B3/B4 back-up dam, delivered in 4Q20

VALE'S PERFORMANCE IN 4Q20 AND 2020

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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 performance in review

Rio de Janeiro, February 25th, 2021 – The adoption of measures to fight the COVID-19 pandemic and the continuity of the integral reparation of Brumadinho were Vale's priorities in 2020. In this challenging environment, we implemented operational adjustments and continued to act positively toward the communities of which we are a part.

Despite the circumstances, we moved forward in de-risking Vale, with the Global Settlement for Brumadinho reparation being the most recent in a series of milestones achieved. We evolved our risk management model, enhanced our dams and tailings practices and broadened the implementation of VPS[1]. We extended our railways concessions from 2027 to 2057, partially resumed production in all our iron ore fines operations halted in 2019, improved production in base metals and closed gaps in the direction of having more robust ESG practices. *"It was a year in which we took important steps to become a more reliable operator. By establishing the Global Agreement of Brumadinho, improving our safety standards and partially resuming all our iron ore operations halted in 2019, we advanced into further de-risking our business. With this, we are preparing Vale for more solid results in 2021"*, commented Eduardo Bartolomeo, Chief Executive Officer.

Brumadinho reparation

Advancing with Brumadinho reparation is our priority. As of February 2021, over 9,100 people were individually indemnified, and more than R$ 13 billion were destined to indemnifications, to infrastructure works and to environmental and socio-economic reparation initiatives. In 4Q20, Vale concluded the works on two pipelines for water withdraw on the Pará River, in Pará de Minas, as part of the construction of new water supply systems to serve the population of Pará de Minas and metropolitan area of Belo Horizonte. A third one, on the Paraopeba River, will be delivered in 1H21.

In February 2021, Vale, the State of Minas Gerais, the Public Defender of the State of Minas Gerais and the Federal and the State of Minas Gerais Public Prosecutors Offices, entered into a settlement to repair the environmental and social collective damages resulting from the Dam I rupture.

The Global Settlement, with an economic value of approximately R$ 37.7 billion, encompass initiatives with socio-economic and socio-environmental scope, representing swift, fair and effective solutions towards the integral reparation and compensation for the damage caused by the tragedy of Brumadinho. The impact of the Global Settlement on 4Q20 results of R$ 19.9 billion (US$ 3.9 billion) is detailed in the Adjusted EBITDA section of this report.

For updated information on the advance of the reparation initiatives, please visit www.vale.com/brumadinho.

[1] VPS (Vale Production System) is Vale's management model that is focused on results, providing in-depth and comprehensive implementation of policies and practices to enable safe and environmentally responsible operations and ensure asset integrity.

Dams safety

Dam management practices at Vale continue to evolve. Vale is well positioned to be adherent to the new Global Industry Standard on Tailings Management - GISTM by the end of 2021. In addition, following the parameters to be announced by the Global Tailings Review Initiative in 2021, Vale will promote an in-depth internal evaluation and define an action plan to fully implement all principles and recommendations of GISTM. In October 2020, our Board of Directors approved the Dams and Mining Geotechnical Structures Policy, which was designed with GISTM as one of its references.

We are working to have all 32 structures currently at Emergency Level in safe conditions by 2025. In 2020, after the conclusion of stability improvements, the Emergency Level of Dam VI in Brumadinho (MG), Itabiruçu in Itabira (MG) and Captação de Água – Igarapé Bahia, in Parauapebas (PA) were removed and positive stability condition of stability attested.

We also promoted PAEBM (emergency action plans for mining dams, in Portuguese) drills for all Emergency Levels 2 and 3 dams.

Cultural transformation and Vale Production System - VPS

Our cultural transformation aims to bring safety, people and reparation to the core of our decisions, with five key behaviors present across the company:

- Obsession with safety and risk management;
- Open and transparent dialogue;
- Empowerment with accountability;
- Ownership for the whole;
- Active listening and engaging with society.

We believe that the adherence to these behaviors will promote the necessary actions to transform Vale into a better operator.

Our human capital management is evolving to support the cultural transformation. On the path to reach our goal of doubling the female presence by 2030, we have reached a 16.3% female presence in senior leadership in 2020 from 12.4% in 2019.

As a cornerstone of the cultural transformation, we started the implementation in large scale of our Vale Production System - VPS. With its Leadership, Technical and Management pillars, VPS promotes and reinforces the key behaviors in the operational routine.

The initial advancements towards operational excellence can already be perceived:

- 23 pp higher adherence to maintenance plans;
- 93% of scheduled maintenance in Brazil with Safe Work Permit[2];
- 95% adherence to systematic maintenance to critical assets;

[2] Operational safety process that provides guidance for a broad risk analysis, including site conditions to proceed with the task, risks incurred, general procedures, among others.

Production resumption

4Q20 marked the partial resumption of all iron ore fines operations halted in 2019, a significant milestone to achieve 400 Mtpy capacity by the end of 2022.

- In the Northern system, Serra Leste mine and mill restarted in December after receiving the required Installation License. The site is expected to produce 4-5 Mt in 2021, reaching 6 Mtpy of run-rate until the end of the year;
- In the Southern system, Fábrica resumed its activities in December after several vibration tests certified the absence of impacts on the site's structures. Until the resumption of beneficiation plant activities, which is expected to happen in 2Q21, Fábrica will operate by dry processing and mechanical dismantling, adding around 2 Mtpy of production capacity.
- Still in the Southern system, in January 2021, Vale resumed production at Vargem Grande pellet plant. With a nominal capacity of 7 Mtpy, the plant is expected to reach approximately 4-5 Mtpy in 2021, according to its ramp-up and pellet feed availability.

In an important step to create production capacity buffers, Vale received in December the required licenses to start the construction of the Capanema Project. The project adds 14 Mtpy capacity to Timbopeba site, ensuring greater operational flexibility with low capital intensity.

We also advanced on the adoption of sustainable mining solutions, with the implementation of filtering and tailings disposal structures that will support the capacity resumption and reduce the dependency on dams:

- Tailings filtration plants construction evolved in Itabira, Brucutu and Vargem Grande, with all plants expected to be operating by 2022;
- Maravilhas III (Vargem Grande Complex) and Torto (Brucutu) dams with start-up expected by 3Q21 and 4Q21, respectively.

Developing dry concentration technologies and increasing the share of high-quality products in the portfolio are important pieces to reduce our scope 3 emissions by 15% by 2035, and aligned with that goal our Board approved the construction of the first New Steel plant, with capacity of 1.5 million tons and startup expected by 2022.

For detailed information on the advance of the operational stabilization and resumption plan, please see Vale's Production and Sales Report in 4Q20 and 2020.

Early extension of railway concessions

In December 2020, Vale agreed terms with the Brazilian Federal Government to extend its concessions to operate the Estrada de Ferro Carajás and Estrada de Ferro Vitória Minas railways by 30 years, from 2027 to 2057. The work on this extension started back in 2015 and is a significant milestone in de-risking our business. To secure the extensions, Vale has agreed to commitments with a Net Present Value of US$ 2.312 billion, with the most significant being the construction of the 383 km railway FICO – Ferrovia de Integração Centro Oeste – on behalf of the Federal Government.

Shareholders remuneration

Vale's Board of Director approved the distribution of a total of R$ 4.26 per share (approximately US$ 0.77 per ADR)[3] in shareholders remuneration in relation to the company performance in 2H20. The continuation of our dividend payment policy aims at returning to our shareholders a relevant portion of our cash generation, in a predictable pattern and aligned with our strategic pillar 'Discipline in Capital Allocation'.

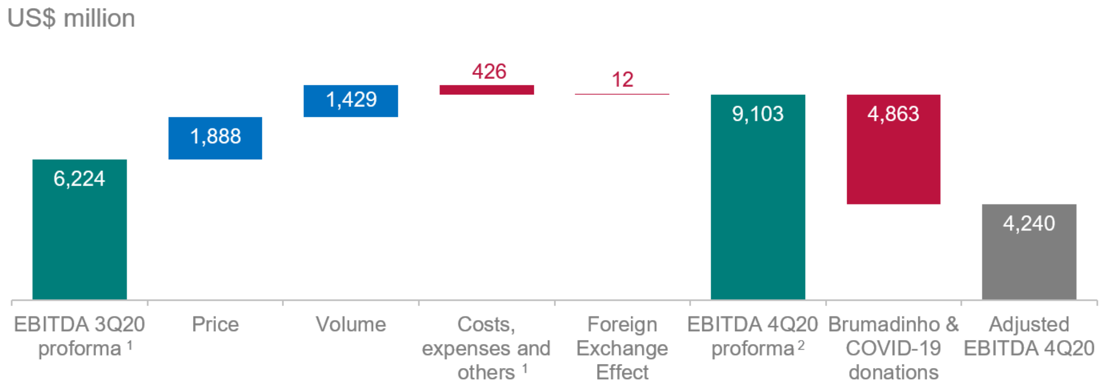
Vale's performance 4Q20

Proforma adjusted EBITDA reached US$ 9.103 billion in 4Q20, US$ 2.879 billion higher than in 3Q20, totaling US$ 15.327 billion in the second half of 2020 and US$ 21.954 billion for the full 2020 year. The quarterly result was mainly driven by:

- The strong performance of Ferrous Minerals business, as a result of 17% higher realized prices (US$ 1.598 billion) and 26% higher sales volumes (US$ 1.364 billion);
- Higher nickel (US$ 113 million) and copper (US$ 57 million) realized prices, following the 12% and 10% higher than 3Q20 average LME reference price, respectively; and
- Higher nickel by-product credits, mainly due to higher volumes of copper, rhodium and palladium (US$ 97 million).

Those effects were partially offset by higher Ferrous Minerals costs and expenses (US$ 152 million), mainly due to higher demurrage costs and higher cost of third party ore purchases, driven by higher reference prices, which in turn were partially offset by the dilution of costs and expenses on higher volumes and lower unit freight costs.

EBITDA proforma 4Q20 vs. 3Q20



[1] Including positive freight effect (US$ 48 million) and higher dividends received (US$ 72 million)
[2] Net of Brumadinho and COVID-19 donations
[3] US$ 4.854 billion related to Brumadinho and US$ 9 million to COVID-19 donations.

