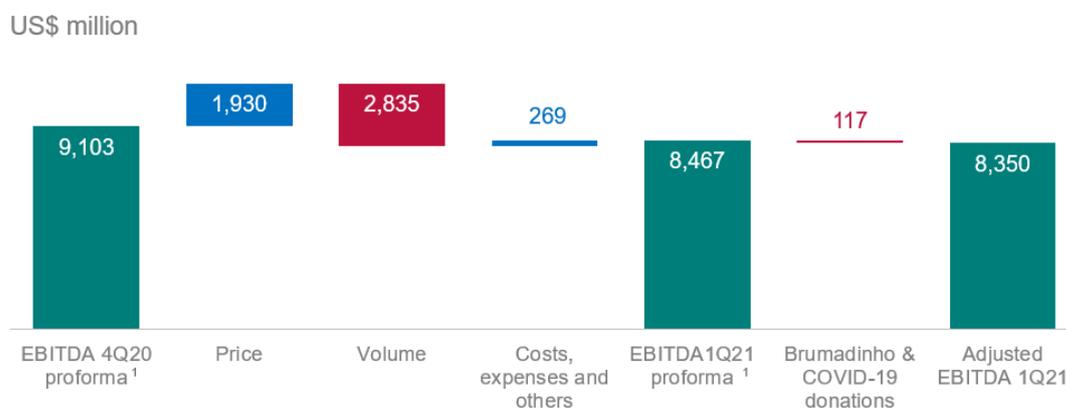
In addition to the shareholder remuneration paid in March, our Board of Director has approved a share buyback program of up to 5.3% of the total number of outstanding shares of the company at the time.

The buyback demonstrates management confidence in Vale's potential to create and share value consistently. Ruled by our strategic pillar 'Discipline in Capital Allocation', we consider the repurchase of our shares one of the best investments available for the company, not competing with our intention to consistently distribute dividends above the minimum level provided in our dividend policy.

## Vale's performance 1Q21

In 1Q21, Vale reported a proforma adjusted EBITDA of US\$ 8.467 billion, a record for a first quarter<sup>2</sup>, with seasonally lower volumes partially offset by higher commodity prices.

### Proforma EBITDA 1Q21 vs. 4Q20



<sup>1</sup> Net of Brumadinho expenses and COVID-19 donations

Below, we highlight the main drivers of our 1Q21 performance:

- Ferrous Minerals EBITDA was US\$ 7.811 billion, US\$ 989 million lower than 4Q20, mainly due to seasonally lower volumes (US\$ 2.616 billion) that were partially supported by higher average realized sales prices (US\$ 1.853 billion);

<sup>2</sup> Proforma adjusted EBITDA in 1Q21, excluding Brumadinho and COVID-19 donations expenses. Excluding the non-recurring gain from the transfer of aluminum assets in 1Q11.

- Base Metals EBITDA was US\$ 1.011 billion, a decrease of US\$ 160 million from 4Q20, mainly attributed to lower sales volumes in nickel and copper business (US\$ 156 million) and lower byproducts revenues from copper operations (US\$ 84 million), which were partially compensated by higher copper realized prices (US\$ 108 million);
- Coal EBITDA reached negative US\$ 159 million, up by US\$ 132 million, as a result of interest received from Nacala Logistics Corridor and higher costs and expenses incurred in 4Q20;
- Others EBITDA improved by US\$ 381 million, mostly due to Asset Retirement Obligations (ARO) charges in 4Q20.

### Selected financial indicators

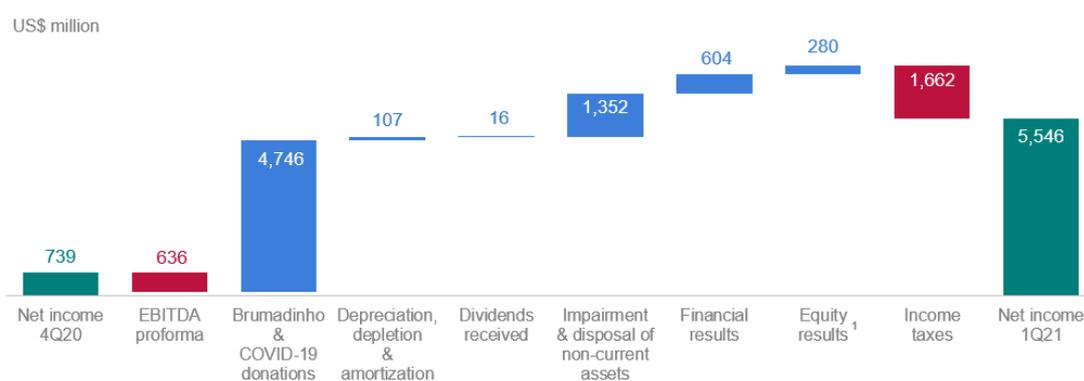
US\$ million	1Q21	4Q20	1Q20
Net operating revenues	12,645	14,769	6,969
Total costs and other expenses	4,989	6,607	4,818
Expenses related to Brumadinho	115	4,854	159
Adjusted EBIT	7,619	3,402	2,067
Adjusted EBIT margin (%)	60%	23%	30%
Adjusted EBITDA	8,350	4,240	2,882
Adjusted EBITDA margin (%)	66%	29%	41%
Proforma adjusted EBITDA <sup>1</sup>	8,467	9,103	3,041
Iron ore - 62% Fe reference price	166.9	133.7	89.0
Net income (loss)	5,546	739	239
Net debt <sup>2</sup>	(2,136)	(898)	4,808
Capital expenditures <sup>3</sup>	1,009	1,444	1,124

<sup>1</sup> Excluding expenses related to Brumadinho and COVID-19.

<sup>2</sup> Does not include leases (IFRS 16).

<sup>3</sup> Does not include Boston Metal investment of US\$ 6 million

### Net income 1Q21 vs. 4Q20



<sup>1</sup> Includes net income (loss) attributable to noncontrolling interests.

Net income was US\$ 5.546 billion in 1Q21, US\$ 4.807 billion higher than 4Q20, primarily due to (i) Brumadinho expenses, (ii) Nickel and Coal Businesses asset impairment charges, both in 4Q20, and (iii) higher financial results, despite the impact of the 9.6% BRL exchange rate devaluation on the mark-to-market of our hedge positions. Those effects were partially offset by the lower proforma adjusted EBITDA.

Total capex for 1Q21 amounted to US\$ 1.009 billion, US\$ 435 million lower than in 4Q20, explained by seasonally lower sustaining capex (US\$ 443 million). The execution of filtration plants, Northern System 240 and Gelado projects, in the Iron Ore business, and Salobo III and VBME projects, in the Base Metals business, progressed in line with 4Q20.

We generated US\$ 5.847 billion in Free Cash Flow from Operations in 1Q21, US\$ 971 million higher than in 4Q20, driven by the solid proforma EBITDA for the quarter and improvement in working capital, as a consequence of strong revenue collection. The cash generated from operations enabled us to manage our liabilities, with a debt net repayment of US\$ 943 million after retiring the EUR 750 million bonds maturing 2023, to distribute US\$ 3.884 billion to shareholders, and to pay US\$ 555 million for the divestment of VNC, and still increase our cash and short-term investments position by US\$ 465 million.

We ended the quarter with gross debt at US\$ 12.176 billion, US\$ 1.184 billion lower than at the end of 2020, mainly due to the abovementioned early bond redemption. Net debt totaled negative US\$ 2.136 billion in the same period, with expanded net debt at US\$ 10.712 billion. Expanded net debt should now hover at the US\$ 10 billion long-term reference level as we continue to generate cash, meet our obligations, distribute solid dividends and repurchase our own shares.

## Performance of business segments in 1Q21

### Ferrous Minerals EBITDA of US\$ 7.811 billion in 1Q21, record for a first quarter

- Iron ore fines' net revenue, excluding pellets and run of mine (ROM), decreased to US\$ 9.154 billion in 1Q21 vs. US\$ 10.765 billion in 4Q20, as a result of 29% lower sales volumes (US\$ 3.151 billion), which was partially compensated by 19% higher sales realized prices (US\$ 1.540 billion).
- Vale's reference CFR price was US\$ 171.1/t, and its average realized price CFR/FOB was US\$ 155.5/t, an increase of US\$ 24.8/t compared with 4Q20, mainly due to higher 62% Fe reference price and higher premiums and quality adjustments, which were partially offset by (i) the negative effect from pricing mechanisms, as provisional prices were marked at the end of the quarter at US\$ 159.9/t, a lower level than the quarter's reference CFR price, and (ii) higher proportion of FOB sales, which have a lower price due to the absence of freight charges.
- With reference prices in the month of April substantially above the provisional price of US\$ 159.9/t, it is expected that 2Q21 EBITDA will be positively impacted by the final pricing of these 1Q21 sales when ships arrive at destination ports.
- MB65% index averaged US\$ 191.2/dmt in 1Q21, 31% higher than 4Q20. The spread between the average of MB65% and the 62% iron ore reference price further increased to around \$24.3/t reflecting the search for productivity by steel mills in an environment of high coal prices in China, high steel margins and the scarcity of high-grade ore.
- Iron ore fines and pellets EBITDA break-even cost was US\$ 36.2/t, in line with 4Q20. The stable break-even was mainly a result of higher quality and pellet premiums that compensated the higher C1 and freight costs, due to lower fixed costs dilution and higher bunker prices, respectively.

## Base Metals EBITDA was US\$ 1.011 billion in 1Q21, US\$ 160 million lower than 4Q20

- Nickel business EBITDA was US\$ 642 million in 1Q21, US\$ 84 million lower than 4Q20.
- We had another quarter of steady nickel production rate at Onça Puma with its EBITDA above US\$ 50 million and a robust performance at North Atlantic refineries, with Long Harbour reaching record production level for a first quarter.
- Nickel sales volumes were in line with production but lower than the strong sales in 4Q20, when Vale seized the opportunity of reducing inventories into a recovering market. Lower sales volumes were partially offset by higher by-product revenue, mostly on the back of higher copper prices in the quarter;
- Copper business EBITDA was US\$ 369 million in 1Q21, US\$ 76 million lower than 4Q20, mainly due to lower production and sales volumes. A broad safety review to improve operating conditions impacted mining equipment availability and mine movement. Besides lower volumes, results were affected by higher unit costs due to lower fixed costs dilution and lower by-product revenues. Those effects were partially compensated by higher realized prices in 1Q21. We expect improvements from maintenance activities to materialize throughout the business in 2H21.

# Market overview

## Iron Ore

Iron ore 62% Fe reference price averaged US\$ 166.9/dmt in 1Q21, 25% higher than 4Q20. Iron ore prices started to pick up in the end of 4Q20 and the combination of seasonal supply reduction in 1Q21, low inventories across the supply chain, very strong economic activity return from Chinese New Year and recovery in economic activity ex-China lifted prices to near record highs. The under supplied scenario that led to a surge in iron ore prices through 1Q21 remains along 2Q21. Going forward on the year, on the supply side, volumes shall increase compared to 2H20 while iron ore demand might be impacted by production cuts due to environmental restrictions in China.

MB65% index averaged US\$ 191.2/dmt in 1Q21, 31% higher than 4Q20. Together with the hike of prices for medium grade ores, high grade ores were even further supported by steel prices moving to record levels in all main steel producing regions. The current price spread between 65% and 62% grades crossed the US\$ 30/t level in 1Q21 reaching levels similar to the record high achieved in Jun/2018. Even with higher iron ore price levels, steel margins moved to very healthy territory by the end of 1Q and kept increasing since, providing a fillip to demand for high grade ores. This has carried iron ore premiums for high grade ores up, together with a lower availability of high-quality ores. The potential of further restrictions over crude steel production in China due to environmental measures, while still under a highly demanded environment for steel may keep its prices at very high levels. Under this scenario, the alternative for China to meet its steel demand requirements shall be by shifting its steel exports into the domestic market. The decrease on China's steel exports will also support robust steel prices elsewhere consequently support high steel margins. Meanwhile, the environmental restrictions in China may also affect coal mines in China, limiting its supply and supporting higher prices within the country. Outside China, the increases of crude steel production may also increase coal demand. The combination of high steel margins and higher coal/coke prices is expected provide a very strong support for iron ore premiums along 2021.

China's crude steel production in 1Q21 totaled 271Mt, an increase of 15.6% YoY, driven by a relatively low base in 1Q20 and a strong demand post Lunar New Year holiday. Production curbs in Tangshan negatively affected pig iron production since March, but strong blast furnace output in January and February, active production in ex-Tangshan regions, as well as higher EAF utilization in March, contributed to strong steel production in 1Q21 and led to high steel margins. Going forward, Chinese steel market is concerned about further policy restriction - given the good steel margins, mills will look to accelerate steel production before NDRC and MIIT capacity control policy materializes. The market also looks forward to China's policy details of decarbonization in steel sector, which is expected to be positive for high iron ore grade demand.

The steel sector Ex-China operating conditions continue to improve as output and new orders are expanding at a sharper pace. Steel producers have recently indicated that this growth encouraged them to take on additional capacity. We have seen new orders growth accelerating mainly in Europe and the USA. As result, HRC prices reach record highs of US\$ 1,100/t in Europe and US\$ 1,500/t in the USA. In Europe, the steel-using sectors suffered severely from the first lockdown measures in 2020 but experienced a stronger than expected post-lockdown

rebound in manufacturing activities due to depleted stocks, supportive government measures and recovering demand. According to World Steel Association, EU27's 1Q21 steel production by the totaled 37.7Mt, +3% higher on YoY basis, despite the decline seen in Feb/21 due to weather disruptions. Turkey has continued with solid domestic demand driving steel production 9.5% higher in 1Q21 YoY. Regardless extended lockdowns along with the semiconductor supply disruptions, a healthy recovery in demand in all steel-using sectors is expected for 2021.

In the USA, mills efficiently closed production in 2020 as demand dropped (COVID-19 pandemic) but are not restarting fast enough to catch up with the demand as shown by steel production of 20.3Mt in the 1Q21, -6% YoY. The economy's restart is gaining traction. March's USA manufacturing PMI rose to 64.7 from 60.8 in February and vehicle sales grew 12.6% in March. Stimulus checks, warmer weather, and a steady decline in new virus cases fueled the strongest level of sales since Oct/17.