Adjusted EBITDA, after US$ 4.863 billion in expenses related to Brumadinho and COVID-19 donations in 4Q20, totaled US$ 4.240 billion. The quarter expense figure is mostly due to the impact of the Global Settlement for reparation of Brumadinho of US$ 3.872 billion and additional provisions for dam decharacterization of US$ 617 million, as detailed in the Adjusted EBITDA section of this report.

[3] Using the exchange rate of USD/BRL 5.5044 rate of February 22, 2021

Selected financial indicators

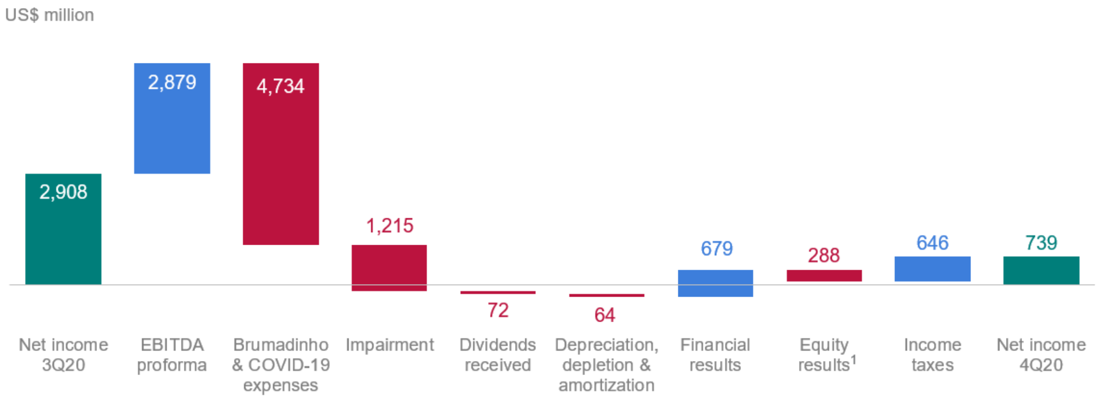
US$ million	4Q20	3Q20	4Q19
Net operating revenues	14,769	10,762	9,964
Total costs and other expenses	6,607	5,349	6,507
Expenses related to Brumadinho	4,854	114	1,141
Adjusted EBIT	3,402	5,321	2,504
Adjusted EBIT margin (%)	23%	49%	25%
Adjusted EBITDA	4,240	6,095	3,536
Adjusted EBITDA margin (%)	29%	57%	35%
Proforma adjusted EBITDA[1]	9,103	6,224	4,677
Iron ore - 62% Fe reference price	133.7	118.2	88.6
Net income (loss)	739	2,908	(1,562)
Net debt [2]	(898)	4,474	4,880
Capital expenditures	1,444	895	1,472

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

[2] Does not include leases (IFRS 16).

Vale posted net income of US$ 739 million in 4Q20, US$ 2.169 billion lower than 3Q20, mainly due to higher Brumadinho expenses, following the Global Settlement for reparation of Brumadinho, and asset impairments charges, mainly related to Coal and Nickel assets. Those effects were partially offset by higher proforma adjusted EBITDA recorded in 4Q20 and better financial results, following the positive impact of the lower Real exchange rate on currency and interest rate swaps, which was partially offset by higher mark-to-market of the participative stockholders' debentures.

Net income 4Q20 vs. 3Q20



[1] Includes net income (loss) attributable to noncontrolling interests.

Total capex for the 4Q20 amounted to US$ 1.444 billion, US$ 549 million higher than in 3Q20, explained by an increase of US$ 515 million in sustaining capex and US$ 34 million in project execution, as Vale progressed with filtration plants investments, Northern System 240 and Gelado projects in Iron Ore business and Salobo III and VBME projects in Base Metals business.

In 2020, Vale approved Serra Sul 120 and Capanema projects and in 2021 expects to invest US$ 5.8 billion, an increase of 31% compared to 2020, mainly due to (i) higher spend on the iron ore tailings filtration plants investments; (ii) investments in solar energy projects, such as Sol do Cerrado, which will increase the share of renewable energy in Vale’s matrix and reduce average energy cost; and (iii) postponements from 2020’s investment program due to COVID-19 pandemic.

Vale generated US$ 4.9 billion in Free Cash Flow from Operations in 4Q20, US$ 1.1 billion higher than in 3Q20 driven by an even stronger proforma EBITDA (US$ 2.9 billion), but negatively impacted by seasonally higher investments (US$ 549 million) and working capital (US$ 1.0 billion). The impact in working capital, which mainly resulted from an increase in accounts receivables due to higher CFR sales and increased iron ore prices, should be partially reverted in 1Q21, following revenues collection in January.

We ended the year with US$ 14.258 billion in cash, more than our Gross Debt of US$ 13.360 billion, and therefore with a net cash position of US$ 898 million in 4Q20. Our Expanded Net debt, which is now comprised mostly by Vale's other relevant obligations and commitments, reduced from 14.465 billion in 3Q20 to US$ 13.334 billion, despite the US$ 3.740 billion in additional obligations related to the Global Settlement for reparation of Brumadinho. Expanded Net Debt is expected to continue trending downwards to US$ 10 billion long-term target level as the company continues to generate cash and pay its Refis, Brumadinho, Renova and Samarco obligations.

We proceeded with the optimization of our asset portfolio, with the following recent progress:

- Closure of ferro-alloy operations in Simões Filho plant (BA);
- Conclusion of the sale of Biopalma (PA), a palm oil company;
- Sale of our minority interest in the Zhuhai Pellet Plant and in the Henan Longyu Coal Mine for a combined US$ 169 million;
- Transfer of the shares of Potassio Rio Colorado to the Province of Mendoza, in Argentina;
- Signature of a binding put option agreement with Prony Resources, a consortium led by the current management and employees of VNC with Trafigura as a non-controlling shareholder, for the sale of our ownership interest in Vale New Caledonia – VNC. The deal is backed by both the Caledonian and French governments and was approved by the VNC workers' council;
- Signature of Heads of Agreement with Mitsui to divest the Mine of Moatize and Nacala Logistics Corridor, as a first step towards Vale's divestment of the coal business.

We also concluded in 4Q20 the agreement for the required divestiture of 14.9% of PT Vale Indonesia shares, against proceeds of US$ 278 million.

Business areas 4Q20 performance

Ferrous Minerals EBITDA of US$ 8.800 billion in 4Q20 was US$ 2.944 billion higher than 3Q20, achieving its second largest all-time adjusted EBITDA.

- Iron ore fines' net revenues, excluding pellets and run of mine (ROM), increased to US$ 10.765 billion in 4Q20 vs. US$ 7.357 billion in 3Q20, as a result of 17% higher realized prices and 26% higher sales volumes.
- Vale's realized price CFR/FOB totaled US$ 130.7/t, an increase of US$ 18.6/t compared with 3Q20, mainly due to the higher 62% Fe reference price and the positive effect from pricing mechanisms, as provisional price was marked, at the end of the quarter, at a higher level than quarter's average price. The positive effects were partially offset by lower premiums, as a result of high reference prices and a sales mix with more medium-grade products.
- Sales to China reached a record level in 4Q20, totaling 63.9 Mt, reflecting the robust demand environment following the recovery of COVID-19 impacts.
- MB65% index averaged US$ 145.9/dmt in 4Q20, 13% higher than 3Q20. The spread between the MB65% and the 62% iron ore reference price recovered along the quarter closing the year at around $13/t. The high coal prices in China, following the country's import restriction over Australia together with high levels of steel margins and the decrease of iron ore pellets and concentrate stocks at Chinese ports supported the level for of high-grade premiums. Although steel margin has deteriorated since the beginning of 2021, the spread widened further, reaching an average of US$ 22/t as a result of continued high coke price and shortage of high-grade fines supply.
- Iron ore fines and pellets EBITDA break-even cost totaled US$ 36.3/t, US$ 0.2/t higher than in 3Q20, as a result of (i) lower premiums; (ii) higher C1 cash cost, mainly due to higher demurrage costs and stronger prices on third party ore purchases driven by higher reference prices; and (iii) higher distribution costs, which were partially offset by (i) lower freight costs; and (ii) seasonal dividends received.

Base Metals adjusted EBITDA was US$ 1.138 billion in 4Q20, US$ 368 million higher than 3Q20.

- 4Q20 was marked by the by successful resumption of production after maintenance works rescheduled from 1H20 to 3Q20 across Base Metals operations. Nickel production was up 19% q/q, while sales grew 14% in the quarter; copper production rose 7% q/q and sales increased 15%.
- The higher EBITDA in 4Q20 was mainly due to: (i) higher nickel and copper realized prices, following the 12% and 10% higher than 3Q20 average LME reference price, respectively; (ii) higher nickel by-product credits, mainly due to higher volumes of copper, rhodium and palladium; (iii) lower costs in Ontario and Onça Puma due to the successful maintenance performed during 3Q20; and (iv) higher nickel sales volumes, as higher production allowed Vale to take advantage of better prices environment;
- Onça-Puma reached US$ 50 million EBITDA in 4Q20, which was the first full quarter after extensive furnace maintenance works, setting the pace for the operation from this point.

- Salobo had solid performance reaching consecutive negative unit cash costs after by-products of -US$ 808/t in the quarter, while Sossego remained at sub-US$ 2,000/t unit cash cost in the same period.
- At VNC, operations have been halted since December 10th, 2020, as the violent protests by independence activist groups near the site made it unsafe for our workers to access the site. Vale continues to seek an open dialogue with all the parties and believes in a solution for the sale of its stake in VNC, which was approved by VNC workers' council and has the support of both the Caledonian and French governments. If the sale alternative does not succeed, production will remain halted and we will initiate the process to cocoon the asset into Care & Maintenance.

Vale Base Metals went through a broad safety review of operational process, resulting in comprehensive overhaul of maintenance standards, procedures, training and oversight. These additional measures will impact mining equipment availability, with the largest backlog impact on the Salobo Operation, likely to cut our initial production estimate of finished copper by 10kt, with a recovery plan during the catchup period during 1Q21 to further mitigate this impact.

Therefore, Vale has established a production guidance range of 360-380 kt for copper in 2021, with Salobo Operation impact reflected in the upper limit of our guidance and the additional difference of 20kt to low end of the range related to usual risks associated with our copper operations, including duration of important scheduled maintenances and potential delays in project start-ups.