In Japan, Korea and Taiwan, steel production totaled 47Mt in 1Q21, +1% YoY, as steel mills see an expansion in production in response to new order volumes from downstream manufacturing industries, notably automotive, from both domestic and international markets, mainly China. However, the local and important automotive sector have been facing supply challenges of semiconductors supply with some carmakers reducing production in Apr/21. The expectation is of stabilization in the 2H21.

As for developing economies, steel demand has been recovering fast since 2H20 and steel output has been steadily growing, an 8% increase in the 1Q21. Construction sector has been strong and driving steel demand. Automotive also on its recovering path, however, also facing production constrains on the semiconductors' shortage. Steel production in Southeast Asia is set to continue growing on continuous investments in local plants, to fulfill domestic demand growth and steel imports substitutes.

## Coal

Coking coal: The FOB Australia premium low vol index averaged US\$128.0/t in 1Q21, up from the previous quarter's US\$108.2/t. The soft ban on Australian coal imposed by China since October 2020 remained in place throughout 1Q21 and was the main influence over pricing and trade flow dynamics. Price improved as Australian miners successfully diverted some sales from China to India, Europe, and JKT (Japan, Korea and Taiwan) markets. China continued to step-up purchases of Canada, USA and Russia coking coals in order to replace the absent Australia tonnages. Strong demand for ex-Australia coking coal pushed the CFR China index from an average of US\$161.2/t in 4Q20 to US\$218.1/t in 1Q21. As a result, the spread between PLV FOB Australia and CFR China prices reached a high level of US\$90/t.

Outlook: With the rollout of COVID-19 vaccines and further reopening of economies, global steel production is set to improve in the coming quarter, and this should benefit seaborne coking coal demand. It remains unclear how long Australian coal will be restricted into China and this is the key factor that will impact prices, although there are currently no signals for any changes in the next quarter. In the meantime, CFR China prices are likely to stay elevated given tight availability of ex-Australia and domestic materials.

Thermal coal: The Richards Bay 6000 kcal NAR price averaged US\$ 90.8/t in 1Q21, 25% higher than the previous quarter. The cold winter weather in Northeastern Asia and parts of Europe

lasted until January, which boosted coal burn since gas supply was not sufficient to fully cover demand. The La Niña cycle brought higher than normal rainfall in Indonesia, Southern Africa, and Australia; with tropical storm Eloise affecting South Africa's coal production in February and flooding in Newcastle disrupting Australia's coal supply in March. These factors created and maintained a tight supply-demand market for high-CV coal. In contrast, Australian mid-CV coal remained oversupplied as it continues to be shunned by its traditional market in China and the elevated freight market reduced its competitiveness into far-off markets. With mid-CV coal prices remaining subdued, the spread between the mid-CV and high-CV grades widened by 40% by the end of the quarter.

Outlook: The thermal coal market is expected to come off gradually in 2Q21 on seasonally lower power demand in spring, but the lingering threat of La Niña wet weather supply disruptions continues into May and pre-monsoon restocking demand from India and Pakistan are expected to keep prices supported. Lower domestic coal supply and the forecast of lower hydropower in China this summer would support coal imports and international coal prices.

## Nickel

LME nickel prices averaged US\$ 17,570/t in 1Q21, 10% higher than in 4Q20.

Total exchange inventories (LME and SHFE) increased, closing at 270.9 kt at the end of 1Q21, up 2% in the quarter. LME inventories stood at 260.2 kt at the end of 1Q21, an increase of 13.5 kt in the quarter. These increases were slightly offset by a 7.4 kt decrease in SHFE inventories to 10.7 kt by the end of 1Q21.

### Demand/Supply

Global sales of electric vehicles are on track to increase by over 80% from 1Q20 led by robust growth in China and moderate increases in Europe and North America. EV sales continue to gain market share with the penetration rate up over 2% from 1Q20. Looking at the automotive market as a whole, 1Q21 production increased 13% year over year, driven by strong numbers in China. The rest of the world is seeing a renewed lag in automotive sales, down 8% year over year, as the pandemic lingers and a shortage in semiconductors causes supply chain bottlenecks.

Global stainless-steel production increased 23% from 1Q20 as resilient growth in China and new capacity additions in Indonesia were offset by a tepid recovery in Europe and North America. Indonesia stainless steel production more than doubled from 1Q20. Nickel consumption in stainless increased 34% year over year as China and Indonesia capture market share with higher nickel contained 300 series stainless production. Visible Chinese stainless-steel inventories decreased 38% from 1Q20 as the global economy recovered from the pandemic.

The aerospace industry is beginning to recover with aircraft deliveries from Boeing and Airbus up 17% from 1Q20. COVID-19 cases showed signs of falling in early 1Q21 but have since seen a resurgence as variants of concern spread globally and slow vaccination progress in many countries lead governments to maintain strict travel restrictions.

The oil and gas industry has begun to recover as energy prices increase; rig counts are, however, lagging as investments on the sector are still ramping-up.

Despite COVID-19 related shutdowns, 1Q21 nickel production increased 11% from 1Q20 as operations were quick to return to normal.

Chinese NPI production declined 10% in 1Q21, compared to 1Q20, while Indonesian NPI production, increased 66%, over the same period. The 2020 Indonesian ore ban has forced the expansion of smelter capacity and the country has now surpassed China as the world's largest NPI producer. The country's HPAL (High-Pressure Acid Leach) projects however suffered some delays due to complexity (e.g. tailings disposal solutions) and high capital costs. These projects are expected to partially supply the EV market by producing a battery-suitable nickel material. Furthermore, in 1Q21, China's Tsingshan Holding Group announced it had signed agreements to provide nickel matte for conversion to nickel sulphate for the potential use in EVs, putting downward pressure on nickel prices as there is more potential of a closing supply gap. However, the economics and CO2 impacts of this route should not provide a long-term supply solution to the EV demand.

### **Outlook**

While demand continues to recover, we see the market in small surplus in 2021 as demand for nickel faces countervailing forces, COVID-19 lingers, and resilient production in China and Indonesia adapts to changing demand fundamentals. Growth in stainless-steel production and a shift towards the electrification of the world economies will improve demand in the medium term. Strong government incentive programs continue to drive EV adoption rates as countries commit to low emission targets with the market now recognizing this growth potential as battery chemistry favors higher nickel content due to its lower cost structure and higher energy density.

Our long-term outlook for nickel remains very positive driven by strong demand in the EV sector with cost of ownership nearing parity with ICE vehicles. Additionally, as countries continue to set aggressive decarbonization goals, growth in EVs and the infrastructure needed to support them is crucial. Strength in markets that were heavily impacted by the pandemic, such as aerospace and energy, are improving accordingly with the success of the global COVID-19 vaccine rollout. The global pursuit of net zero emission is expected to have positive impacts on the stainless steel, aerospace and energy markets in the long term.

## **Copper**

The LME copper prices posted strong gains in 1Q21, averaging US\$ 8,504/t compared to US\$ 7,166/t in 4Q20. This represents a 19%, or nearly US\$ 1,340/t, quarter over quarter increase.

LME copper inventories at the end of 1Q21 stood at 144.5 kt, an increase of 37 kt from the end of last quarter. SHFE inventories, including deliverable stocks, increased by 101.7 kt, to 188.4 kt at the end of 1Q21. COMEX copper inventories decreased by 5.6 kt, ending 1Q21 at 64.8 kt. Overall, copper exchange inventory increased by 132.6 kt, ending the quarter at 397.6 kt.

### **Demand/Supply**

Global refined copper demand increased 3.5% in 1Q21 compared to 1Q20, while concentrate demand increased slightly better, at 3.8% over the same period. Over the past year demand has been mainly driven by China as refined imports have reached record level. However, in 1Q21, all major regions registered growth increases compared to 1Q20. 1Q21 consumptions levels are just below those registered in 2019, pre-COVID. Manufacturing and automotive

activity remained robust which supported copper consumption. On the supply side, global refined copper production increased 1.8% in 1Q21 vs. 1Q20. Most mining operations which were disrupted by COVID-19 have returned to, or close to, normal operation. Containing the spread of COVID-19 however, continues to prove difficult, particularly in Latin American, and therefore, supply concerns, particularly concentrate supply, persist.

### **Outlook**

With demand strength and persisting supply issues, we continue to have a positive near-term view on copper. For 2021, we see the refined market now in a deficit, while the concentrate market where Vale participates primarily, appears very tight. This is reflected in the declining spot treatment and refining charges (TC/RC's), which ended the quarter 55% lower than the 2021 benchmark of US\$59.5/t (US\$ 5.95 cents/lb). Along with strong demand across the board, added support is coming from additional fiscal and monetary stimulus, mounting ESG pressures, and an accelerated transition towards sustainable energy (which is copper intensive).

Our long-term outlook for copper is very positive. Copper has a strong long-term growth profile driven by industrialization, construction and electrical network infrastructure, however, post-COVID we see an even brighter demand outlook. Governments globally have set ambitious decarbonization targets, and coupled with falling costs of renewables, and stimulus investments in the green economy, growth forecasts are increasing. This acceleration will lead to a pivot towards even more copper-intensive uses in renewable energy and transportation projects related to electric vehicles. On the supply side, growth continues to struggle given declining ore grades and the lack of major discoveries. While in the short term there are enough quality assets being developed to meet demand, significantly more quality assets will be required in the medium/long-term to replace existing operations ramping down or closing.

# Adjusted EBITDA

## Adjusted EBITDA

US\$ million	1Q21	4Q20	1Q20
Net operating revenues	12,645	14,769	6,969
COGS	(4,627)	(5,733)	(4,278)
SG&A	(105)	(188)	(115)
Research and development	(100)	(153)	(95)
Pre-operating and stoppage expenses	(145)	(193)	(268)
Expenses related to Brumadinho	(115)	(4,854)	(159)
Expenses related to COVID-19 donations	(2)	(9)	-
Other operational expenses	(10)	(331)	(62)
Dividends and interests on associates and JVs	78	94	75
<b>Adjusted EBIT</b>	<b>7,619</b>	<b>3,402</b>	<b>2,067</b>
Depreciation, amortization & depletion	731	838	815
<b>Adjusted EBITDA</b>	<b>8,350</b>	<b>4,240</b>	<b>2,882</b>
<b>Proforma adjusted EBITDA<sup>1</sup></b>	<b>8,467</b>	<b>9,103</b>	<b>3,041</b>

<sup>1</sup> Excluding expenses related to Brumadinho and COVID-19 donations.

## Adjusted EBITDA by business area<sup>1</sup>

US\$ million	1Q21	4Q20	1Q20
Ferrous Minerals	7,811	8,800	2,847
Base Metals	1,011	1,171	556
Coal	(159)	(291)	(158)
Others	(196)	(577)	(204)
Brumadinho expenses	(115)	(4,854)	(159)
Expenses related to COVID-19 donations	(2)	(9)	-
<b>Total</b>	<b>8,350</b>	<b>4,240</b>	<b>2,882</b>

<sup>1</sup> VNC results are reported in Others segment Information and previous quarters Base Metals results adjusted accordingly.

## Net operating revenue by business area<sup>1</sup>

US\$ million	1Q21	%	4Q20	%	1Q20	%
<b>Ferrous Minerals</b>	<b>10,505</b>	<b>83.1</b>	<b>12,203</b>	<b>82.6</b>	<b>5,296</b>	<b>76.0</b>
Iron ore fines	9,154	72.4	10,765	72.9	4,311	61.9
ROM	24	0.2	6	0.0	6	0.1
Pellets	1,208	9.6	1,295	8.8	852	12.2
Manganese ore	28	0.2	40	0.3	23	0.3
Ferroalloys	18	0.1	20	0.1	23	0.3
Others	73	0.6	77	0.5	81	1.2
<b>Base Metals</b>	<b>1,988</b>	<b>15.7</b>	<b>2,270</b>	<b>15.4</b>	<b>1,339</b>	<b>19.2</b>
Nickel	846	6.7	1,028	7.0	564	8.1
Copper	670	5.3	670	4.5	350	5.0
PGMs	183	1.4	178	1.2	210	3.0
Gold as by-product	135	1.1	231	1.6	179	2.6
Silver as by-product	8	0.1	15	0.1	12	0.2
Cobalt	19	0.2	19	0.1	17	0.2
Others	127	1.0	129	0.9	7	0.1
<b>Coal</b>	<b>92</b>	<b>0.7</b>	<b>128</b>	<b>0.9</b>	<b>148</b>	<b>2.1</b>
Metallurgical coal	58	0.5	91	0.6	94	1.3
Thermal coal	34	0.3	37	0.3	54	0.8
<b>Others</b>	<b>60</b>	<b>0.5</b>	<b>168</b>	<b>1.1</b>	<b>186</b>	<b>2.7</b>
<b>Total</b>	<b>12,645</b>	<b>100.0</b>	<b>14,769</b>	<b>100.0</b>	<b>6,969</b>	<b>100.0</b>

<sup>1</sup> VNC results are reported in Others segment Information and previous quarters Base Metals results adjusted accordingly.

## COGS by business segment<sup>1</sup>

US\$ million	1Q21	%	4Q20	%	1Q20	%
Ferrous Minerals	2,922	63.2	3,664	63.9	2,569	60.1
Base Metals	1,188	25.7	1,371	23.9	999	23.4
Coal	329	7.1	400	7.0	393	9.2
Others	188	4.1	298	5.2	317	7.4
<b>Total COGS</b>	<b>4,627</b>	<b>100.0</b>	<b>5,733</b>	<b>100.0</b>	<b>4,278</b>	<b>100.0</b>
Depreciation	688		791		729	
<b>COGS<sup>2</sup>, ex-depreciation</b>	<b>3,939</b>		<b>4,942</b>		<b>3,549</b>	

<sup>1</sup> VNC results are reported in Others segment Information and previous quarters Base Metals results adjusted accordingly.

<sup>2</sup> COGS currency exposure in 1Q21 was as follows: 52% USD, 40% BRL, 7.5% CAD and 0.5% Other currencies.