Coal business resumed its revamp plan in November 2020, with the first phase of the project currently running as scheduled. Vale expects to resume the ramp-up in 1H21, reaching a production rate of 15 Mtpy in 2H21 and 18 Mtpy in 2022.

US$ million	**2020**	**2019**	**%**
Net operating revenues	40,018	37,570	7%
Total costs and other expenses	21,675	23,775	-9%
Expenses related to Brumadinho	5,257	7,402	-29%
Adjusted EBIT	13,354	6,859	95%
Adjusted EBIT margin (%)	33%	18%	15%
Adjusted EBITDA	16,588	10,585	57%
Adjusted EBITDA margin (%)	41%	28%	13%
Proforma adjusted EBITDA[1]	21,954	17,987	22%
Net income (loss)	4,881	(1,683)	N/A
Capital expenditures	4,430	3,704	20%

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

Market overview

Iron Ore

Iron ore 62% Fe reference price averaged US$ 108.9/dmt in 2020, 17% higher than 2019. In 4Q20, the index averaged US$ 133.7/dmt, 13% higher than 3Q20. In the second half of 2020, prices strongly increased following global economy recoveries from COVID-19 pandemic. The combination of a tighter seaborne iron ore market together with a significant upward adjustment to hot metal production in China, at a time when the country's domestic iron ore production is running close to its capacity, feeds through to stronger demand for seaborne iron ore and higher prices.

MB65% index averaged US$ 122.3/dmt in 2020, 17% higher than 2019. In 4Q20, the index averaged US$ 145.9/dmt, 13% higher than 3Q20. The spread between the MB65% and the 62% iron ore reference price recovered along the quarter closing the year at around US$ 13/t. The high coal prices in China, following the country's import restriction over Australia together with high levels of steel margins and the decrease of iron ore pellets and concentrate stocks at Chinese ports supported the high-grade premiums. However, stock levels of such materials started to correct along the quarter.

In China, crude steel production was record, achieving 1,053 Mt in 2020, 5% above previous year, closing the year at a very strong pace, producing 91.25 Mt in December (+7.7% YoY). The economic recovery over the second half of the year, boosted by economic stimulus led China's GDP to exceed 100 trillion yuan by the end of 2020, with annual GDP growth reaching 2.3% YoY. Industrial production and exports continued to outperform in the last quarter. GDP growth in 4Q20 accelerated further to 6.5% YoY from 4.9% YoY in 3Q20, while Fixed Asset Investment continued growing smoothly. Property sales remained high, which strongly supported construction demand for steel.

Ex-China, lockdown measures impacted steel demand, leading steel production to decrease 8%, totaling 776 Mt in 2020, as demand slumped and the entire manufacturing supply chain got interrupted. Developed economies were the hardest hit with crude steel production having contracted 11% in 2020 compared to -4% observed in ex-China developing countries.

According to World Steel Association, in 2020 steel production growth was -17% in the USA, -16% in Japan, and -12% in the EU28, compared to 2019. Looking at the bright side, in the 4Q20 some steel mills re-started idled capacity in response to recovering demand, inventory replenishment throughout the manufacturing chain and record high steel prices, which led ex-China steel production to reach 208 Mt, 2% higher than in 4Q19.

Stimulus packages announced in major economies are expected to provide support for continued recovery into 2021. Funds are being distributed in the forms of grants and loans to the sectors most impacted by the COVID-19 pandemic which are supportive for the recovery of economic activity and reestablishing the normality throughout the supply chain. For 2021, the expectation is a continued steel production recovery in line with International Monetary Fund economic outlook from January 2021, where the institution projects economic yearly growth of 5.5% as vaccinations are rolled-out and economies receive additional policy support.

Coal

Coking coal: In 4Q20, seaborne coking coal price averaged US$108.2/t in 4Q20, down from the previous quarter's US$114.8/t. The onset of a soft ban on Australia coal by China from October 2020 resulted in the benchmark index PLV FOB Australia falling to a low of US$97.3/t for the first time since 2016. To replace the loss of Australia tonnages, China increased purchases of Canada, USA and Russia coking coals. However, limited supply availability from ex-Australia miners and strong coking coal demand in China resulted in the CFR China index pushing to a high of US$202/t by end-December 2020. As a result, the spread between PLV FOB Australia and CFR China prices reached an historical high of US$100/t.

Thermal coal: In the thermal coal market, Richards Bay 6000 NAR price averaged US$ 72.8/t for the quarter, 32% higher than in 3Q20. China's soft ban on Australian coal altered trade flows as China buyers purchased coal from afield, including South Africa and Colombia, making use of additional import quotas released in November. Without its traditional home in China, Australian mid-CV coal became oversupplied and was aggressively offered into India and Pakistan, keeping mid-CV prices subdued and causing the spread between the mid-CV and high-CV grades to double by the end of the quarter. The La Niña cycle brought cold spells to Northeastern Asia and parts of Europe from December, which boosted coal burn for winter heating as gas supply was not sufficient. At the same time, coal supply tightened due to higher than normal rainfall in Indonesia and Southern Africa, extended low production from Colombia and supply disruption in Newcastle, Australia.

Going forward, it remains unclear when China will lift the ban on Australia coal. In the meantime, a reshuffling of seaborne coking coal trade flows is expected to take place as annual contracts conclude. This reshuffle will partially rebalance the coking coal market for some recovery in FOB PLV prices as ex-Australia coking coals increase to China and Australia coals take more share of other markets like Brazil, Europe and JKT (Japan, South Korea and Taiwan). The thermal coal market is likely to stay robust in early 1Q21 bolstered by strong restocking demand amid a colder winter, especially from China as domestic supply is expected to remain tight, and the imminent threat of La Niña wet weather supply disruptions.

Nickel

LME nickel prices averaged US$ 13,789/t in 2020, 1% lower than in 2019, and averaged US$ 15,930/t in 4Q20, 12% higher than in 3Q20.

Total exchange inventories (LME and SHFE) had a net increase, closing at 264.8 kt by the end of 2020, up 76.7 kt since 2019. LME inventories at the end of 2020 stood at 246.7 kt, an increase of 96.0 kt since the end of 2019. SHFE inventories declined by half, to 18.1 kt by the end of 2020.

Sales of electric vehicles accelerated in 2020 and are now expected to be around 3.1 million units, a year-on-year increase of 45%. This outperformance, compared with an overall decline in automotive sales, pushed the EV penetration rate to record highs. European sales accelerated as the year progressed, mainly driven by subsidies in the large consumer markets (Germany, France, UK, Sweden, and Netherlands) and roll-out of environmental policies to reduce CO2 emissions. In China, the pandemic-related slowdown hurt EV demand in 1H20, however, since September, sales increased significantly and have been elevated.

Global stainless-steel production is expected to finish the year ~5% lower than 2019, however, production finished the year strong with 4Q20 production increasing 6% compared to 3Q20. The year decline was greatly limited by the production strength from China, which makes up ~60% of global output. Additionally, because Chinese production placed a greater focus on 300 series stainless, which contains higher levels of nickel, total nickel consumption globally in stainless-steel was essentially flat year-over-year. While visible Chinese stainless-steel inventories were elevated for most of 2020, inventories dropped 22.5% by the end of 4Q20, compared to the end of 3Q20. Production elsewhere, such as North America and Europe was more significantly impacted, however, in a sign that the recovery has taken hold, both regions registered more than 10% growth in 4Q20 compared to 3Q20.

Looking at the automotive market, 4Q20 production greatly improved, increasing 13.6% compared to 3Q20, driven by strong numbers in the U.S. and China. Europe also showed strong quarter-over-quarter sales growth, although it was limited in December as stricter COVID-19 lockdowns in the region were implemented. Still, given the global COVID-19 lockdowns in 1H20, full year sales are expected to be roughly 14% lower compared to 2019.

The aerospace industry looks to be on the rebound as aircraft deliveries from Boeing and Airbus increased in 4Q20 and air passenger traffic numbers improved. With the Boeing Max now cleared by the FAA for flight, deliveries are expected to climb in 2021.

The oil and gas sector has rebounded with demand and price increases, however, rig counts are still depressed, and well below the average. Towards the end of 2020, as prices rallied, rigs began coming back online.

At the start of the COVID-19 outbreak, several nickel operations were impacted globally, however, downtimes were short lived and nearly all quickly returned to normal production. Inventory of ore and concentrates meant there was limited impact on refined nickel.

Chinese NPI production declined 12% in 2020, compared to 2019, and declined by 8% in 4Q20 compared to 3Q20. Overall Chinese NPI output was stronger than many anticipated given the Indonesian Ore ban at the start of 2020. The country relied heavily on ore stocks and imports from Philippines, which were briefly interrupted in April, due COVID-19 related port closures.

Indonesian NPI production, conversely, increased in 2020, by more than 50%, compared to 2019. 4Q20 production was 13% higher compared to 3Q20. The 2020 ore ban has succeeded in accelerating smelter production in the country, which has now surpassed China as the largest NPI producer. The country's HPAL (High-Pressure Acid Leach) projects however had suffered some delays due to complexity (e.g. tailings disposal solutions), costs, and COVID-19 related travel restrictions. These projects are expected to partially supply the EV market by producing a battery-suitable nickel material.

Outlook

Our near-term view for nickel improved, as we continue to see the market at surplus in 2021 albeit less than the surplus seen in 2020. COVID-19 has impacted demand, particularly in the high-value markets, such as aerospace, automotive and oil & gas sectors. However, positive signs have emerged such as strength in Chinese stainless-steel production and a rebound in automotive sales. The pandemic has sped up the green electrification of economies, which in turn has led to a significant increase in electric vehicle sales. The market is now recognizing the growth potential, especially as battery chemistry continues to favor higher nickel content due to lower cost and higher energy density.

Our long-term outlook for nickel continues to remain positive. Depending on the speed and success of COVID-19 vaccines distributions, depressed markets, such as Aerospace and Oil & Gas, could either remain challenged or return rather quickly. Also, we see prolonged support driven by record stimulus provided by governments globally. Additionally, growth in electric vehicles and the infrastructure needed to support them is crucial if decarbonization goals, set by an increasing number of major economies, are to be achieved. The long-term outlook for EVs remains bright as fundamental costs continue to decline, and technology continues to advance.