## Operating expenses

US\$ million	1Q21	4Q20	1Q20
<b>SG&amp;A ex-depreciation</b>	<b>96</b>	<b>179</b>	<b>98</b>
<b>SG&amp;A</b>	<b>105</b>	<b>188</b>	<b>115</b>
<b>Administrative</b>	<b>87</b>	<b>158</b>	<b>98</b>
Personnel	47	87	47
Services	17	35	18
Depreciation	9	9	17
Others	14	27	16
<b>Selling</b>	<b>18</b>	<b>30</b>	<b>17</b>
<b>R&amp;D</b>	<b>100</b>	<b>153</b>	<b>95</b>
<b>Pre-operating and stoppage expenses</b>	<b>145</b>	<b>193</b>	<b>268</b>
Depreciation	34	38	69
<b>Expenses related to Brumadinho</b>	<b>115</b>	<b>4,854</b>	<b>159</b>
Provisions	-	4,726	-
Incurred expenses	115	128	159
<b>Expenses related to COVID-19 donations</b>	<b>2</b>	<b>9</b>	<b>-</b>
<b>Other operating expenses</b>	<b>10</b>	<b>331</b>	<b>62</b>
<b>Total operating expenses</b>	<b>477</b>	<b>5,728</b>	<b>699</b>
Depreciation	43	47	86
<b>Operating expenses ex-depreciation</b>	<b>434</b>	<b>5,681</b>	<b>613</b>

SG&A expenses declined due to taxes payable on long-term incentive plans for company executives recorded in 4Q20.

Pre-operating and stoppage expenses declined in 1Q21, mainly due to the resumption of operations at Fábrica, Serra Leste, Viga and Vargem Grande pellet plant and performance improvement at Brucutu site. Please see “Pre-operating and stoppage expenses break-down” table below for details.

Other operating expenses fell in 1Q21 due to charges related to Asset Retirement Obligation revaluation recorded in 4Q20.

## Impact of Brumadinho provisions and expenses in 1Q21 – in US\$

US\$ million	Provisions balance 31dec20	EBITDA impact	Payments	PV & FX adjust	Provisions balance 31mar21
Decharacterization	2,289	-	(84)	(243)	1,962
Global Settlement	3,990	-	(12)	(437)	3,541
Other reparation provisions <sup>1</sup>	585	-	(58)	(54)	473
<b>Total Provisions</b>	<b>6,864</b>	<b>-</b>	<b>(154)</b>	<b>(734)</b>	<b>5,976</b>
Incurring expenses		(115)	(115)		
<b>Total</b>		<b>115</b>	<b>(269)</b>		

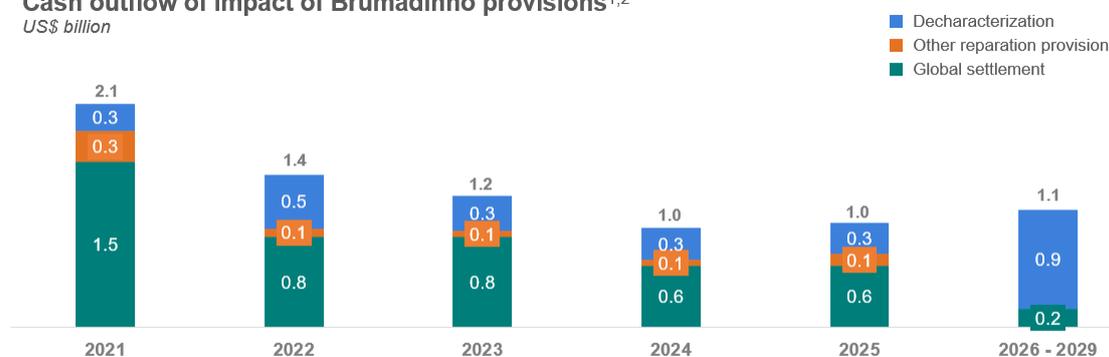
<sup>1</sup> Includes Individual, labor and emergency indemnifications and tailing removal and containment works

In 1Q21, Vale paid US\$ 269 million related to Brumadinho, including the Global Settlement (US\$ 12 million), decharacterization program (US\$ 84 million), other reparation provisions (US\$ 58 million) and incurred expenses (US\$ 115 million). The aggregate amount of the provisions is currently at US\$ 6.0 billion, mainly due to payments made during the quarter in the amount of US\$ 154 million, and the impact of the Brazilian real depreciation.

Payments related to the Global Settlement for Brumadinho Reparation should start in 2T21. Vale expects to disburse US\$ 1.5 billion in 2021 with respect to the Agreement, including US\$ 1.2 billion in direct payment obligations.

### Cash outflow of Impact of Brumadinho provisions<sup>1,2</sup>

US\$ billion



<sup>1</sup> Estimate cash outflow for 2021 - 2029 period, given BRL-USD exchange rates of 5.42 (April 2021 - December 2021) and 4.7 (2022-2029)

<sup>2</sup> Nominal amounts

## Impact of Brumadinho provisions and expenses since 2019

US\$ million	EBITDA impact by 2020	Payments By 2020	PV & FX adjust	Provisions balance 31 dec20	EBITDA impact in 1Q21	Payments 1Q21	PV & FX adjust 1Q21	Provisions balance 31mar21
Decharacterization	3,241	(451)	(501)	2,289	-	(84)	(243)	1,962
Agreements & donations <sup>1</sup>	8,056	(2,660) <sup>2</sup>	(821)	4,575	-	(70)	(491)	4,014
<b>Total Provisions</b>	<b>11,297</b>	<b>(3,111)</b>	<b>(1,322)</b>	<b>6,864</b>	-	<b>(154)</b>	<b>(734)</b>	<b>5,976</b>
Incurring expenses	1,240	(1,240)			(115)	<b>(115)</b>		
Others	122	-						
<b>Total</b>	<b>12,659</b>	<b>(4,351)</b>			<b>(115)</b>	<b>(269)</b>	<b>(734)</b>	

<sup>1</sup> Includes Global Settlement, individual, labor and emergency indemnifications and tailing removal and containment works.

<sup>2</sup> Includes cash outflows of US\$ 1,347 million and the release of judicial deposits of US\$ 1,313 million.

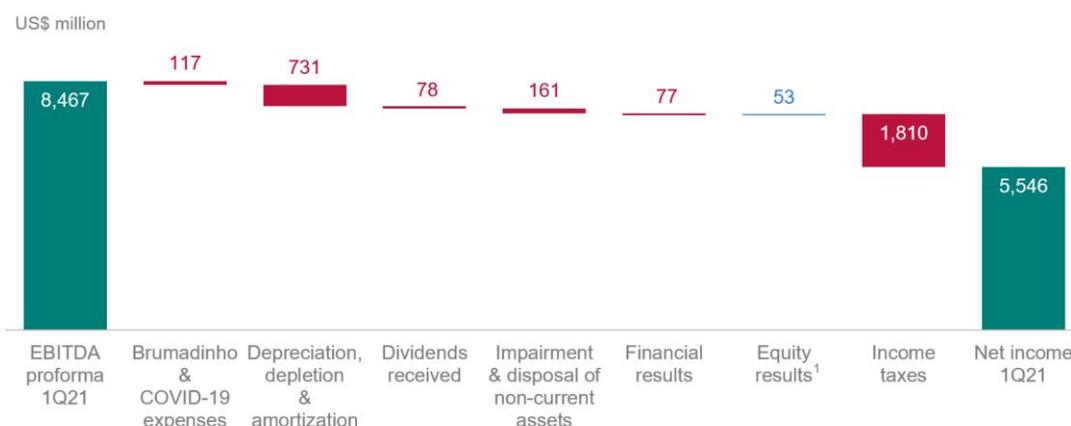
## Pre-operating and stoppage expenses break-down

US\$ million	1Q21	4Q20	1Q20
<b>Pre-operating and stoppage expenses</b>	<b>145</b>	<b>193</b>	<b>268</b>
Depreciation	34	38	69
<b>Pre-operating and stoppage expenses, ex-depreciation</b>	<b>111</b>	<b>155</b>	<b>199</b>
<b>Brumadinho - stoppage expenses</b>	<b>85</b>	<b>104</b>	<b>163</b>
Itabira Complex (Cauê, Conceição and others)	0	0	6
Minas Centrais Complex (Brucutu and others)	22	28	26
Mariana Complex (Alegria, Timbopeba and others)	3	4	19
Paraopeba Complex (Mutuca, Fábrica <sup>1</sup> and others)	35	42	55
Vargem Grande Complex (Vargem Grande <sup>1</sup> , Pico and others)	25	30	57
Others Brumadinho	0	0	0
<b>Tubarão pellet plants</b>	<b>7</b>	<b>7</b>	<b>15</b>
<b>Onça Puma</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Voisey's Bay</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Others</b>	<b>19</b>	<b>44</b>	<b>21</b>

<sup>1</sup> Including pelletizing plants.

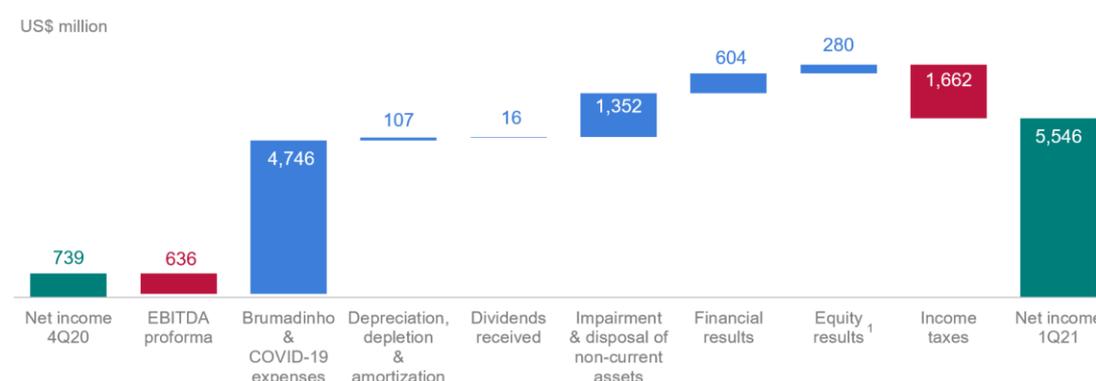
# Net income (loss)

## 1Q21 EBITDA proforma to Net income reconciliation



<sup>1</sup> Includes net income (loss) attributable to noncontrolling interests of US\$ 69 million

## Net income 1Q21 vs. 4Q20



<sup>1</sup> Includes net income (loss) attributable to noncontrolling interests.

In 1Q21 net income reached US\$ 5.546 billion, US\$ 4.807 higher than 4Q20, mainly due to:

- Charges related to the Global Settlement for Brumadinho reparation recorded in 4Q20, and asset impairments related to Coal and Nickel businesses;
- Higher financial result mainly from foreign exchange gains, which were partially offset by lower mark-to-market of derivatives, mainly due to the impact of the weaker BRL on currency and interest rate hedges, and the higher mark-to-market of our shareholder debentures;
- Equity results improved as 4Q20 recorded additional provision charges related to Renova provisions.

## Financial results

<i>US\$ million</i>	<b>1Q21</b>	<b>4Q20</b>	<b>1Q20</b>
<b>Financial expenses</b>	<b>(1,386)</b>	<b>(958)</b>	<b>(525)</b>
Gross interest	(207)	(204)	(214)
Capitalization of interest	16	13	32
Shareholder debentures <sup>1</sup>	(983)	(732)	(49)
Others	(205)	(27)	(269)
Financial expenses (REFIS)	(7)	(8)	(25)
<b>Financial income</b>	<b>74</b>	<b>64</b>	<b>107</b>
<b>Derivatives<sup>2</sup></b>	<b>(439)</b>	<b>447</b>	<b>(1,384)</b>
Currency and interest rate swaps	(482)	325	(1,091)
Others (commodities, etc)	43	122	(293)
<b>Foreign Exchange</b>	<b>1,452</b>	<b>(148)</b>	<b>(464)</b>
Net foreign exchange gain (losses)	320	(148)	(464)
Reclassification of cumulative translation adjustment on VNC sale	1,132	-	-
<b>Monetary variation</b>	<b>222</b>	<b>(86)</b>	<b>(19)</b>
<b>Financial result, net</b>	<b>(77)</b>	<b>(681)</b>	<b>(2,285)</b>

<sup>1</sup> In 1Q21, there wasn't remuneration on shareholder debentures.

<sup>2</sup> The cash effect of the derivatives was a loss of US\$ 199 million in 1Q21.

## CAPEX

Investments in 1Q21 totaled US\$ 1.009 billion, consisting of US\$ 857 million in maintenance of operations and US\$ 152 million in project execution. Investments were 30% lower than in 4Q20, mainly due to weather-related conditions in the first quarter, which usually slow down construction works at our sites, and lower investments in VBME project after intense investments in the previous quarter, which were partially offset by higher investment intensity in Northern System 240 Mtpy, Salobo III and tailings filtering plants projects.

In addition, COVID-19 restrictions slowed the pace of our projects when compared to the original schedule for the quarter. However, there are yet no changes to expected start-up dates, as critical path activities were developed according to plan.

### Project Execution and Sustaining by business area

US\$ million	1Q21	%	4Q20	%	1Q20	%
Ferrous Minerals	608	60.3	763	52.8	627	55.8
Base Metals	359	35.6	566	39.2	352	31.3
Coal	29	2.9	65	4.5	80	7.1
Energy and others	13	1.3	50	3.5	65	5.8
<b>Total</b>	<b>1,009</b>	<b>100.0</b>	<b>1,444</b>	<b>100.0</b>	<b>1,124</b>	<b>100.0</b>

### Project execution

Investments in project execution totaled US\$ 152 million in 1Q21, slightly higher than 4Q20, mainly due to higher intensity in Northern System 240 Mtpy and Salobo III projects' investments, which was partially offset by lower Sol do Cerrado project expenditures, after project acquisition in 4Q20.

### Project execution by business area

US\$ million	1Q21	%	4Q20	%	1Q20	%
Ferrous Minerals	82	53.9	69	47.9	91	62.8
Base Metals	68	44.7	55	38.2	52	35.9
Energy and others	2	1.3	20	13.9	2	1.4
<b>Total</b>	<b>152</b>	<b>100.0</b>	<b>144</b>	<b>100.0</b>	<b>145</b>	<b>100.0</b>

The Northern System 240 Mtpy Project concluded the root piles of the third loading silo and started the pre-assembly of the plant's conveyor belt. The Serra Sul 120 Mtpy and Capanema projects progressed on its initial phase of equipment and services procurement activities and engineering plan improvements. Salobo III Project started the installation of secondary crushing equipment.