Copper

LME Copper prices averaged US$ 6,181/t in 2020, 3% higher than in 2019, and averaged US$ 7,166/t in 4Q20, 10% higher than in 3Q20.

LME Copper inventories at the end of 2020 stood at 108.0 kt, a decrease of 37.8 kt since the end of 2019. SHFE inventories, decreased by 37.0 kt in comparison with 2019, ending at 2020 at 86.7 kt. Comex inventories on the other hand increased 36.3 kt, ended the year at 70.4 kt. Combined, copper exchange inventory ended 2020 at 265.0 kt, lower than 2019 by 38.4 kt.

Global refined copper demand finished the year 3% lower compared to 2019, however, demand finished the year strong with 4Q20 consumption increasing 7% compared to 3Q20. The concentrate market finished strong as well, and full year demand increased, by 0.5% compared to 2019.

Chinese demand quickly returned after COVID-19 was contained within the country, and then further expanded. Construction and manufacturing activity completely rebounded by March and have remained in expansion territory since then. This pushed refined imports to record levels, even as domestic refined output continued to expand. Part of the greater focus on refined copper came because of a steep decline in scrap usage, which was caused both by COVID-19 related supply chain disruptions and a delay in new regulations. Chinese consumption increased 2% compared to 2019.

In the U.S. and Europe, demand has yet to fully return to 2019 levels. However, 2H20 numbers improved greatly. U.S. demand growth came from a rapid expansion in manufacturing activity and a very strong residential construction sector. Europe benefited from a rebounding auto sector, which was aided by record EV sales. Consumption decreased 5 and 7%, respectively.

On the supply side, global refined copper production finished the year unchanged compared to 2019. The year ended similarly with 4Q20 production increasing 1% compared to 3Q20. Concentrate production however was down on the year, by about 1.3%, and down significantly, 3.3%, in 4Q20, compared to 3Q20.

COVID-19 impacted several operations globally, producing and developing. Most supply concerns surrounded the countries of Chile and Peru, which combined, account for roughly 40% of global mine production. While Chile was able to impressively maintain output levels with a reduced workforce, Peru’s national lockdown greatly impacted production.

Outlook

With continued strength in Chinese demand and persisting supply issues, we continue to have a positive near-term view on copper. For 2021, we see the market relatively balanced, leaning towards a minor deficit. However, the concentrate market, which Vale mainly participates in, appears much tighter, with deficits forecasted for several years. This is reflected in the current spot treatment and refining charges (TC/RC's), which are at record lows. While COVID-19 effects remain a near-term risk, the market backdrop looks constructive. Along with strong Chinese demand, we see added support 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 remains positive as well. Copper demand is expected to continue to grow, driven by building, construction and electrical network infrastructures. Additionally, targeted green economy investments by governments globally have increased the demand forecast for copper in the electric vehicles and renewable energy markets. Future supply growth continues to be challenged 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, additional assets will be required in the medium-term to replace existing operation ramp downs and closures.

Adjusted EBITDA

Adjusted EBITDA

US$ million	4Q20	3Q20	4Q19	2020	2019
Net operating revenues	14,769	10,762	9,964	40,018	37,570
COGS	(5,733)	(4,816)	(5,632)	(19,039)	(21,187)
SG&A	(188)	(127)	(139)	(554)	(487)
Research and development	(153)	(105)	(158)	(443)	(443)
Pre-operating and stoppage expenses	(193)	(188)	(314)	(887)	(1,153)
Expenses related to Brumadinho	(4,854)	(114)	(1,141)	(5,257)	(7,402)
Expenses related to COVID-19 donations	(9)	(15)	-	(109)	-
Other operational expenses	(331)	(98)	(264)	(643)	(505)
Dividends and interests on associates and JVs	94	22	188	268	466
Adjusted EBIT	**3,402**	**5,321**	**2,504**	**13,354**	**6,859**
Depreciation, amortization & depletion	838	774	1,032	3,234	3,726
Adjusted EBITDA	**4,240**	**6,095**	**3,536**	**16,588**	**10,585**
Proforma adjusted EBITDA[1]	**9,103**	**6,224**	**4,677**	**21,954**	**17,987**

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

Impact of provisions and reparation expenses related to the Brumadinho event

For the purpose of reconciling with the public statements made by Vale after the settlement, in addition to the Brumadinho expenses impact in US dollars, we present also the table in Brazilian reais.

Impact of Brumadinho provisions and expenses in 4Q20 – in BRL[1]

R$ million	Provisions balance 30sep20	EBITDA impact	Payments	PV adjust	Provisions balance 30dec20
Decharacterization	8,875	3,175	(541)	388	11,897
Global Settlement	6,612	19,924	(5,829)[2]	19	20,726
Other reparation provisions[3]	2,133	1,223	(227)	(81)	3,048
Total Provisions	**17,620**	**24,322**	**(6,597)**	**326**	**35,671**
Incurred expenses		680	(680)		
Total		**25,002**	**(7,277)**		

[1] The US dollar amounts were recorded for provision balances with the exchange rate of R$5.6407/US$ and R$5.1967/US$, prevailing in 30 September 2020 and 31 December 2020 respectively, and for EBITDA impact and payments with the average exchange rate for 2020 of R$5.1578/US$.

[2] Includes cash outflows of R$ 429 million and the release of judicial deposits of R$ 5.400 billion

[3] Includes individual indemnifications and onsite containment works

Impact of Brumadinho provisions and expenses in 4Q20 – in USD[1]

US$ million	Provisions balance 30sep20	EBITDA impact	Payments	PV & FX adjust	Provisions balance 30dec20
Decharacterization	1,574	617	(99)	197	2,289
Global Settlement	1,172	3,872	(1,119)[2]	64	3,989
Other reparation provisions[3]	378	237	(41)	12	586
Total Provisions	**3,124**	**4,726**	**(1,259)**	**273**	**6,864**
Incurred expenses		128	(128)		
Total		**4,854**	**(1,387)**		

[1] The US dollar amounts were recorded for provision balances with the exchange rate of R$5.6407/US$ and R$5.1967/US$, prevailing in 30 September 2020 and 31 December 2020 respectively, and for EBITDA impact and payments with the average exchange rate for 2020 of R$5.1578/US$.

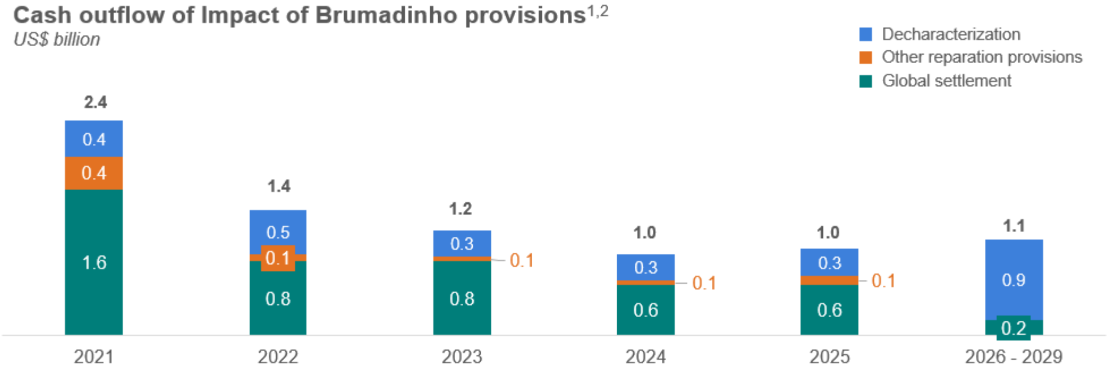
[2] Includes cash outflows of US$ 80 million and the release of judicial deposits of US$ 1.039 billion

[3] Includes individual indemnifications and onsite containment works

In 4Q20 provisions related to Brumadinho increased by US$ 3.740 billion reflecting:

- The impact of the Global Settlement in 4Q20 result of R$ 19.924 billion (US$ 3.872 billion), of which R$ 5.400 billion (US$ 1.039 billion) will be settled upon the release of judicial deposits, with a net effect on provisions, after deduction of payments and present value and foreign exchange adjustments, of R$ 14.113 billion (US$ 2.817 billion);
- Additional provision of US$ 617 million relative to dam decharacterization reflecting project adjustments and safety improvement works. The additional provision includes the changes in the planned containment structures and evolution of engineering process.
- In Other Reparation Provisions, the revaluation of the geotechnical works, containment and removal of tailings on site and the extension until February 2021 of payments of emergency aid to those affected by the Dam I rupture (US$ 237 million).

Cash outflow of Impact of Brumadinho provisions[1,2]
US$ billion



[1] Estimate cash outflow for 2021 - 2029 period, given BRL-USD exchange rates of 5.11 (2021) and 4.7 (2022-2029)

[2] Nominal amounts

Impact of Brumadinho provisions and expenses since 2019

US$ million	EBITDA impact in 2019	Payments in 2019	PV & FX adjust 2019	Provisions balance 31dec19	EBITDA impact in 2020	Payments 2020	PV & FX adjust 2020	Provisions balance 31dec20
Decharacterization	2,624	(158)	23	2,489	617	(293)	(524)	2,289
Agreements & donations	3,926	(831)	(112)	2,983	4,130	(1,829)[1]	(709)	4,575
Total Provisions	**6,550**	**(989)**	**(89)**	**5,472**	**4,747**	**(2,122)**	**(1,233)**	**6,864**
Incurred expenses	730	(730)			510	(510)		
Others	122	-			-	-		
Total	**7,402**	**(1,719)**			**5,257**	**(2,632)**		

[1] Includes cash outflows of US$ 516 million and the release of judicial deposits of US$ 1,313 million

Adjusted EBITDA by business area

US$ million	4Q20	3Q20	4Q19	2020	2019
Ferrous Minerals	8,800	5,856	4,538	21,005	16,997
Base Metals	1,138	770	649	2,981	2,174
Coal	(291)	(213)	(186)	(931)	(533)
Others	(544)	(189)	(324)	(1,101)	(651)
Brumadinho expenses	(4,854)	(114)	(1,141)	(5,257)	(7,402)
Expenses related to COVID-19 donations	(9)	(15)	-	(109)	-
Total	**4,240**	**6,095**	**3,536**	**16,588**	**10,585**

Net operating revenue by business area

US$ million	4Q20	%	3Q20	%	4Q19	%	2020	%	2019	%
Ferrous Minerals	**12,203**	**82.6**	**8,684**	**80.7**	**8,020**	**80.5**	**32,078**	**80.2**	**30,005**	**79.9**
Iron ore fines	10,765	72.9	7,357	68.4	6,451	64.7	27,285	68.2	23,343	62.1
ROM	6	0.0	5	0.0	5	0.1	21	0.1	35	0.1
Pellets	1,295	8.8	1,195	11.1	1,378	13.8	4,242	10.6	5,948	15.8
Manganese ore	40	0.3	37	0.3	46	0.5	158	0.4	148	0.4
Ferroalloys	20	0.1	14	0.1	34	0.3	67	0.2	134	0.4
Others	77	0.5	76	0.7	106	1.1	305	0.8	397	1.1
Base Metals	**2,368**	**16.0**	**1,904**	**17.7**	**1,643**	**16.5**	**7,170**	**17.9**	**6,161**	**16.4**
Nickel	1,115	7.6	882	8.2	764	7.7	3,226	8.1	2,892	7.7
Copper	670	4.5	519	4.8	500	5.0	2,031	5.1	1,986	5.3
PGMs	178	1.2	155	1.4	148	1.5	664	1.7	469	1.2
Gold as by-product	231	1.6	218	2.0	188	1.9	819	2.0	651	1.7
Silver as by-product	15	0.1	13	0.1	9	0.1	47	0.1	28	0.1
Cobalt	30	0.2	28	0.3	28	0.3	118	0.3	112	0.3
Others	129	0.9	88	0.8	6	0.1	265	**0.7**	23	**0.1**
Coal	**128**	**0.9**	**103**	**1.0**	**191**	**1.9**	**473**	**1.2**	**1,021**	**2.7**
Metallurgical coal	91	0.6	76	0.7	134	1.3	313	0.8	764	2.0
Thermal coal	37	0.3	27	0.3	57	0.6	160	0.4	257	0.7
Others	**70**	**0.5**	**71**	**0.7**	**110**	**1.1**	**297**	**0.7**	**383**	**1.0**
Total	**14,769**	**100.0**	**10,762**	**100.0**	**9,964**	**100.0**	**40,018**	**100.0**	**37,570**	**100.0**

COGS by business segment

US$ million	4Q20	%	3Q20	%	4Q19	%	2020	%	2019	%
Ferrous Minerals	3,664	63.9	2,961	61.5	3,763	66.8	11,825	62.1	13,802	65.1
Base Metals	1,509	26.3	1,356	28.2	1,238	22.0	5,078	26.7	5,038	23.8
Coal	400	7.0	321	6.7	453	8.0	1,475	7.7	1,875	8.8
Others	160	2.8	178	3.7	178	3.2	661	3.5	472	2.2
Total COGS	**5,733**	**100.0**	**4,816**	**100.0**	**5,632**	**100.0**	**19,039**	**100.0**	**21,187**	**100.0**
Depreciation	791		726		943		2,980		3,399	
COGS [1], ex-depreciation	**4,942**		**4,090**		**4,689**		**16,059**		**17,788**	

[1] COGS currency exposure in 4Q20 was as follows: 58% USD, 35% BRL, 6% CAD and 1% EUR.

Operating expenses

US$ million	4Q20	3Q20	4Q19	2020	2019
SG&A ex-depreciation	**179**	**118**	**125**	**505**	**431**
SG&A	**188**	**127**	**139**	**554**	**487**
Administrative	**158**	**106**	**116**	**466**	**395**
Personnel	87	50	49	224	181
Services	35	28	33	114	85
Depreciation	9	9	14	49	56
Others	27	19	20	79	73
Selling	**30**	**21**	**23**	**88**	**92**
R&D	**153**	**105**	**158**	**443**	**443**
Pre-operating and stoppage expenses	**193**	**188**	**314**	**887**	**1,153**
Depreciation	38	39	75	205	271
Expenses related to Brumadinho	**4,854**	**114**	**1,141**	**5,257**	**7,402**
Provisions	4,726	-	898	4,747	6,550
Incurred expenses	128	114	243	510	852
Expenses related to COVID-19 donations	**9**	**15**	**-**	**109**	**-**
Other operating expenses	**331**	**98**	**264**	**643**	**505**
Total operating expenses	**5,728**	**647**	**2,016**	**7,893**	**9,990**
Depreciation	47	48	89	254	327
Operating expenses ex-depreciation	**5,681**	**599**	**1,927**	**7,639**	**9,663**

Personnel expenses had a one-off impact of US$ 47 million in 4Q20 due to recognition of taxes due on outstanding and past long-term incentive plans for company executives

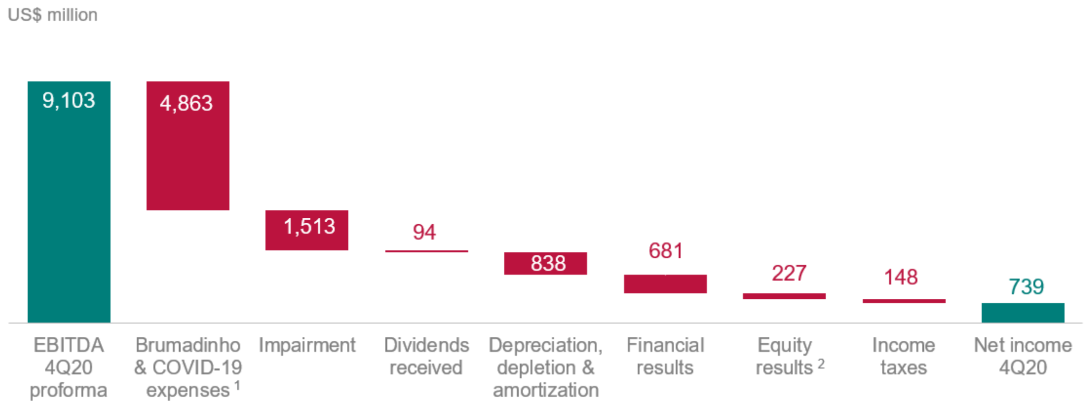
Pre-operating and stoppage expenses break-down

US$ million	4Q20	3Q20	4Q19
Pre-operating and stoppage expenses	**193**	**188**	**314**
Depreciation	38	39	75
Pre-operating and stoppage expenses, ex-depreciation	**155**	**149**	**239**
Brumadinho - stoppage expenses	**104**	**111**	**182**
Itabira Complex (Cauê, Conceição and others)	0	0	0
Minas Centrais Complex (Brucutu and others)	28	22	11
Mariana Complex (Alegria, Timbopeba and others)	4	4	29
Paraopeba Complex (Mutuca, Fábrica[1] and others)	42	52	57
Vargem Grande Complex (Vargem Grande[1], Pico and others)	30	33	79
Others Brumadinho	0	0	6
Tubarão pellet plants	**7**	**7**	**8**
Onça Puma	**0**	**0**	**20**
Voisey's Bay	**0**	**0**	**0**
Others	**44**	**31**	**29**

[1] Including pelletizing plants.

Net income (loss)

4Q20 EBITDA proforma to Net income reconciliation



[1] US$ 4.854 billion related to Brumadinho and US$ 9 million to COVID-19 expenses
[2] Includes net income (loss) attributable to noncontrolling interests of US$ 95 million

4Q20 impairment charges were mainly due to:

- In December 2020, Vale signed a binding put option agreement for the sale of VNC. Under this agreement, Vale does have a commitment to fund VNC in approximately US$ 500 million to support the continuity of VNC operations. Therefore, the Company recognized a loss in that amount due to the potential sale agreement.
- Vale has loans receivables from Nacala that have been impacted by the change in the production curve of the Moatize mine and the reduction in the expected volume of coal to be transported in Nacala Logistic Corridor (CLN), which in turn has impacted CLN's projected cash flows. Therefore, the Company carried out an impairment test for the loan receivable, resulting in a loss of US$ 798 million.

During 2020, the Renova Foundation updated the premises used in the preparation of the estimate of the costs necessary for the execution of the 42 repair and compensation programs. This periodic review resulted in an additional provision of US$ 1.069 billion, which corresponds to the Company's proportional responsibility with Renova Foundation.

The impact on Equity Results was partially offset by (i) the exercise of the call option contract for shares of VLI S.A. by BNDES Participações S.A., and (ii) the conclusion of the divestment of Vale’s 25% interest in Henan Longyu, a coal mine operator in China, entered into in December 2019.

Financial results

US$ million	4Q20	3Q20	4Q19	2020	2019
Financial expenses	**(958)**	**(1,202)**	**(1,147)**	**(3,283)**	**(3,746)**
Gross interest	(204)	(208)	(205)	(819)	(989)
Capitalization of interest	13	13	29	70	140
Participative stockholders' debentures	(732)	(553)	(361)	(1,565)	(1,475)
Others	(27)	(444)	(582)	(914)	(1,268)
Financial expenses (REFIS)	(8)	(10)	(28)	(55)	(154)
Financial income	**64**	**69**	**176**	**375**	**527**
Derivatives[2]	**447**	**(187)**	**159**	**(1,210)**	**244**
Currency and interest rate swaps	325	(145)	141	(1,141)	42
Others (bunker oil, commodities, etc)	122	(42)	18	(69)	202
Foreign Exchange	**(148)**	**(18)**	**-**	**(523)**	**39**
Monetary variation	**(86)**	**(22)**	**(28)**	**(170)**	**(477)**
Financial result, net	**(681)**	**(1,360)**	**(840)**	**(4,811)**	**(3,413)**

[1] In 4Q20, US$ 95 million were paid as remuneration on participative stockholders' debentures.

[2] The cash effect of the derivatives was a loss of US$ 63 million in 4Q20.

In 4Q20, Financial Expenses continued to be impacted by non-cash expenses related to the mark-to-market of participative stockholders' debentures. Participative stockholders' debentures pay royalties linked to iron ore production and as a result their market price strongly correlates with iron ore prices, which continued to rise in the quarter.

CAPEX

Total capex for the 4Q20 amounted to US$ 1.444 billion, US$ 549 million higher than in 3Q20, explained by an increase of US$ 515 million in sustaining capex and US$ 34 million in project execution, as Vale progressed with filtration plants investments, Northern System 240 Mtpy and Gelado projects in Iron Ore business and Salobo III and VBME projects in Base Metals business.