### Capital projects progress indicator<sup>3</sup>

Projects	Capacity (per year)	Estimated start-up <sup>1</sup>	Executed capex (US\$ million)		Estimated capex (US\$ million)		Physical progress (%)
			1Q21	Total	2021	Total	
<b>Ferrous Minerals Project</b>							
Northern System 240 Mtpy	10 Mt	2H22	55	236	229	772	70% <sup>1</sup>
Capanema	18 Mt <sup>2</sup>	2H23	-	-	47	495	1%
Serra Sul 120 Mtpy <sup>3</sup>	20 Mt	1H24	4	4	168	1,502	0%
<b>Base Metals Project</b>							
Salobo III	30-40 kt	1H22	63	410	262	816	73%

<sup>1</sup> Considering mine-plant project front physical progress.

<sup>2</sup> Capanema project adds 14 Mtpy capacity in Timbopeba site expedition in its first years.

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

### Sustaining CAPEX

Investments in maintenance of operations totaled US\$ 857 million in 1Q21, US\$ 443 million lower than in 4Q20, mainly due to weather-related conditions in the first quarter, which usually slow down construction works at our sites, and lower expenditures in Moatize plant revamp, which was concluded in April with ramp-up expected to be concluded by the end of 2Q21.

#### Sustaining capex by business area

US\$ million	1Q21	%	4Q20	%	1Q20	%
Ferrous Minerals	526	61.4	694	53.4	536	54.7
Base Metals	291	34.0	511	39.3	300	30.6
Nickel	266	31.0	465	35.8	238	24.3
Copper	25	2.9	46	3.5	62	6.3
Coal	29	3.4	65	5.0	80	8.2
Energy and others	11	1.2	30	2.3	63	6.4
<b>Total</b>	<b>857</b>	<b>100.0</b>	<b>1,300</b>	<b>100.0</b>	<b>979</b>	<b>100.0</b>

#### Sustaining capex by type - 1Q21

US\$ million	Ferrous Minerals	Base Metals	Coal	Energy and others	TOTAL
Enhancement of operations	218	146	23	1	388
Replacement projects	34	110	-	-	144
Filtration and dry stacking projects	128	-	-	-	128
Dam management	12	6	1	-	19
Other investments in dams and waste dumps	17	3	-	-	20
Health and Safety	55	16	3	-	74
Social investments and environmental protection	20	3	1	-	24
Administrative & Others	42	7	1	9	59
<b>Total</b>	<b>526</b>	<b>291</b>	<b>29</b>	<b>11</b>	<b>857</b>

<sup>3</sup> 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.

On the Gelado project, the construction of the thickener's bottom slab and the assembly of all linear sieves in the sieving buildings were completed. In Voisey's Bay underground mine extension works, Reid Brook powerhouse exhaust stack installation started and the paste plant cladding and rough setting of major equipment are underway. Vale expects to start-up mining in Reid Brook underground deposit in the 2Q21, while the start-up of operation in Eastern Deeps is expected for the second semester.

### Replacement projects progress indicator

Projects	Capacity (per year)	Estimated start-up	Executed capex (US\$ million)		Estimated capex (US\$ million)		Physical progress (%)
			1Q21	Total	2021	Total	
Gelado	9.7 Mt	1H22	25	200	100	428	79%
Voisey's Bay Mine Extension	45 kt	1H21	107	1,015	449	1,694	62%

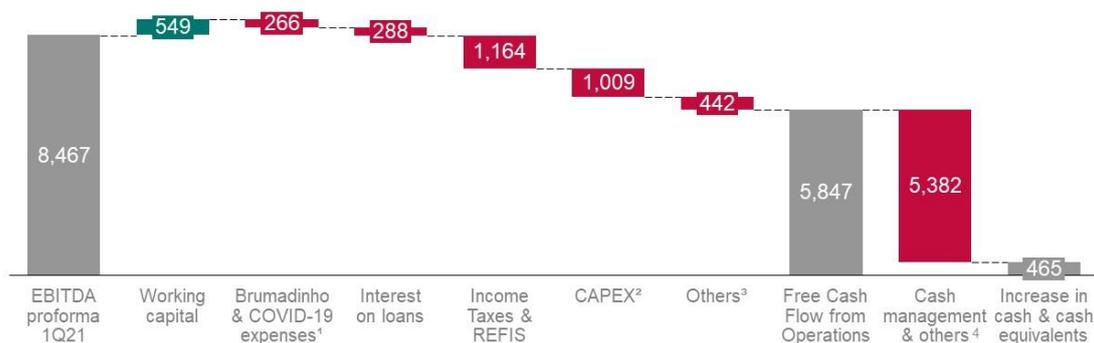
## Free cash flow

Vale generated US\$ 5.847 billion in Free Cash Flow from Operations in 1Q21, US\$ 971 million higher than in 4Q20. The proforma EBITDA was reinforced by the positive effect of working capital (+US\$ 549 million in 1Q21, vs -US\$ 1,322 million in 4Q20), due to a strong cash collection of 4Q20 sales, as expected, partially compensated by higher income taxes due to the combined effect of the higher profit and the seasonally higher income tax paid at the beginning of the year.

The solid Free Cash Flow from Operations enabled Vale to repay US\$ 943 million in debt, by retiring the EUR 750 million bonds maturing 2023, to distribute US\$ 3.884 billion to shareholders and to pay US\$ 555 million for the divestment of VNC. Yet, cash & equivalents position increased by US\$ 465 million in the quarter.

### Free Cash Flow 1Q21

US\$ million



<sup>1</sup> Includes US\$ 149 million of disbursement of Brumadinho provisioned expenses, US\$ 115 million of Brumadinho incurred expenses and US\$ 2 million of COVID-19 expenses.

<sup>2</sup> Does not include Boston Metal investment of US\$ 6 million.

<sup>3</sup> Includes derivatives, payments to Samarco, leasing, dividends, interest on capital paid to noncontrolling interest, and others.

<sup>4</sup> Includes US\$ 3,884 million of shareholder remuneration, US\$ 1,233 million of debt repayment, US\$ 290 million of proceeds from debt funding and US\$ 555 million from the divestment of VNC.

## Debt indicators

Gross debt totaled US\$ 12.176 billion as of March 31, 2021, US\$ 1.184 billion lower than December 31, 2020, mainly due to the redemption of our EUR 750 million bonds maturing in 2023. Net cash totaled US\$ 2.136 billion in the same period, with a US\$ 1.238 billion increase in relation to 4Q20, as reflected by the solid free cash flow generation in the quarter.

Expanded Net debt decreased to US\$ 10.712 billion as of March 31, 2021 mainly as a result of the lower gross debt and the exchange rate impact on BRL denominated commitments. Looking forward, expanded net debt should hover at the US\$ 10 billion long-term reference level as we continue to generate cash, meet our obligations, distribute strong dividends and repurchase our shares, in line with our disciplined capital allocation strategy.

Average debt maturity was 9.1 years on March 31, 2021, slightly longer than the 8.4 years on December 31, 2020 after the retirement of its 2023 bond. Average cost of debt, after currency and interest rate swaps, was in line with 4Q20 at 4.58% per annum, above the bond curve equivalent yields for Vale due to the legacy of high-coupon bonds still outstanding.

### Debt indicators

<i>US\$ million</i>	1Q21	4Q20	1Q20
<b>Gross debt</b> <sup>1</sup>	<b>12,176</b>	<b>13,360</b>	<b>17,075</b>
Cash, cash equivalents and short-term investments	14,312	14,258	12,267
<b>Net debt</b> <sup>1</sup>	<b>(2,136)</b>	<b>(898)</b>	<b>4,808</b>
Leases (IFRS 16)	1,631	1,667	1,694
Currency swaps <sup>2</sup>	1,077	883	971
Refis	2,432	2,744	2,964
Brumadinho provisions	5,976	6,864	3,975
Samarco & Renova Foundation provisions	1,732	2,074	1,274
<b>Expanded net debt</b>	<b>10,712</b>	<b>13,334</b>	<b>15,686</b>
Total debt / adjusted LTM EBITDA (x)	0.6	0.8	1.2
Net debt / adjusted LTM EBITDA (x)	(0.1)	(0.1)	0.3
Adjusted LTM EBITDA / LTM gross interest (x)	27.2	20.3	14.8

<sup>1</sup> Does not include leases (IFRS 16).

<sup>2</sup> Includes interest rate swaps.

## Performance of the business segments

### Segment information — 1Q21, as per footnote of financial statements

US\$ million	Net operating revenues	Expenses				Dividends and interest received from associates and JVs	Adjusted EBITDA
		Cost <sup>1</sup>	SG&A and others <sup>1</sup>	R&D <sup>1</sup>	Pre operating & stoppage <sup>1</sup>		
Ferrous Minerals	10,505	(2,559)	8	(34)	(109)	-	7,811
Iron ore fines	9,154	(2,087)	(22)	(33)	(92)	-	6,920
ROM	24	-	-	-	-	-	24
Pellets	1,208	(383)	29	(1)	(13)	-	840
Others ferrous	73	(66)	2	-	-	-	9
Mn & Alloys	46	(23)	(1)	-	(4)	-	18
Base Metals <sup>2</sup>	1,988	(937)	(10)	(29)	(1)	-	1,011
Nickel <sup>3</sup>	1,434	(771)	(10)	(11)	-	-	642
Copper <sup>4</sup>	554	(166)	-	(18)	(1)	-	369
Coal	92	(329)	2	(2)	-	78	(159)
Others	60	(114)	(106)	(35)	(1)	-	(196)
Brumadinho impact	-	-	(115)	-	-	-	(115)
COVID-19 donations	-	-	(2)	-	-	-	(2)
<b>Total</b>	<b>12,645</b>	<b>(3,939)</b>	<b>(223)</b>	<b>(100)</b>	<b>(111)</b>	<b>78</b>	<b>8,350</b>

<sup>1</sup> Excluding depreciation, depletion and amortization.

<sup>2</sup> VNC results are reported in Others segment Information

<sup>3</sup> Including copper and by-products from our nickel operations.

<sup>4</sup> Including by-products from our copper operations.

## Ferrous Minerals

Ferrous Minerals adjusted EBITDA was US\$ 7.811 billion, an all-time record for a first quarter. However, it was 11% lower than 4Q20 mostly due to seasonally lower sales volumes for iron ore fines and pellets, which were partially compensated by higher realized prices. The adjusted EBITDA per ton for Ferrous Minerals, excluding Manganese and Ferroalloys, totaled US\$ 118.9/t, an increase of US\$ 22.6/t when compared to 4Q20.

### Ferrous Minerals EBITDA variation – US\$ million (1Q21 x 4Q20)



<sup>1</sup> Including higher costs and expenses, excluding volume effect and FX (-US\$ 120 million), lower dividends received (-US\$ 86 million) and higher freight costs (-US\$ 35 million), which were partially offset by positive FX effect (US\$ 15 million).

The share of premium products<sup>4</sup> in total sales was 89% in 1Q21, in line with 4Q20. Iron ore fines and pellets quality premiums totaled US\$ 8.3/t in 1Q21 vs. US\$ 4.3/t in 4Q20, as strong demand recovery from ex-China markets, higher coking coal prices in China and the need for elevated productivity in blast furnaces gave support to higher spreads between 65% Fe index and 62% Fe benchmark index and pellet premiums.

### Iron ore fines and pellets quality premium

US\$/t	1Q21	4Q20	1Q20
Iron ore fines quality premium	6.9	3.2	4.6
Pellets weighted average contribution	1.5	1.1	0.6
<b>Iron ore fines and pellets total quality premium</b>	<b>8.3</b>	<b>4.3</b>	<b>5.2</b>
<b>Share of premium products<sup>1</sup> (%)</b>	<b>89%</b>	<b>90%</b>	<b>87%</b>

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

<sup>4</sup> Pellets, Carajás (IOCJ), Brazilian Blend Fines (BRBF) and pellet feed.

## Volume sold

'000 metric tons	1Q21	4Q20	1Q20
Iron ore fines	58,872	82,391	51,445
ROM	426	434	211
Pellets	6,271	8,486	7,311
Manganese ore	258	461	219
Ferroalloys	14	15	27

## Net operating revenue by product

US\$ million	1Q21	4Q20	1Q20
Iron ore fines	9,154	10,765	4,311
ROM	24	6	6
Pellets	1,208	1,295	852
Manganese & Ferroalloys	46	60	46
Others	73	77	81
<b>Total</b>	<b>10,505</b>	<b>12,203</b>	<b>5,296</b>

## Iron ore fines (excluding Pellets and ROM)

### Iron ore fines EBITDA variation – US\$ million (1Q21 x 4Q20)



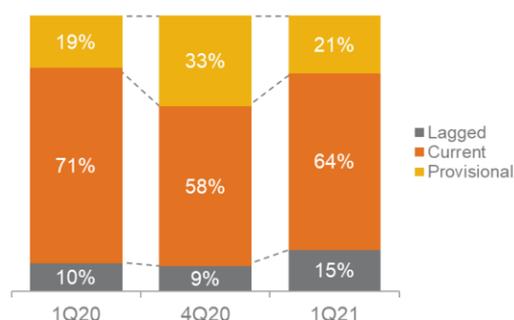
<sup>1</sup> Including higher costs and expenses, excluding volume effect and FX (-US\$ 102 million), higher freight costs (-US\$ 32 million) and lower dividends received (-US\$ 23 million), which were partially offset by positive FX effect (US\$ 9 million).

## REVENUES AND SALES VOLUMES

Iron ore fines' net revenues, excluding pellets and run of mine (ROM), decreased to US\$ 9.154 billion in 1Q21 vs. US\$ 10.765 billion in 4Q20, as a result of 29% decline in sales volumes (US\$ 3.151 billion), which was partially compensated by 19% higher realized prices (US\$ 1.540 billion).