In 2021, Vale expects to invest US$ 5.8 billion, an increase of 31% compared to 2020, mainly due to (i) higher intensity of iron ore tailings filtration plants investments, which aims to reduce Vale's dependence on tailings dams (US$ 350 million); (ii) higher intensity in Northern System 240 Mtpy investments and construction start-up of Serra Sul 120 Mtpy project (US$ 286 million); and (iii) investments in solar energy projects, as Sol do Cerrado project, which will reduce Vale's average energy cost (US$ 143 million); and (iv) postponements from 2020's investment program due to COVID-19 pandemic.

Project Execution and Sustaining by business area

US$ million	4Q20	%	3Q20	%	4Q19	%	2020	%	2019	%
Ferrous Minerals	763	52.8	461	51.5	815	55.4	2,392	54.0	2,070	55.9
Base Metals	595	41.2	405	45.3	569	38.7	1,805	40.7	1,376	37.1
Coal	65	4.5	27	3.0	84	5.7	203	4.6	240	6.5
Energy and others	21	1.5	2	0.2	4	0.3	30	0.7	18	0.5
Total	**1,444**	**100.0**	**895**	**100.0**	**1,472**	**100.0**	**4,430**	**100.0**	**3,704**	**100.0**

Project execution

Investments in project execution totaled US$ 144 million in 4Q20, US$ 34 million higher than in 3Q20, mainly due to (i) higher investments in Northern System 240 Mtpy project; and (ii) Sol do Cerrado project acquisition.

Project execution by business area

US$ million	4Q20	%	3Q20	%	4Q19	%	2020	%	2019	%
Ferrous Minerals	69	47.9	40	36.3	122	67.8	258	49.4	385	70.8
Base Metals	55	38.2	69	62.7	56	31.1	239	45.8	151	27.8
Energy and others	20	13.9	1	0.9	2	1.1	25	4.8	8	1.5
Total	**144**	**100.0**	**110**	**100.0**	**180**	**100.0**	**522**	**100.0**	**544**	**100.0**

The Northern System 240 Mtpy project achieved substantial evolution on mine-plant project front, starting the construction works of transportation lines and stockyards. The Serra Sul 120 Mtpy project, approved in August 2020, is in its initial phase of equipment and services procurement activities and engineering plan improvements. Salobo III Project concluded the construction of the metallic structures for the conveyor belt transfer houses.

The total expected investment for Salobo III was reviewed to US$ 816 million (vs. US$ 1.128 billion, previously) mainly due to positive exchange rate effect.

In October, Vale approved the incorporation of a joint venture to build and operate an expansion project for the Shulanghu Port facilities, located in China. The project secures strategic port capacity in China to further improve Vale's shipping and distribution costs optimization. Vale's capital contribution to the project is estimated to range from US$ 110 million to US$ 160 million. The construction of the project, which is expected to take up to three years, will start after both parties obtain the anti-trust and other regulatory approvals in China.

In December, Vale received the required licenses to start the construction of the Capanema Project. The project includes investments in the Capanema mine to resume facilities and acquire new equipment, implement a long-distance conveyor belt and adjustments in the Timbopeba stockyards.

Capital projects progress[4]

Projects	Capacity (per year)	Estimated start-up[1]	Executed capex (US$ million)		Estimated capex (US$ million)		Physical progress (%)
			4Q20	Total	2020	Total	
Ferrous Minerals							
Northern System 240 Mtpy	10 Mt	2H22	36	181	224	772	59%[2]
Capanema	18 Mt[2]	2H23	-	-	-	495	0%
Serra Sul 120 Mtpy	20 Mt	1H24	-	-	-	1,502	0%
Base Metals							
Salobo III	30-40 kt	1H22	50	346	323	816	62%

[1] Updates may be required in the future, depending on the developments of the COVID-19 pandemic.
[2] Considering mine-plant project front physical progress.
[3] Capanema project adds 14 Mtpy capacity in Timbopeba site expedition in its first years.

Sustaining CAPEX

Investments in maintenance of operations totaled US$ 1,300 million in 4Q20, US$ 515 million higher than in 3Q20, mainly due to (i) usual seasonality of higher disbursements in the end of the year; (ii) increasing investments in filtration plants; (iii) execution pace normalization of Voisey's Bay Mine Extension project, which in 2020 slowed due to COVID-19 pandemic; and (iv) Moatize plant revamp which resumed in November.

Sustaining capex by business area

US$ million	4Q20	%	3Q20	%	4Q19	%	2020	%	2,019	%
Ferrous Minerals	694	53.4	421	53.6	693	53.6	2,134	54.6	1,685	53.3
Base Metals	540	41.5	336	42.8	513	39.7	1,566	40.1	1,225	38.8
Nickel	494	38.0	310	39.5	461	35.7	1,393	35.6	1,068	33.8
Copper	46	3.5	26	3.3	52	4.0	173	4.4	157	5.0
Coal	65	5.0	27	3.4	84	6.5	203	5.2	240	7.6
Energy and others	1	0.1	1	0.1	2	0.2	5	0.1	10	0.3
Total	**1,300**	**100.0**	**785**	**100.0**	**1,292**	**100.0**	**3,908**	**100.0**	**3,160**	**100.0**

[4] 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.

Sustaining capex by type - 4Q20

US$ million	Ferrous Minerals	Base Metals	Coal	Energy and others	TOTAL
Enhancement of operations	319	267	58	1	645
Replacement projects	42	192	-	-	234
Filtration and dry stacking projects	95	-	-	-	95
Dam management	24	16	1	-	41
Other investments in dams and waste dumps	24	13	-	-	37
Health and Safety	91	21	1	-	113
Social investments and environmental protection	35	11	1	-	47
Administrative & Others	64	20	3	-	87
Total	**694**	**540**	**64**	**1**	**1,300**

On the Gelado project, the construction of the tailing pipeline for the magnetic concentration plant was concluded and backfilling adjustments were carried out in thickener facilities. As next steps, the works will advance in the assembly of the first dredge structure.

The Voisey's Bay underground mine extension works are ongoing in underground development in Reid Brook deposit development under strict geotechnical control and paste and booster plant has commenced.

Replacement projects progress

Projects	Capacity (per year)	Estimated start-up	Executed capex (US$ million)		Estimated capex (US$ million)		Physical progress (%)
			4Q20	Total	2020	Total	
Gelado	9.7 Mt	1H22	29	175	121	428	73%
Voisey's Bay Mine Extension	45 kt	1H21	184	909	499	1,694	59%

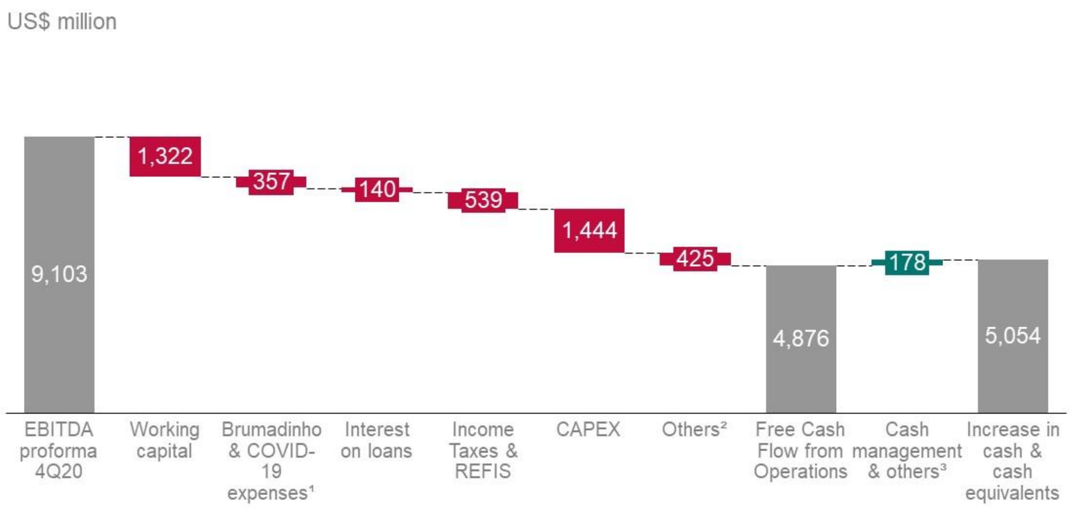
Free cash flow

Vale generated US$ 4.9 billion in Free Cash Flow from Operations in 4Q20, US$ 1.1 billion higher than in 3Q20 driven by an even stronger proforma EBITDA, but negatively impacted by seasonally higher investments and increase in working capital.

The negative impact of working capital variation of US$ 1.3 billion in 4Q20, was mainly resulted from an increase of US$ 2.0 billion in accounts receivables due to higher accrual revenues led by stronger CFR sales and increased iron ore prices throughout the quarter, particularly in December, when accrual sales totaled US$ 2.4 billion related to 15.9 Mt. Such effect should be partially reverted in 1Q21, following the strong revenues collection in January.

In 4Q20, Vale received the proceeds from its divestment in PT Vale Indonesia and from the option exercised by BNDES Participações SA, regarding the right to reconstitute an 8% stake in VLI S.A., both totaling US$ 520 million. Vale also received US$ 84 million from the sale of its participation in Longyu[5] and bought JFE's stake in EBM[6] for US$ 108 million.

Free Cash Flow 4Q20



[1] Includes US$ 128 million of Brumadinho incurred expenses, US$ 220 million of disbursement of Brumadinho provisioned expenses and US$ 9 million of COVID-19 expenses.
[2] Includes derivatives, payments to Samarco, leasing, shareholders' debentures, dividends and interest on capital paid to noncontrolling interest.
[3] Includes US$ 308 million from liability management, proceeds from the divestment in PTVI, VLI, Longyu and the acquisition of EBM stake from JFE and US$ 23 million as shareholder remuneration.

[5] Vale sold the totality of its 25% stake in the Chinese company Henan Longyu Energy Resources Co., Ltd. ("Longyu") to the Yongmei Group Co., Ltd, totaling US$ 156 million.
[6] Vale bought from JFE Steel Corporation ("JFE") its stake in EBM, which led Vale to be the holder of 100% of the shares issued by EBM and, consequently, of Minerações Brasileiras Reunidas ("MBR").

Debt indicators

Gross debt totaled US$ 13.360 billion as of December 31st, 2020, in line with the US$ 13.444 billion from September 30th, 2020, while net debt totaled negative US$ 898 million in the same period, US$ 5.372 billion lower than 3Q20, as the US$ 4.876 billion in Free Cash Flow from Operations substantially increased Vale's cash and cash equivalent position.

Expanded net debt, which is now comprised solely by Vale's other relevant obligations and commitments, decreased to US$ 13.334 billion as of December 31st, 2020 mainly as a result of the lower net debt, which was partially offset by the Brumadinho-related provisions recorded in the quarter. Expanded Net Debt should continue trending toward the US$ 10 billion long-term target level as the company continues to generate cash and pay its obligations and commitments.

Average debt maturity was 8.4 years on December 31st, 2020, in line with the 8.6 years on December 31st, 2019. Average cost of debt, after currency and interest rate swaps, was also in line with 3Q20 at 4.50% per annum, mainly due to the continuity of low interest rates environment prevalent in the international capital markets.

Debt indicators

US$ million	4Q20	3Q20	4Q19
Gross debt [1]	**13,360**	**13,444**	**13,056**
Cash, cash equivalents and short-term investments	14,258	8,970	8,176
Net debt [1]	**(898)**	**4,474**	**4,880**
Leases (IFRS 16)	1,667	1,621	1,791
Currency swaps[2]	883	1,161	16
Refis	2,744	2,600	3,907
Brumadinho provisions	6,864	3,124	5,472
Samarco & Renova Foundation provisions	2,074	1,485	1,700
Expanded net debt	**13,334**	**14,465**	**17,766**
Total debt / adjusted LTM EBITDA (x)	0.8	0.8	1.2
Net debt / adjusted LTM EBITDA (x)	(0.1)	0.3	0.5
Adjusted LTM EBITDA / LTM gross interest (x)	20.3	19.4	10.7

[1] Does not include leases (IFRS 16).

[2] Includes interest rate swaps.

Performance of the business segments

Segment information — 2020, as per footnote of financial statements

US$ million	Net operating revenues	Expenses				Dividends and interest received from associates and JVs	Adjusted EBITDA
		Cost[1]	SG&A and others[1]	R&D[1]	Pre operating & stoppage[1]		
Ferrous Minerals	32,078	(10,265)	(173)	(136)	(640)	141	21,005
Iron ore fines	27,285	(8,171)	(187)	(127)	(534)	23	18,289
ROM	21	-	-	-	-	-	21
Pellets	4,242	(1,661)	11	(5)	(77)	116	2,626
Others ferrous	305	(254)	3	(2)	-	2	54
Mn & Alloys	225	(179)	-	(2)	(29)	-	15
Base Metals	7,170	(4,010)	(32)	(117)	(30)	-	2,981
Nickel[2]	4,995	(3,216)	(25)	(49)	(29)	-	1,676
Copper[3]	2,175	(794)	(7)	(68)	(1)	-	1,305
Coal	473	(1,456)	(15)	(28)	-	95	(931)
Others	297	(328)	(928)	(162)	(12)	32	(1,101)
Brumadinho impact	-	-	(5,257)	-	-	-	(5,257)
COVID-19 donations	-	-	(109)	-	-	-	(109)
Total	40,018	(16,059)	(6,514)	(443)	(682)	268	16,588

[1] Excluding depreciation, depletion and amortization.

[2] Including copper and by-products from our nickel operations.

[3] Including by-products from our copper operations.

Segment information — 4Q20, as per footnote of financial statements

US$ million	Net operating revenues	Expenses				Dividends and interest received from associates and JVs	Adjusted EBITDA
		Cost[1]	SG&A and others[1]	R&D[1]	Pre operating & stoppage[1]		
Ferrous Minerals	12,203	(3,237)	(50)	(52)	(150)	86	8,800
Iron ore fines	10,765	(2,685)	(52)	(48)	(122)	23	7,881
ROM	6	-	-	-	-	-	6
Pellets	1,295	(441)	(3)	(2)	(18)	63	894
Others ferrous	77	(67)	1	(1)	-	-	10
Mn & Alloys	60	(44)	4	(1)	(10)	-	9
Base Metals	2,368	(1,224)	30	(35)	(1)	-	1,138
Nickel[2]	1,686	(1,012)	33	(14)	-	-	693
Copper[3]	682	(212)	(3)	(21)	(1)	-	445
Coal	128	(400)	(15)	(4)	-	-	(291)
Others	70	(81)	(475)	(62)	(4)	8	(544)
Brumadinho impact	-	-	(4,854)	-	-	-	(4,854)
COVID-19 donations	-	-	(9)	-	-	-	(9)
Total	14,769	(4,942)	(5,373)	(153)	(155)	94	4,240

[1] Excluding depreciation, depletion and amortization.

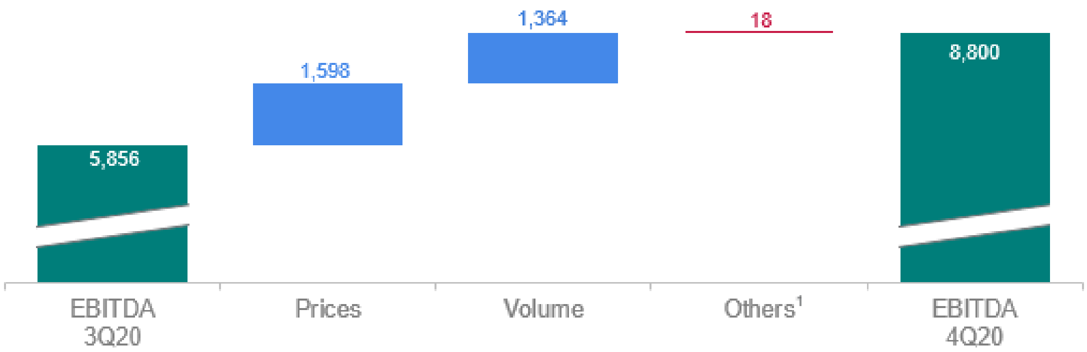
[2] Including copper and by-products from our nickel operations.

[3] Including by-products from our copper operations.

Ferrous Minerals

Ferrous Minerals business segment achieved in 4Q20 its second largest all-time adjusted EBITDA, US$ 8.800 billion, 50% higher than in 3Q20. The adjusted EBITDA per ton for Ferrous Minerals, excluding Manganese and Ferroalloys, totaled US$ 96.3/t, an increase of US$ 17.3/t when compared to 3Q20.

Ferrous Minerals EBITDA variation – US$ million (4Q20 x 3Q20)



[1] Including higher costs, excluding volume effect and FX (-US$ 152 million), which was partially offset by higher dividends received (US$ 84 million), lower freight costs (US$ 48 million) and positive FX effect (US$ 2 million).

The share of premium products[7] in total sales was 90% in 4Q20, as a result of an increase in BRBF sales in China, following strong domestic demand. Despite higher share of premium products, iron ore fines and pellets quality premiums declined slightly to US$ 4.3/t in 4Q20 vs. US$ 4.6/t in 3Q20, as a result of high reference prices and a sales mix with more medium-grade products, which was partially offset by seasonal dividends received.

Iron ore fines and pellets quality premium

US$/t	4Q20	3Q20	4Q19	2020	2019
Iron ore fines quality premium	3.2	3.7	3.8	4.1	4.6
Pellets weighted average contribution	1.1	0.9	2.6	1.2	3.7
Iron ore fines and pellets total quality premium	**4.3**	**4.6**	**6.4**	**5.3**	**8.3**
Share of premium products[1] (%)	**90%**	**83%**	**87%**	**86%**	**83%**

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

Volume sold

'000 metric tons	4Q20	3Q20	4Q19	2020	2019
Iron ore fines	82,391	65,607	77,301	254,012	267,992
ROM	434	162	605	853	1,314
Pellets	8,486	8,464	10,966	31,211	43,199
Manganese ore	461	428	570	1,378	1,063
Ferroalloys	15	15	35	67	127

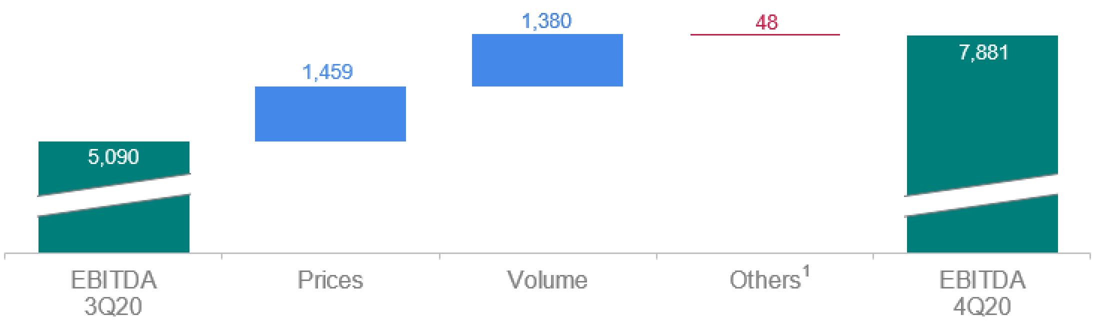
[7] Pellets, Carajás, BRBF (Brazilian Blend Fines) and pellet feed.

Net operating revenue by product

US$ million	4Q20	3Q20	4Q19	2020	2019
Iron ore fines	10,765	7,357	6,451	27,285	23,343
ROM	6	5	5	20	35
Pellets	1,295	1,195	1,378	4,242	5,948
Manganese & Ferroalloys	60	51	80	225	282
Others	77	76	106	306	397
Total	**12,203**	**8,684**	**8,020**	**32,078**	**30,005**

Iron ore fines (excluding Pellets and ROM)

Iron ore fines EBITDA variation – US$ million (4Q20 x 3Q20)



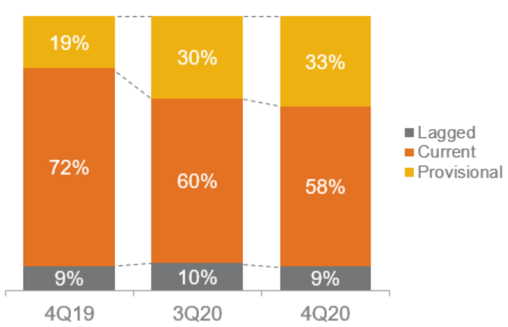
[1] Including higher costs, excluding volume effect and FX (-US$ 115 million), which was partially offset by lower freight costs (US$ 42 million), higher dividends received (US$ 23 million) and positive FX effect (US$ 2 million).