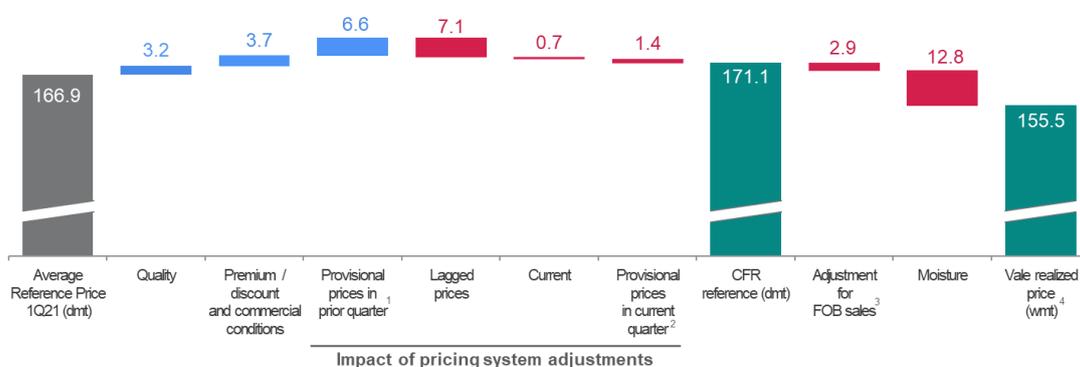
Sales volumes of iron ore fines totaled 58.9 Mt in 1Q21, in line with production. CFR sales were 47.3 Mt in 1Q21, representing 80% of total sales.

## Pricing system breakdown (%)



Vale's realized price CFR/FOB totaled US\$ 155.5/t, an increase of US\$ 24.8/t compared with 4Q20, mainly due to (i) higher 62% Fe reference price (US\$ 33.2/t); and (ii) higher premiums and quality adjustments (US\$ 3.7/t), which were offset in part by (i) a negative effect from pricing mechanisms (US\$ 9.1/t), as provisional price was marked, at the end of the quarter, at a lower level than quarter's average price and lagged prices negatively impacted price realization; and (ii) higher FOB sales adjustment, as result of lower sales including freight service. The weighted provisional price at the end of 1Q21 averaged US\$ 159.9/t. If the price index sustains April's level throughout the 2Q21, Vale's price realization should capture this positive spread in the upcoming quarter.

## Price realization iron ore fines – US\$/t, 1Q21



<sup>1</sup> Adjustment as a result of provisional prices booked in 4Q20 at US\$ 157.6/t.

<sup>2</sup> Difference between the weighted average of the prices provisionally set at the end of 1Q21 at US\$ 159.9/t based on forward curves and US\$ 166.9/t from the 4Q20 62% Fe reference price.

<sup>3</sup> Includes freight pricing mechanisms of CFR sales freight recognition.

<sup>4</sup> Vale's price is net of taxes.

## Average prices

US\$/ metric ton	1Q21	4Q20	1Q20
Iron ore - Metal Bulletin 65% index	191.2	145.9	104.3
Iron ore - Metal Bulletin 62% low alumina index	167.9	133.7	91.0
Iron ore - 62% Fe reference price	166.9	133.7	89.0
Provisional price at the end of the quarter	159.9	157.6	82.6
Iron ore fines Vale CFR reference (dmt)	171.1	143.4	93.5
Iron ore fines Vale CFR/FOB realized price	155.5	130.7	83.8
Pellets CFR/FOB (wmt)	192.6	152.6	116.6
Manganese ore	109.7	87.5	107.4
Ferroalloys	1,158.6	1,027.2	870.7

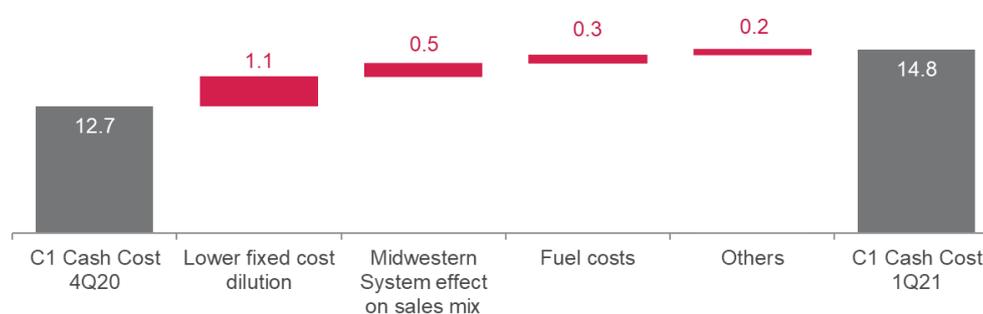
## COSTS

### IRON ORE COGS - 4Q20 x 1Q21

US\$ million	4Q20	Variance drivers			Total variation	1Q21
		Volume	Exchange rate	Others		
C1 cash costs	1,260	(353)	(5)	127	(231)	1,029
Freight	1,054	(339)	-	32	(307)	747
Distribution costs	87	(25)	-	14	(11)	76
Royalties & others	284	(81)	-	32	(49)	235
<b>Total costs before depreciation and amortization</b>	<b>2,685</b>	<b>(798)</b>	<b>(5)</b>	<b>205</b>	<b>(598)</b>	<b>2,087</b>
Depreciation	304	(86)	(4)	41	(49)	255
<b>Total</b>	<b>2,989</b>	<b>(884)</b>	<b>(9)</b>	<b>246</b>	<b>(647)</b>	<b>2,342</b>

Vale's C1 cash cost ex-third-party purchases increased to US\$ 14.8/t in 1Q21 from US\$ 12.7/t in 4Q20, mainly explained by (i) lower fixed costs dilution due to seasonal lower volumes (US\$ 1.1/t); (ii) higher sales as a proportion of total sales from Midwestern System, which has a cost level above Vale's average (US\$ 0.5/t); and (iii) higher fuel costs, as a result of diesel price increase (US\$ 0.3/t).

### C1 cash cost variation (excluding 3<sup>rd</sup> party purchases) – US\$/t (1Q21 x 4Q20)



Despite the US\$ 2.4/t spot rate increase<sup>5</sup> in 1Q21 vs. 4Q20, Vale's unit maritime freight cost increased just US\$ 0.7/t, totaling US\$ 15.8/t, mainly impacted by higher bunker fuel costs (US\$ 0.7/t). The spot rate increase was mitigated by Vale's strategy of long-term contracts of affreightment and seasonally lower exposure to spot rates in the first quarter.

<sup>5</sup>Tubarão/Qingdao (C3) index.

## Iron ore fines cash cost and freight

	1Q21	4Q20	1Q20
<b>Costs (US\$ million)</b>			
Vale's iron ore fines C1 cash cost (A)	1,029	1,260	832
Third-party purchase costs <sup>1</sup> (B)	198	271	91
Vale's C1 cash cost ex-third-party volumes (C = A – B)	832	989	741
<b>Sales volumes (Mt)</b>			
Volume sold (ex-ROM) (D)	58.9	82.4	51.4
Volume sold from third-party purchases (E)	2.8	4.5	2.0
Volume sold from own operations (F = D – E)	56.1	77.9	49.4
<b>Iron ore fines cash cost (ex-ROM, ex-royalties), FOB (US\$ /t)</b>			
Vale's C1 cash cost ex-third-party purchase cost (C/F)	14.8	12.7	15.0
Average third-party purchase C1 cash cost (B/E)	70.8	60.8	45.6
Vale's iron ore cash cost (A/D)	17.5	15.3	16.2
<b>Freight</b>			
Maritime freight costs (G)	747	1,054	646
% of CFR sales (H)	80%	85%	73%
Volume CFR (Mt) (I = D x H)	47.3	69.7	37.7
Vale's iron ore unit freight cost (US\$/t) (G/I)	15.8	15.1	17.1

<sup>1</sup> Includes logistics costs related to third-party purchases.

## EXPENSES

Iron ore fines expenses, net of depreciation, amounted to US\$ 147 million in 1Q21, decreasing US\$ 75 million vs. 4Q20, mainly as a result of lower pre-operating and stoppage expenses (US\$ 30 million) due to the resumption of operations at Fábrica, and Viga sites and performance improvement at Brucutu site, and lower R&D expenses (US\$ 15 million) and the positive effect of iron ore sales contractual fines (US\$ 14 million).

### Expenses - iron ore fines

US\$ millions	1Q21	4Q20	1Q20
<b>Selling</b>	11	14	11
<b>R&amp;D</b>	33	48	23
<b>Pre-operating and stoppage expenses</b>	92	122	169
Brumadinho stoppage expenses	78	93	153
Others	14	29	16
<b>Other expenses</b>	11	38	14
<b>Total expenses</b>	147	222	217

## Iron ore pellets

Adjusted EBITDA for pellets was US\$ 840 million in 1Q21, US\$ 54 million below 4Q20, mainly as a result of lower sales volumes (US\$ 256 million) and the absence of seasonal dividends received (US\$ 63 million), which were compensated in part by higher realized prices, following higher 65% Fe price index and contractual premiums (US\$ 301 million).

FOB pellets sales of 4.8 Mt in 1Q21 represented 77% of total pellets sales. CFR pellets sales amounted to 1.4 Mt in 1Q21. The increase in the share of FOB sales is a result of ex-China demand improvements, mainly in Europe and Japan.

Realized prices in 1Q21 averaged US\$ 192.6/t, increasing US\$ 40.1/t vs. 4Q20, mainly due to 31% higher 65% Fe price index and higher contractual pellet premiums, which were partially offset by negative effect of pricing from lagged prices and higher FOB sales.

Costs totaled US\$ 383 million (or US\$ 466 million with depreciation charges) in 1Q21. Excluding the impact of lower volumes (US\$ 132 million), costs increased US\$ 74 million when compared with 4Q20, mainly due to higher pellet feed production costs, in line with Vale's C1 cash cost increase, and higher leasing costs, as a result of higher pellet premiums.

## Pellets - EBITDA

	1Q21		4Q20	
	US\$ million	US\$/wmt	US\$ million	US\$/wmt
Net revenues / Realized price	1,208	192.6	1,295	152.6
Dividends received (Leased pelletizing plants)	-	-	63	7.4
Cash costs (Iron ore, leasing, freight, overhead, energy and other)	(383)	(61.1)	(441)	(52.0)
Pre-operational & stoppage expenses	(13)	(2.1)	(18)	(2.1)
Expenses (Selling, R&D and other)	28	4.5	(5)	(0.6)
<b>EBITDA</b>	<b>840</b>	<b>134.0</b>	<b>894</b>	<b>105.3</b>

## Iron ore fines and pellets cash break-even<sup>6</sup>

### Iron ore and pellets cash break-even landed in China<sup>1</sup>

US\$/t	1Q21	4Q20	1Q20
Vale's C1 cash cost ex-third-party purchase cost	14.8	12.7	15.0
Third party purchases cost adjustments	2.7	2.6	1.2
Vale's iron ore cash cost (ex-ROM, ex-royalties), FOB (US\$/t)	17.5	15.3	16.2
Iron ore fines freight cost (ex-bunker oil hedge)	15.8	15.1	17.1
Iron ore fines distribution cost	1.3	1.1	1.1
Iron ore fines stoppage expenses <sup>2</sup> related to Brumadinho	1.3	1.1	3.0
Iron ore fines expenses <sup>2</sup> & royalties	5.2	4.7	4.1
Iron ore fines moisture adjustment	3.5	3.3	3.6
Iron ore fines quality adjustment	(6.9)	(3.2)	(4.6)
<b>Iron ore fines EBITDA break-even (US\$/dmt)</b>	<b>37.7</b>	<b>37.4</b>	<b>40.5</b>
Iron ore fines pellet adjustment	(1.5)	(1.1)	(0.6)
<b>Iron ore fines and pellets EBITDA break-even (US\$/dmt)</b>	<b>36.2</b>	<b>36.3</b>	<b>39.9</b>
Iron ore fines sustaining investments	8.4	7.9	9.4
<b>Iron ore fines and pellets cash break-even landed in China (US\$/dmt)</b>	<b>44.6</b>	<b>44.2</b>	<b>49.3</b>

<sup>1</sup> Measured by unit cost + expenses + sustaining investment adjusted for quality

<sup>2</sup> Net of depreciation and includes dividends received

## Manganese and ferroalloys

Adjusted EBITDA of manganese ore and ferroalloys was US\$ 18 million in 1Q21, US\$ 9 million higher than in 4Q20, mainly due to lower costs and expenses (US\$ 16 million) and higher prices (US\$ 7 million), which were partially offset by lower volumes (US\$ 15 million).

<sup>6</sup> Does not include the impact from the iron ore fines and pellets pricing system mechanism.

## Volume sold by destination – Iron ore and pellets

'000 metric tons	1Q21	4Q20	1Q20
<b>Americas</b>	<b>9,261</b>	<b>8,543</b>	<b>7,986</b>
Brazil	7,099	7,126	6,558
Others	2,162	1,417	1,428
<b>Asia</b>	<b>50,525</b>	<b>75,848</b>	<b>43,119</b>
China	40,798	63,933	34,239
Japan	4,422	6,272	4,355
Others	5,305	5,643	4,525
<b>Europe</b>	<b>4,622</b>	<b>4,048</b>	<b>6,069</b>
Germany	1,087	505	2,500
France	783	376	994
Others	2,752	3,167	2,575
<b>Middle East</b>	<b>276</b>	<b>2,061</b>	<b>707</b>
<b>Rest of the World</b>	<b>885</b>	<b>811</b>	<b>1,086</b>
<b>Total</b>	<b>65,569</b>	<b>91,311</b>	<b>58,967</b>

## Selected financial indicators - Ferrous Minerals

US\$ million	1Q21	4Q20	1Q20
Net Revenues	10,505	12,203	5,296
Costs <sup>1</sup>	(2,559)	(3,237)	(2,215)
Expenses <sup>1</sup>	8	(50)	(14)
Pre-operating and stoppage expenses <sup>1</sup>	(109)	(150)	(195)
R&D expenses	(34)	(52)	(25)
Dividends and interests on associates and JVs	-	86	-
Adjusted EBITDA	7,811	8,800	2,847
Depreciation and amortization	(397)	(465)	(422)
Adjusted EBIT	7,414	8,335	2,425
Adjusted EBIT margin (%)	70.6	68.3	45.8

<sup>1</sup> Net of depreciation and amortization

## Selected financial indicators - Iron ore fines

US\$ million	1Q21	4Q20	1Q20
Adjusted EBITDA (US\$ million)	6,920	7,881	2,411
Volume Sold (Mt)	58.9	82.4	51.4
Adjusted EBITDA (US\$/t)	118	96	47

## Selected financial indicators - Pellets

US\$ million	1Q21	4Q20	1Q20
Adjusted EBITDA (US\$ million)	840	894	424
Volume Sold (Mt)	6.3	8.5	7.3
Adjusted EBITDA (US\$/t)	134	105	58

## Selected financial indicators - Ferrous ex Manganese and Ferroalloys

US\$ million	1Q21	4Q20	1Q20
Adjusted EBITDA (US\$ million)	7,793	8,791	2,851
Volume Sold (Mt) <sup>1</sup>	65.6	91.3	59.0
Adjusted EBITDA (US\$/t)	119	96	48

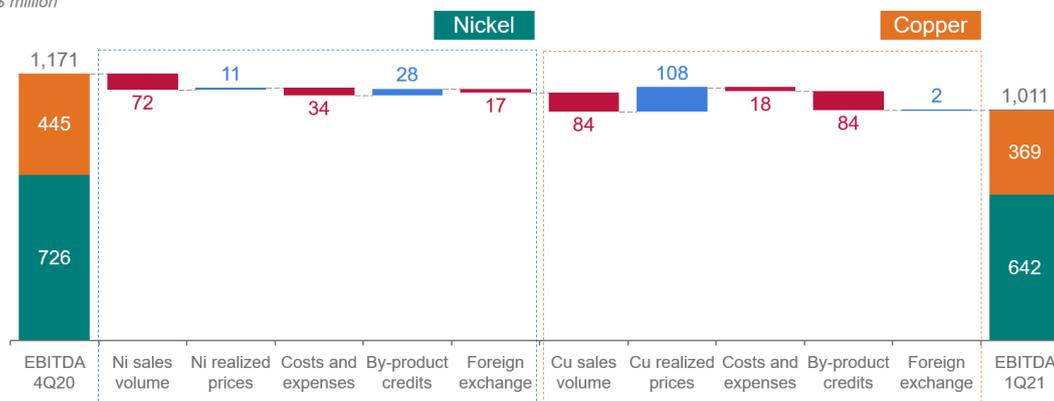
<sup>1</sup> Volume including iron ore fines, pellets and ROM.

## Base Metals

Base Metals adjusted EBITDA<sup>7</sup> was US\$ 1.011 billion in 1Q21, US\$ 160 million lower than 4Q20.

Base Metals - EBITDA 1Q21 vs. 4Q20

US\$ million



The lower EBITDA in the quarter was mainly due to:

- Lower nickel and copper sales volumes, mainly due to lower production;
- Lower gold by-product credits from copper operations, mainly due to lower copper production and sales;
- Higher maintenance costs, mainly due to PTVI unscheduled furnace repairs;
- Canadian dollar appreciation against US dollar.

These effects were partially offset by:

- Higher copper and nickel realized prices, on stronger LME reference price;
- Higher nickel by-product credits, mainly due to higher copper and PGM prices

### Base Metals EBITDA overview – 1Q21

US\$ million	North Atlantic	PTVI Site	Onça Puma	Sossego	Salobo	Others	Total Base Metals
Net Revenues	1,127	207	99	164	390	1	1,988
Costs	(604)	(116)	(46)	(61)	(105)	(5)	(937)
Selling and other expenses	(4)	(1)	-	-	-	(5)	(10)
Pre-operating and stoppage expenses	-	-	-	-	(1)	-	(1)
R&D	(10)	(1)	-	(2)	-	(16)	(29)
<b>EBITDA</b>	<b>509</b>	<b>89</b>	<b>53</b>	<b>101</b>	<b>284</b>	<b>(25)</b>	<b>1,011</b>

<sup>7</sup> VNC site results are not reported as part of Base Metals results. Previous Base Metals results were restated to reflect this change. Results from VNC site are being accounted for as "Other" in the Segment Information.

## Average prices

US\$/ metric ton	1Q21	4Q20	1Q20
Nickel - LME	17,570	15,930	12,723
Copper - LME	8,504	7,166	5,637
Nickel - realized prices	17,630	17,387	15,380
Copper - realized prices <sup>1</sup>	9,493	7,133	3,858
Gold (US\$/oz)	1,781	1,895	1,636
Silver (US\$/oz)	24.58	29.90	15.81
Cobalt (US\$/t)	44,834	56,097	33,580

<sup>1</sup>Considers Salobo and Sossego operations.

## Nickel operations

### Nickel operations – EBITDA by operation

US\$ million	1Q21	4Q20	1Q20
North Atlantic operation <sup>1</sup>	509	485	289
PTVI	89	74	55
Onça Puma	53	50	-
Others <sup>2</sup>	(9)	117	52
<b>Total</b>	<b>642</b>	<b>726</b>	<b>396</b>

<sup>1</sup> Includes the operations in Canada and in the United Kingdom.

<sup>2</sup> Includes the PTVI and VNC off-takes, intercompany sales eliminations, purchase of finished nickel and trading activities. Hedge results have been relocated to each nickel business operation.

**North Atlantic** operations' EBITDA was higher in 1Q21 due to (i) higher by-product credits, mainly copper and PGM's, (ii) greater fixed cost dilution and strong sales volume in Long Harbour after successfully maintenance works during 4Q20.

**PTVI's** higher EBITDA in 1Q21 was supported by better nickel realized prices, which were partially offset by pressured costs from unscheduled furnace repairs during the quarter and lower sales volumes.

**Onça Puma's** EBITDA was higher in 1Q21 mainly due to higher nickel realized prices.

## Nickel Revenue and Realized Price

### Net operating revenue by product - Nickel operations

US\$ million	1Q21	4Q20	1Q20
Nickel	846	1,028	564
Copper	239	195	124
Gold as by-product	16	30	25
Silver as by-product	4	9	9
PGMs	183	178	210
Cobalt	19	19	17
Others <sup>1</sup>	127	129	6
<b>Total</b>	<b>1,434</b>	<b>1,588</b>	<b>955</b>

<sup>1</sup> Includes US\$ 121 million in 1Q21 and US\$ 122 million in 4Q20 of revenues associated with trading activities

## Volume sold - Nickel operations

'000 metric tons	1Q21	4Q20	1Q20
Nickel <sup>1</sup>	48	59	37
Upper Class I nickel	25	18	23
Lower Class I nickel	8	18	5
Class II nickel	12	19	10
Intermediates	3	6	4
VNC eliminations <sup>2</sup>	0	(2)	(5)
Copper	26	26	31
Gold as by-product ('000 oz)	10	16	16
Silver as by-product ('000 oz)	163	292	581
PGMs ('000 oz)	60	82	91
Cobalt (metric ton)	428	350	517

<sup>1</sup> Nickel sales volumes were adjusted in the financial report to reflect VNC divestment

<sup>2</sup> Volumes associated with revenues from VNC that are accounted for as Other in segment information.

## Nickel realized price

US\$/t	1Q21	4Q20	1Q20
LME average nickel price	17,570	15,930	12,723
Average nickel realized price	17,630	17,387	15,380
<b>Contribution to the NRP by category:</b>			
Nickel average aggregate premium	(10)	(90)	190
Other timing and pricing adjustments contribution	70	1,547	2,467

Nickel realized price in 1Q21 rose 1.4% from 4Q20 mainly due to (i) 10.3% higher LME nickel prices and (ii) higher sales into the upper class I markets, partially offset by (iii) higher discounts for Class II nickel and intermediates.

## Premiums / discount by nickel product

US\$/t	1Q21	4Q20	1Q20
Upper Class I nickel	820	1,035	960
Lower Class I nickel	140	74	320
Class II nickel	(750)	(530)	(240)
Intermediates	(3,860)	(2,720)	(3,220)

## Nickel products by source as % of sales - 1Q21

% of source sales	North Atlantic	PTVI	Onça Puma	VNC <sup>1</sup>	Total 1T21	Total 4T20
Upper Class I	72%	0%	0%	0%	52%	30%
Lower Class I	23%	0%	0%	0%	17%	30%
Class II	5%	55%	100%	100%	25%	32%
Intermediates	0%	45%	0%	0%	6%	8%

<sup>1</sup> Figures reflect refined product sales sourced from VNC

Other timing and pricing adjustments had an aggregate positive impact of US\$ 70/t. The main drivers for this positive adjustment in 1Q21 are (i) the effect of the hedging on Vale's nickel price realization, with a negative impact of US\$ 49/t in the quarter<sup>8</sup>, (ii) the Quotational Period effects (based on sales distribution in the prior three months, as well as the differences between

<sup>8</sup> In October 2020 Vale decided to execute new hedge operations, continuing the Nickel Revenue Hedging Program in order to provide stable cash generation during a period of significant investments. As of March 31, 2021, the average strike price for the put position was US\$ 15,000/t and the average strike price of the call option was US\$ 17,641/t for the program's sales volume.

the LME price at the moment of sale and the LME average price), with an impact of positive US\$ 30/t, (iii) fixed price sales, with an impact of negative US\$ 54/t and (iv) other effects and including VNC intermediates adjustments, of positive US\$ 143/t.

## Nickel Costs and Expenses

### Nickel COGS - 4Q20 x 1Q21

US\$ million	Variance drivers					1Q21
	4Q20	Volume	Exchange rate	Others	Total variation	
Nickel operations <sup>1</sup>	884	(121)	17	(9)	(113)	771
Depreciation	240	(35)	5	10	(20)	220
<b>Total</b>	<b>1,124</b>	<b>(156)</b>	<b>22</b>	<b>1</b>	<b>(133)</b>	<b>991</b>

<sup>1</sup> Includes costs associated with tradings activities of US\$ 121 million in 4Q20 and 1Q21

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

US\$/t	1Q21	4Q20	1Q20
North Atlantic operations <sup>1</sup>	3,774	6,531	3,004
PTVI	7,836	7,109	7,037
Onça Puma	7,763	7,257	13,141

<sup>1</sup> North Atlantic figures include Clydach refining costs.

**North Atlantic** operations' unit cash costs after by-products decreased in 1Q21 mainly due higher by-product credits and greater fixed cost dilution.

**PTVI's** unit cash costs was negatively affected in 1Q21 by lower dilution of fixed costs and unscheduled furnace repairs during the quarter.

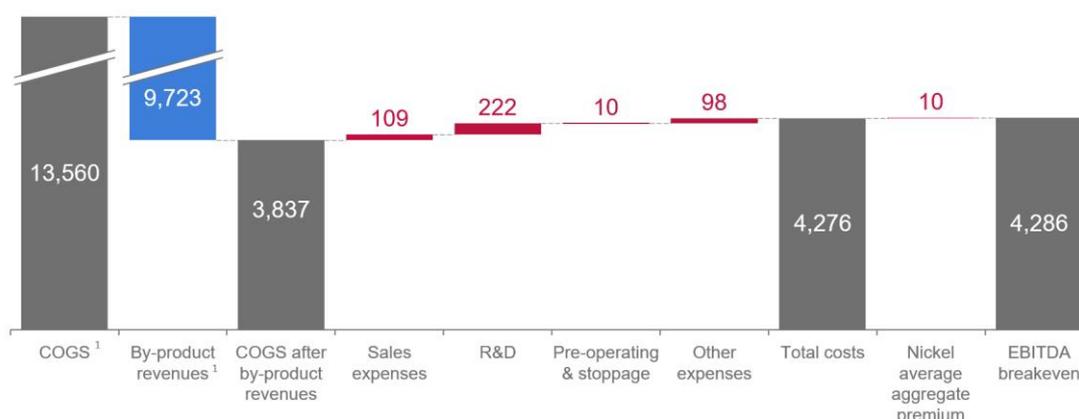
**Onça Puma's** higher unit cash costs reflects a reduced cost dilution from a slightly lower production level versus previous quarter.

Selling expenses and other expenses totaled US\$ 10 million in 1Q21, US\$ 45 million higher than the 4Q20 due to a one-off positive impact (revenue) of US\$ 50 million related to tax credits in 4Q20.

R&D expenses were US\$ 11 million in 1Q21, in line with the recorded in 4Q20. These expenses encompass R&D initiatives for further operational improvements in North Atlantic.

## EBITDA breakeven – nickel operations<sup>9</sup>

US\$/t, 1Q21



<sup>1</sup> Excluding trading activities

## Selected financial indicators - Nickel operations

US\$ million	1Q21	4Q20	1Q20
Net Revenues	1,434	1,587	956
Costs <sup>1</sup>	(771)	(884)	(528)
Expenses <sup>1</sup>	(10)	35	(19)
Pre-operating and stoppage expenses <sup>1</sup>	-	(1)	-
R&D expenses	(11)	(11)	(13)
Adjusted EBITDA	642	726	396
Depreciation and amortization	(220)	(240)	(224)
Adjusted EBIT	422	486	172
Adjusted EBIT margin (%)	29.4	30.6	18.0

<sup>1</sup> Net of depreciation and amortization

## Copper operations – Salobo and Sossego

### Copper – EBITDA by operation

US\$ million	1Q21	4Q20	1Q20
Salobo	284	339	145
Sossego	101	122	29
Others Copper <sup>1</sup>	(16)	(16)	(14)
<b>Total</b>	<b>369</b>	<b>445</b>	<b>160</b>

<sup>1</sup> Includes research expenses related to the Hu'u project.

**Salobo** and **Sossego**'s EBITDA declined in 1Q21 mainly due to lower copper and gold sales and production volumes, as changes in maintenance schedules and routines, following a broad safety review that will improve operating conditions, impacted mining equipment availability and mine movement. Sales were also impacted by an unplanned shipping reschedule, which has deferred sales to the next quarter.

<sup>9</sup> 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 breakeven would increase to US\$ 4,397/t.

## Copper revenue and realized price

### Net operating revenue by product - Copper operations

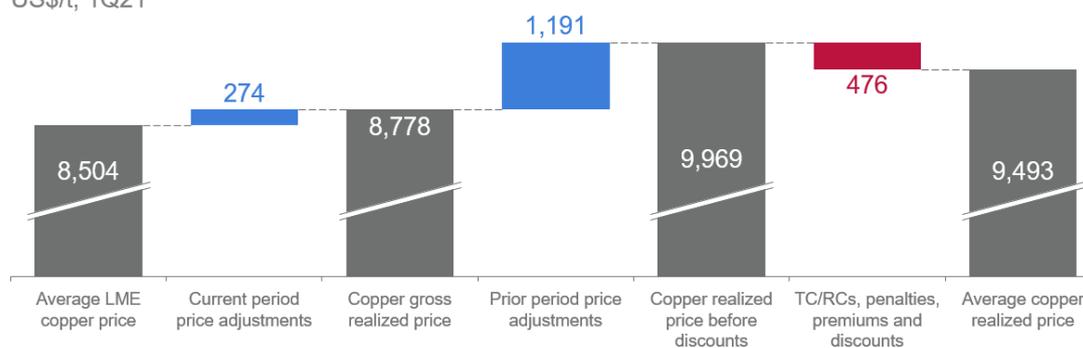
US\$ million	1Q21	4Q20	1Q20
Copper	431	476	226
Gold as by-product	119	201	154
Silver as by-product	4	5	3
<b>Total</b>	<b>554</b>	<b>682</b>	<b>383</b>

### Volume sold - Copper operations

'000 metric tons	1Q21	4Q20	1Q20
Copper	45	67	59
Gold as by-product ('000 oz)	66	106	93
Silver as by-product ('000 oz)	152	199	186

### Price realization – copper operations

US\$/t, 1Q21



Vale's copper products are sold on a provisional pricing basis<sup>10</sup> 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 curve
- 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 previous quarters
- TC/RCs, penalties, premiums and discounts for intermediate products

The positive effects of current period price adjustments of US\$ 274/t and prior period price adjustments of US\$ 1,191/t were mainly due to the forward price steadily rising during the first quarter.

<sup>10</sup> On March 31, 2021, Vale had provisionally priced copper sales from Sossego and Salobo totaling 51,513 tons valued at an LME forward price of US\$ 7,353/t, subject to final pricing over the following months.

## Copper Costs and Expenses

**Salobo** and **Sossego** operations were impacted by maintenance activities which reduced the production and sales during the quarter. Therefore, Salobo unit cash costs after by-products increased to positive levels, while Sossego surpassed the US\$ 2,000/t unit cash cost level it had kept under in 2H20.

### Copper COGS - 4Q20 x 1Q21

US\$ million	Variance drivers					1Q21
	4Q20	Volume	Exchange rate	Others	Total variation	
Copper operations	212	(68)	(2)	24	(46)	166
Depreciation	35	(11)	-	7	(4)	31
<b>Total</b>	<b>247</b>	<b>(79)</b>	<b>(2)</b>	<b>31</b>	<b>(50)</b>	<b>197</b>

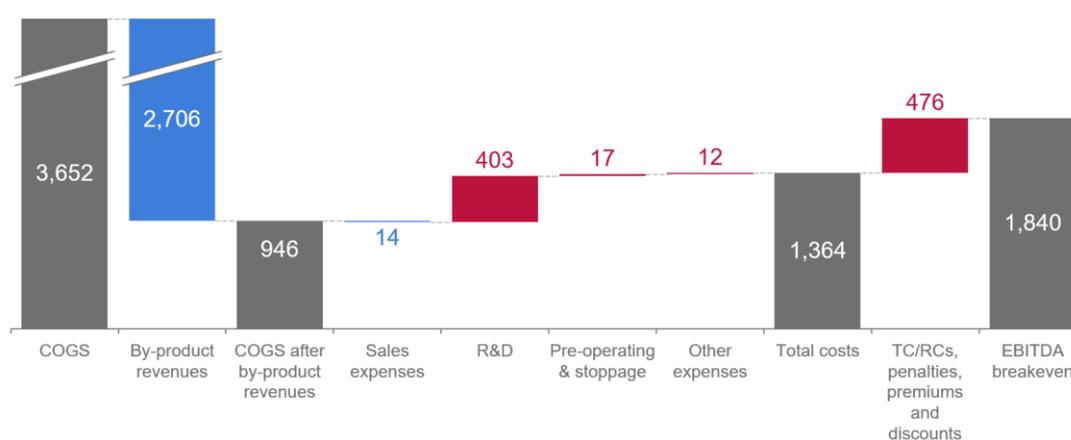
### Copper operations – unit cash cost of sales, net of by-product credits

US\$/t	1Q21	4Q20	1Q20
Salobo	106	(808)	(264)
Sossego	2,711	1,742	2,985

Selling and other expenses were US\$ 0.09 million. Pre-operational and stoppage expenses totaled US\$ 1 million in 1Q21. Research and development expenses were US\$ 18 million in 1Q21, with Hu'u-related expenditures amounting to US\$ 15 million, Sossego-related expenditures amounting to US\$ 2 million and other developments in Carajas region amounting to US\$ 1 million in the quarter.

### EBITDA breakeven – copper operations<sup>11</sup>

US\$/t, 1Q21



<sup>11</sup> 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 breakeven would increase to US\$ 3,435/t.

The realized price to be compared to the EBITDA break-even should be the copper realized price before discounts (US\$ 9,969/t), given that TC/RCs, penalties and other discounts are already part of the EBITDA break-even build-up.

### Selected financial indicators - Copper operations

<i>US\$ million</i>	<b>1Q21</b>	<b>4Q20</b>	<b>1Q20</b>
Net Revenues	554	682	383
Costs <sup>1</sup>	(166)	(212)	(207)
Expenses <sup>1</sup>	-	(3)	1
Pre-operating and stoppage expenses <sup>1</sup>	(1)	(1)	-
R&D expenses	(18)	(21)	(17)
Adjusted EBITDA	369	445	160
Depreciation and amortization	(31)	(35)	(40)
Adjusted EBIT	338	410	120
Adjusted EBIT margin (%)	61.0	60.0	31.3

<sup>1</sup> Net of depreciation and amortization

## Coal

Coal adjusted EBITDA was negative US\$ 159 million in 1Q21, US\$ 132 million higher than in 4Q20, mainly as a result of the interest received from the Nacala Logistic Corridor<sup>12</sup> (US\$ 78 million).

As reported in Vale's Production and Sales report, the maintenance plan was concluded in April 2021. Following the ramp-up, which is expected to be concluded by May, Vale expects to reach a run-rate of 15 Mtpy in 2H21 and 18 Mtpy in 2022.

Following the signing of the Investment Agreement with Mitsui on April 2021, the completion of Mitsui's exit from the Moatize coal mine and the Nacala Logistics Corridor, which is expected throughout 2021, is an initial stage towards Vale's divestment of the coal business.

### Revenue and price realization

The lower net revenues on 1Q21 was due the lower sales volumes (US\$ 48 million) affected by the plant revamp as expected.

#### Volume sold

'000 metric tons	1Q21	4Q20	1Q20
Metallurgical coal	474	884	706
Thermal coal	541	651	860
<b>Total</b>	<b>1,015</b>	<b>1,535</b>	<b>1,566</b>

#### Net operating revenue by product

US\$ million	1Q21	4Q20	1Q20
Metallurgical coal	58	91	94
Thermal coal	34	37	54
<b>Total</b>	<b>92</b>	<b>128</b>	<b>148</b>

#### Coal prices

US\$/ metric ton	1Q21	4Q20	1Q20
Metallurgical coal index price <sup>1</sup>	127.1	108.1	155.1
Vale's metallurgical coal realized price	122.1	103.3	132.9
Thermal coal index price <sup>2</sup>	90.8	72.8	78.0
Vale's thermal coal realized price	62.7	56.7	63.5
<b>Vale's average realized price</b>	<b>90.4</b>	<b>83.6</b>	<b>94.8</b>

<sup>1</sup> Reference price Premium Low Vol Hard Coking Coal FOB Australia.

<sup>2</sup> McCloskey FOB Richards Bay.

<sup>12</sup> From 1Q20 onwards, and for Adjusted EBITDA purposes only, Vale is recognizing interest on a cash basis. Therefore, interest from the Nacala Logistic Corridor will be recorded in the Adjusted EBITDA every 6 months (usually in 1Q and 3Q of each fiscal year) as provided for in the debt service contract.

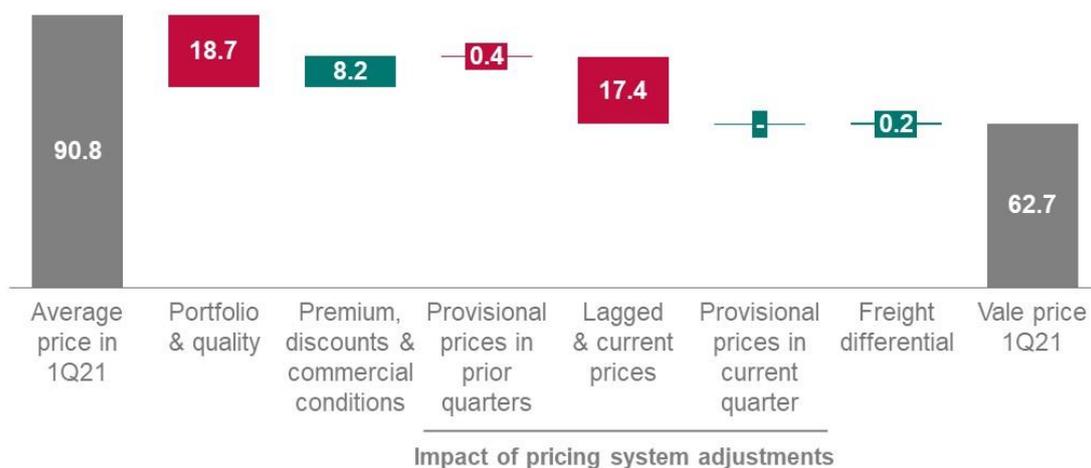
### Price realization – Metallurgical coal

US\$/t 1Q21



### Price realization – Thermal coal

US\$/t 1Q21



## Costs and expenses

Costs totaled US\$ 329 million in 1Q21, US\$ 71 million lower than in 4Q20, on account of lower variable costs resulting from lower sales volumes. Pro-forma C1 cash cost totaled US\$ 41.8/t, a decrease compared to 4Q20 due to the positive impact of the interest received from Nacala Logistic Corridor related to its debt service to Vale<sup>13</sup>.

### Pro-forma cash cost

US\$/ metric ton	1Q21	4Q20	1Q20
Pro-forma operational costs <sup>1</sup> (A)	99.4	113.7	144.8
Nacala non-operational tariff <sup>2</sup> (B)	29.9	13.4	58.3
Other costs (C) <sup>3</sup>	(10.4)	0.3	35.4
Cost at Nacala Port (D = A+B+C)	118.9	127.5	238.5
NLC's debt service to Vale (E)	77.1	-	47.9
Pro-forma C1 cash cost (F = D-E)	41.8	127.5	190.6
Idle capacity	205.1	133.7	-
<b>Total</b>	<b>246.9</b>	<b>261.2</b>	<b>190.6</b>

<sup>1</sup> Includes the inferred NLC tariff components related to fixed and variable costs and excludes royalties.

<sup>2</sup> Includes the inferred NLC tariff components related to sustaining capex, working capital, taxes and other financial items.

<sup>3</sup> 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	1Q21	4Q20	1Q20
Net Revenues	92	128	148
Costs <sup>1 2</sup>	(329)	(400)	(374)
Expenses <sup>1</sup>	2	(15)	2
R&D expenses	(2)	(4)	(9)
Dividends and interests on associates and JVs	78	-	75
Adjusted EBITDA	(159)	(291)	(158)
Depreciation and amortization	-	-	(19)
Adjusted EBIT	(159)	(291)	(177)
Adjusted EBIT margin (%)	(173)	(227)	(120)

<sup>1</sup> Net of depreciation and amortization

<sup>2</sup> Including idle capacity

<sup>13</sup> From 1Q20 onwards, and for Adjusted EBITDA purposes only, Vale is recognizing interest on a cash basis. Therefore, interest from the Nacala Logistic Corridor will be recorded in the Adjusted EBITDA every 6 months (usually in 1Q and 3Q of each fiscal year) as provided for in the debt service contract.

# ANNEXES

## SIMPLIFIED FINANCIAL STATEMENTS

### Income Statement

<i>US\$ million</i>	1Q21	4Q20	1Q20
<b>Net operating revenue</b>	<b>12,645</b>	<b>14,769</b>	<b>6,969</b>
Cost of goods sold and services rendered	(4,627)	(5,733)	(4,278)
<b>Gross profit</b>	<b>8,018</b>	<b>9,036</b>	<b>2,691</b>
Gross margin (%)	63.4	61.2	38.6
Selling and administrative expenses	(105)	(188)	(115)
Research and evaluation expenses	(100)	(153)	(95)
Pre-operating and operational stoppage	(145)	(193)	(268)
Brumadinho event	(115)	(4,854)	(159)
Other operational expenses, net	(12)	(340)	(62)
Impairment and disposal of non-current assets	(161)	(1,513)	(29)
<b>Operating income</b>	<b>7,380</b>	<b>1,795</b>	<b>1,963</b>
Financial income	74	64	107
Financial expenses	(1,386)	(958)	(525)
Other financial items, net	1,235	213	(1,867)
Equity results and other results in associates and joint ventures	(16)	(322)	(166)
<b>Income (loss) before income taxes</b>	<b>7,287</b>	<b>792</b>	<b>(488)</b>
Current tax	(1,515)	(1,982)	(347)
Deferred tax	(295)	1,834	996
<b>Net income</b>	<b>5,477</b>	<b>644</b>	<b>161</b>
Loss attributable to noncontrolling interests	(69)	(95)	(78)
<b>Net income attributable to Vale's stockholders</b>	<b>5,546</b>	<b>739</b>	<b>239</b>
Earnings per share (attributable to the Company's stockholders - US\$):			
Basic and diluted earnings per share (attributable to the Company's stockholders - US\$)	1.09	0.14	0.05

### Equity income (loss) by business segment

<i>US\$ million</i>	1Q21	%	4Q20	%	1Q20	%
Ferrous Minerals	15	(54)	13	(28)	(18)	16
Base Metals	-	-	-	-	-	-
Coal	-	-	-	-	-	-
Others	(43)	154	(59)	128	(92)	84
<b>Total</b>	<b>(28)</b>	<b>100</b>	<b>(46)</b>	<b>100</b>	<b>(110)</b>	<b>100</b>

<sup>1</sup> VNC results are reported in Others segment Information

## Balance sheet

US\$ million	3/31/2021	12/31/2020	3/31/2020
<b>Assets</b>			
<b>Current assets</b>	<b>23,173</b>	<b>24,403</b>	<b>19,944</b>
Cash and cash equivalents	12,883	13,487	11,788
Short term investments	1,429	771	479
Accounts receivable	3,515	4,993	2,096
Other financial assets	289	329	510
Inventories	4,274	4,061	4,090
Recoverable taxes	466	509	571
Others	317	253	410
<b>Non-current assets</b>	<b>14,217</b>	<b>15,129</b>	<b>16,396</b>
Judicial deposits	1,146	1,268	2,436
Other financial assets	2,111	1,784	2,247
Recoverable taxes	1,107	1,091	1,095
Deferred income taxes	9,207	10,335	10,060
Others	646	651	558
<b>Fixed assets</b>	<b>49,594</b>	<b>52,475</b>	<b>48,242</b>
<b>Total assets</b>	<b>86,984</b>	<b>92,007</b>	<b>84,582</b>
<b>Liabilities</b>			
<b>Current liabilities</b>	<b>11,827</b>	<b>14,594</b>	<b>11,578</b>
Suppliers and contractors	3,113	3,367	3,009
Loans, borrowings and leases	989	1,136	1,166
Other financial liabilities	2,082	1,906	1,565
Taxes payable	830	952	385
Settlement program (REFIS)	311	340	336
Provisions	903	1,826	787
Liabilities related to associates and joint ventures	846	876	453
Liabilities related to Brumadinho	1,847	1,910	990
De-characterization of dams	367	381	274
Dividends payable	21	1,220	1,218
Others	518	680	1,395
<b>Non-current liabilities</b>	<b>39,728</b>	<b>42,592</b>	<b>39,747</b>
Loans, borrowings and leases	12,818	13,891	17,603
Participative stockholders' debentures	4,045	3,413	2,023
Other financial liabilities	4,418	4,612	2,340
Settlement program (REFIS)	2,121	2,404	2,628
Deferred income taxes	1,944	1,770	1,741
Provisions	7,445	8,434	7,478
Liabilities related to associates and joint ventures	886	1,198	821
Liabilities related to Brumadinho	2,167	2,665	1,173
De-characterization of dams	1,595	1,908	1,538
Streaming transactions	1,986	2,005	2,046
Others	303	292	356
<b>Total liabilities</b>	<b>51,555</b>	<b>57,186</b>	<b>51,325</b>
<b>Stockholders' equity</b>	<b>35,429</b>	<b>34,821</b>	<b>33,257</b>
<b>Total liabilities and stockholders' equity</b>	<b>86,984</b>	<b>92,007</b>	<b>84,582</b>

## Cash flow

<i>US\$ million</i>	1Q21	4Q20	1Q20
<b>Cash flow from operations</b>	<b>8,673</b>	<b>7,330</b>	<b>2,005</b>
Interest on loans and borrowings paid	(288)	(140)	(244)
Cash received (paid) on settlement of Derivatives, net	(199)	(63)	273
Interest on participative stockholders debentures paid	-	(95)	-
Income taxes (including settlement program)	(1,164)	(539)	(349)
<b>Net cash provided by operating activities</b>	<b>7,022</b>	<b>6,493</b>	<b>1,685</b>
<b>Cash flows from investing activities:</b>			
Short-term investment	(716)	-	181
Investment in fund applications	-	(697)	-
Capital expenditures	(1,009)	(1,444)	(1,124)
Additions to investments	(42)	(56)	(75)
Cash paid on the disposal of VNC	(555)	-	-
Dividends received from joint ventures and associates	-	94	-
Other investment activities, net	(24)	205	(53)
<b>Net cash used in investing activities</b>	<b>(2,346)</b>	<b>(1,898)</b>	<b>(1,071)</b>
<b>Cash flows from financing activities:</b>			
<b>Loans and financing:</b>			
Loans and borrowings from third-parties	290	-	5,000
Payments of loans and borrowings from third-parties	(1,233)	(308)	(375)
Lease payments	(55)	(75)	(50)
<b>Payments to stockholders:</b>			
<b>Dividends and interest on capital paid to stockholders</b>	<b>(3,884)</b>	<b>(23)</b>	<b>-</b>
Dividends and interest on capital paid to noncontrolling interest	(3)	(3)	(3)
Transactions with noncontrolling stockholders	-	171	-
<b>Net cash provided by (used in) financing activities</b>	<b>(4,885)</b>	<b>(238)</b>	<b>4,572</b>
<b>Increase (decrease) in cash and cash equivalents</b>	<b>(209)</b>	<b>4,357</b>	<b>5,186</b>
Cash and cash equivalents in the beginning of the period	13,487	8,845	7,350
Effect of exchange rate changes on cash and cash equivalents	(395)	300	(748)
Effects of disposals of subsidiaries, net of cash and cash equivalents	-	(15)	-
<b>Cash and cash equivalents at the end of period</b>	<b>12,883</b>	<b>13,487</b>	<b>11,788</b>
<b>Non-cash transactions:</b>			
Additions to property, plant and equipment - capitalized loans and borrowing costs	16	13	32
<b>Cash flows from operating activities:</b>			
Income before income taxes	<b>7,287</b>	<b>792</b>	<b>(488)</b>
<b>Adjusted for:</b>			
Provisions related to Brumadinho	-	4,727	-
Equity results and other results in associates and joint ventures	16	322	166
Impairment and disposal of non-current assets	161	1,513	29
Depreciation, depletion and amortization	731	838	815
Financial results, net	77	681	2,285
<b>Change in assets and liabilities</b>	<b>-</b>		
Accounts receivable	1,401	(1,963)	621
Inventories	(174)	470	(227)
Suppliers and contractors	(256)	85	(674)
Provision - Payroll, related charges and other remunerations	(289)	138	(208)
Payments related to Brumadinho	(149)	(221)	(217)
Other assets and liabilities, net	(132)	(52)	(97)
<b>Cash flow from operations</b>	<b>8,673</b>	<b>7,330</b>	<b>2,005</b>

## REVENUES, VOLUMES SOLD, PRICES AND MARGINS

### Net operating revenue by destination

US\$ million	1Q21	%	4Q20	%	1Q20	%
<b>North America</b>	<b>481</b>	<b>3.8</b>	<b>302</b>	<b>2.0</b>	<b>494</b>	<b>7.1</b>
USA	383	3.0	297	2.0	289	4.1
Canada	98	0.8	5	0.0	204	2.9
Mexico	-	-	-	-	1	0.0
<b>South America</b>	<b>1,353</b>	<b>10.7</b>	<b>1,045</b>	<b>7.1</b>	<b>819</b>	<b>11.8</b>
Brazil	1,134	9.0	938	6.4	725	10.4
Others	219	1.7	107	0.7	94	1.3
<b>Asia</b>	<b>8,572</b>	<b>67.8</b>	<b>11,105</b>	<b>75.2</b>	<b>4,291</b>	<b>61.6</b>
China	6,966	55.1	9,208	62.3	3,196	45.9
Japan	623	4.9	775	5.2	484	6.9
South Korea	356	2.8	477	3.2	240	3.4
Others	627	5.0	645	4.4	371	5.3
<b>Europe</b>	<b>1,950</b>	<b>15.4</b>	<b>1,815</b>	<b>12.3</b>	<b>1,087</b>	<b>15.6</b>
Germany	635	5.0	498	3.4	376	5.4
Italy	144	1.1	105	0.7	58	0.8
Others	1,171	9.3	1,212	8.2	653	9.4
<b>Middle East</b>	<b>71</b>	<b>0.6</b>	<b>348</b>	<b>2.4</b>	<b>108</b>	<b>1.5</b>
<b>Rest of the World</b>	<b>218</b>	<b>1.7</b>	<b>154</b>	<b>1.0</b>	<b>170</b>	<b>2.4</b>
<b>Total</b>	<b>12,645</b>	<b>100.0</b>	<b>14,769</b>	<b>100.0</b>	<b>6,969</b>	<b>100.0</b>

### Volume sold - Minerals and metals

'000 metric tons	1Q21	4Q20	1Q20
Iron ore fines	58,872	82,391	51,445
ROM	426	434	211
Pellets	6,271	8,486	7,311
Manganese ore	258	461	219
Ferroalloys	14	15	27
Thermal coal	541	651	860
Metallurgical coal	474	884	706
Nickel <sup>1</sup>	48	59	37
Copper	71	93	89
Gold as by-product ('000 oz)	76	122	109
Silver as by-product ('000 oz)	315	491	767
PGMs ('000 oz)	60	82	91
Cobalt (metric ton) <sup>1</sup>	428	350	517

<sup>1</sup> Excludes VNC volumes

## Average prices

US\$/ton	1Q21	4Q20	1Q20
Iron ore fines CFR reference (dmt)	171.1	143.4	93.5
Iron ore fines Vale CFR/FOB realized price	155.5	130.7	83.8
Pellets CFR/FOB (wmt)	192.6	206.0	116.6
Manganese ore	109.7	87.5	107.4
Ferroalloys	1,158.6	1,027.2	870.7
Thermal coal	62.7	56.7	63.5
Metallurgical coal	122.1	103.3	132.9
Nickel <sup>2</sup>	17,630	17,387	15,380
Copper <sup>1</sup>	9,409	7,209	3,924
Gold (US\$/oz)	1,781	1,895	1,636
Silver (US\$/oz)	24.58	29.93	15.81
Cobalt (US\$/t) <sup>2</sup>	44,834	56,097	33,580

<sup>1</sup> Considers Salobo, Sossego and North Atlantic operations.

<sup>2</sup> VNC results are reported in Others segment Information.

## Operating margin by segment (EBIT adjusted margin)

%	1Q21	4Q20	1Q20
Ferrous Minerals	70.1	68.3	45.8
Base Metals <sup>1</sup>	38.2	39.5	21.8
Coal	(172.8)	(227.3)	(119.6)
<b>Total</b>	<b>60.3</b>	<b>23.0</b>	<b>29.7</b>

<sup>1</sup> VNC results are reported in Others segment Information.

## RECONCILIATION OF IFRS AND “NON-GAAP” INFORMATION

### (a) Adjusted EBIT

US\$ million	1Q21	4Q20	1Q20
Net operating revenues	12,645	14,769	6,969
COGS	(4,627)	(5,733)	(4,278)
Sales and administrative expenses	(105)	(188)	(115)
Research and development expenses	(100)	(153)	(95)
Pre-operating and stoppage expenses	(145)	(193)	(268)
Brumadinho event	(115)	(4,854)	(159)
Other operational expenses, net	(12)	(340)	(62)
Dividends received and interests from associates and JVs	78	94	75
<b>Adjusted EBIT</b>	<b>7,619</b>	<b>3,402</b>	<b>2,067</b>

### (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 and disposal 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

<i>US\$ million</i>	<b>1Q21</b>	<b>4Q20</b>	<b>1Q20</b>
<b>Adjusted EBITDA</b>	<b>8,350</b>	<b>4,240</b>	<b>2,882</b>
<b>Working capital:</b>			
Accounts receivable	1,401	(1,963)	621
Inventories	(174)	470	(227)
Suppliers and contractors	(256)	85	(674)
Provision - Payroll, related charges and other remunerations	(289)	138	(208)
Payments related to Brumadinho	(264)	(221)	(217)
Provisions related to Brumadinho	-	4,727	-
Others	(95)	(146)	(172)
<b>Cash provided from operations</b>	<b>8,673</b>	<b>7,330</b>	<b>2,005</b>
Income taxes paid - including settlement program	(1,164)	(539)	(349)
Interest on loans and borrowings paid	(288)	(140)	(244)
Interest on participative shareholders' debentures paid	-	(95)	-
Cash received (paid) on settlement of Derivatives, net	(199)	(63)	273
<b>Net cash provided by (used in) operating activities</b>	<b>7,022</b>	<b>6,493</b>	<b>1,685</b>

### Reconciliation between adjusted EBITDA and net income (loss)

<i>US\$ million</i>	<b>1Q21</b>	<b>4Q20</b>	<b>1Q20</b>
<b>Adjusted EBITDA</b>	<b>8,350</b>	<b>4,240</b>	<b>2,882</b>
Depreciation, depletion and amortization	(731)	(838)	(815)
Dividends received and interest from associates and joint ventures	(78)	(94)	(75)
Impairment and disposal of non-current assets	(161)	(1,513)	(29)
<b>Operating income</b>	<b>7,380</b>	<b>1,795</b>	<b>1,963</b>
Financial results	(77)	(681)	(2,285)
Equity results and other results in associates and joint ventures	(16)	(322)	(166)
Income taxes	(1,810)	(148)	649
<b>Net income</b>	<b>5,477</b>	<b>644</b>	<b>161</b>
Loss attributable to noncontrolling interests	(69)	(95)	(78)
<b>Net income attributable to Vale's stockholders</b>	<b>5,546</b>	<b>739</b>	<b>239</b>

### (c) Net debt

<i>US\$ million</i>	<b>1Q21</b>	<b>4Q20</b>	<b>1Q20</b>
Total debt	12,176	13,360	17,075
Cash and cash equivalents <sup>1</sup>	14,312	14,258	12,267
<b>Net debt</b>	<b>(2,136)</b>	<b>(898)</b>	<b>4,808</b>

<sup>1</sup> Including financial investments

### (d) Gross debt / LTM Adjusted EBITDA

<i>US\$ million</i>	<b>1Q21</b>	<b>4Q20</b>	<b>1Q20</b>
Gross debt / LTM Adjusted EBITDA (x)	0.6	0.8	1.2
Gross debt / LTM operational cash flow (x)	0.6	0.9	1.5

### (e) LTM Adjusted EBITDA / LTM interest payments

<i>US\$ million</i>	<b>1Q21</b>	<b>4Q20</b>	<b>1Q20</b>
Adjusted LTM EBITDA / LTM gross interest (x)	27.2	20.3	14.8
LTM adjusted EBITDA / LTM interest payments (x)	27.6	22.0	11.9
LTM operational profit / LTM interest payments (x)	20.7	14.7	4.6