REVENUES AND SALES VOLUMES

Iron ore fine's net revenues, excluding pellets and run of mine (ROM), increased to US$ 10.765 billion in 4Q20 vs. US$ 7.357 billion in 3Q20, as a result of 26% higher sales volumes (US$ 1.949 billion) and 17% higher sales realized prices (US$ 1.459 billion).

Sales volumes of iron ore fines totaled 82.4 Mt in 4Q20, 16.8 Mt higher than in 3Q20. CFR sales of iron ore fines were 69.7 Mt in 4Q20, reaching 85% of total sales. The increase of CFR sales is an effect of higher sales to China, which reached a record level in 4Q20, totaling 63.5 Mt[8]. Sales to China are predominantly CFR-based, due to Vale's blending strategy and customers' usual choice.

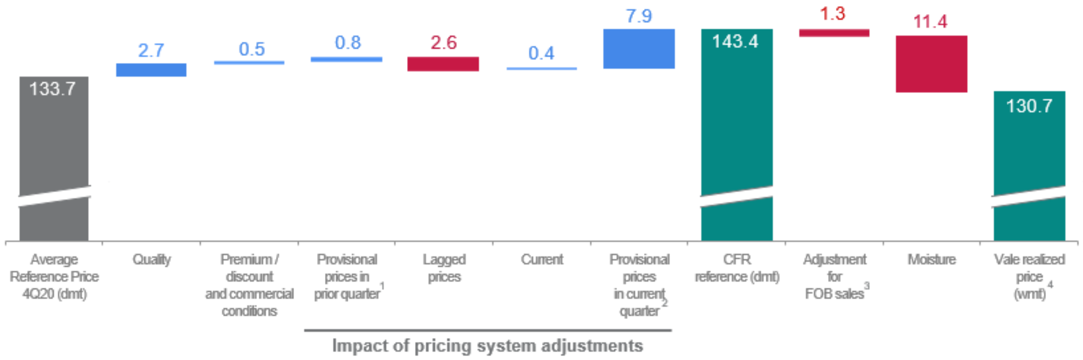
Pricing system breakdown (%)



[8] Iron ore fines and pellets sales volume to China totaled 63.9 Mt in 4Q20.

Vale's realized price CFR/FOB totaled US$ 130.7/t, an increase of US$ 18.6/t compared with 3Q20, mainly due to higher 62% Fe reference price (US$ 15.5/t), and a positive effect from pricing mechanisms(US$ 5.2/t), since provisional price was marked, at the end of the quarter, at a higher level than quarter's average price , which were partially offset by lower premiums (US$ 0.7/t).

Price realization iron ore fines – US$/t, 4Q20



[1] Adjustment as a result of provisional prices booked in 3Q20 at US$ 119.8/t.
[2] Difference between the weighted average of the prices provisionally set at the end of 4Q20 at US$ 157.6/t based on forward curves and US$ 133.7/t from the 4Q20 62% Fe reference price.
[3] Includes freight pricing mechanisms of CFR sales freight recognition.
[4] Vale's price is net of taxes.

Average prices

US$/ metric ton	4Q20	3Q20	4Q19	2020	2019
Iron ore - Metal Bulletin 65% index	145.9	129.2	98.6	122.3	104.5
Iron ore - Metal Bulletin 62% low alumina index	133.7	118.7	88.3	110.1	94.5
Iron ore - 62% Fe reference price	133.7	118.2	88.6	108.9	93.4
Provisional price at the end of the quarter	157.7	119.8	90.3	157.7	90.3
Iron ore fines Vale CFR price (dmt)	143.4	123.1	93.7	118.9	98.0
Iron ore fines Vale CFR/FOB realized price	130.7	112.1	83.5	107.4	87.1
Pellets CFR/FOB (wmt)	152.6	141.2	125.7	135.9	137.7
Manganese ore	87.5	85.3	80.2	114.9	139.0
Ferroalloys	1,027.2	968.2	969.9	948.0	1,057.2

COSTS

IRON ORE COGS - 3Q20 x 4Q20

		Variation drivers				
US$ million	3Q20	Volume	Exchange rate	Others	Total variation	4Q20
C1 cash costs	977	251	(2)	34	283	1,260
Freight	840	256	-	(42)	214	1,054
Distribution costs	48	12	-	27	39	87
Royalties & others	199	50	-	35	85	284
Total costs before depreciation and amortization	**2,064**	**569**	**(2)**	**54**	**621**	**2,685**
Depreciation	253	65	(1)	(13)	51	304
Total	**2,317**	**634**	**(3)**	**41**	**672**	**2,989**

Vale's C1 cash cost ex-third-party purchases was relatively stable at US$ 12.7/t vs. US$ 12.5/t in the 3Q20. The slight increase was mainly due to higher demurrage cost driven by the extended queue of vessels at the Ponta da Madeira port after a collision during a dock maneuver in November 28th (US$ 0.2/t). Higher third-party purchase prices and volumes increased C1 cash cost after third-party purchases by additional US$ 0.1/t.

Unit maritime freight cost decreased US$ 0.6/t, totaling US$ 15.1/t in 4Q20, mainly due to lower spot freight prices (US$ 0.2/t), route optimization (US$0.2/t) and lower bunker fuel costs (US$ 0.1/t).

During 2020, Vale partially offset the impact of the IMO2020 regulation through scrubber installations on ships servicing long term contracts and the delivery of new scrubber-fitted vessels. Mainly through these initiatives and also HSFO-linked commercial contracts, in 2020, ~90% of our dedicated fleet remained exposed to high sulphur fuel oil, totaling an estimated US$ 200 million of bunker cost savings. By the end of 2021, Vale expects to reach 97% of high sulphur fuel oil exposure in its long-term contracts fleet either through scrubbers or commercial arrangements.

Iron ore fines cash cost and freight

	4Q20	3Q20	4Q19	2020	2019
Costs (US$ million)					
Vale's iron ore fines C1 cash cost (A)	1,260	977	1,122	4,002	4,109
Third-party purchase costs[1] (B)	271	209	145	710	569
Vale's C1 cash cost ex-third-party volumes (C = A – B)	989	768	978	3,292	3,541
Sales volumes (Mt)					
Volume sold (ex-ROM) (D)	82.4	65.6	77.3	254.0	268.0
Volume sold from third-party purchases (E)	4.5	4.1	3.9	13.6	14.2
Volume sold from own operations (F = D – E)	77.9	61.5	73.4	240.4	253.8
Iron ore fines cash cost (ex-ROM, ex-royalties), FOB (US$ /t)					
Vale's C1 cash cost ex-third-party purchase cost (C/F)	12.7	12.5	13.3	13.7	13.9
Average third-party purchase C1 cash cost (B/E)	60.8	50.8	37.0	52.1	40.2
Vale's iron ore cash cost (A/D)	15.3	14.9	14.5	15.8	15.3
Freight					
Maritime freight costs (G)	1,054	840	1,093	3,137	3,644
% of CFR sales (H)	85%	81%	78%	81%	76%
Volume CFR (Mt) (I = D x H)	69.7	53.5	60.0	205.1	204.9
Vale's iron ore unit freight cost (US$/t) (G/I)	15.1	15.7	18.2	15.3	17.8

[1] Includes logistics costs related to third-party purchases.

EXPENSES

Iron ore fines expenses, net of depreciation, amounted to US$ 222 million in 4Q20, increasing US$ 19 million vs. 3Q20, mainly as a result of higher R&D expenses, following the usual seasonality higher disbursements (US$ 17 million), and higher stoppage expenses mainly due to Viga operation stoppage (US$ 8 million), which was offset by lower stoppage expenses related to Brumadinho (US$ 9 million).

Expenses - iron ore fines

US$ millions	4Q20	3Q20	4Q19	2020	2019
Selling	**14**	**13**	**11**	**51**	**50**
R&D	**48**	**31**	**52**	**127**	**123**
Pre-operating and stoppage expenses	**122**	**121**	**191**	**534**	**750**
Brumadinho stoppage expenses	93	102	168	445	696
Others	29	19	23	89	54
Other expenses	**38**	**38**	**71**	**136**	**273**
Total expenses	**222**	**203**	**325**	**848**	**1196**

Iron ore pellets

Adjusted EBITDA for pellets was US$ 894 million in 4Q20, 20% higher than in 3Q20, mainly as a result of higher sales price, following higher 65% Fe price index (US$ 129 million) and seasonal dividends received (US$ 63 million), which were partially offset by higher costs and expenses (US$ 38 million).

CFR pellets sales of 3.6 Mt in 4Q20 represented 42% of total pellets sales. FOB pellets sales amounted to 4.9 Mt in 4Q20. The increase of 1.0 Mt of FOB sales vs. 3Q20 is a result of demand improvements ex-China, such as Europe and Japan.

Realized prices in 4Q20 averaged US$ 152.6/t, increasing US$ 11.4/t vs. 3Q20, mainly due to 13% higher 65% Fe price index, which was partially offset by lower pellet premiums and the negative effect of pricing mechanisms as a result of higher sales volume in the first two months of the quarter when price were lower than 4Q20 average. In 1Q21, pellet contractual premiums improved significantly as a result of demand recovery in regions such as Europe, Japan and MENA and steel scrap price increase, supporting pellet premiums.

Costs totaled US$ 441 million (or US$ 541 million with depreciation charges) in 4Q20. Excluding the impact of lower CFR sales volumes (US$ 15 million) and lower freight rate costs (US$ 6 million), costs increased US$ 31 million when compared with 3Q20, mainly due to higher maintenance costs.

Pellets - EBITDA

	4Q20		3Q20	
	US$ million	US$/wmt	US$ million	US$/wmt
Net revenues / Realized price	1,295	152.6	1,195	141.2
Dividends received (Leased pelletizing plants)	63	7.4	-	-
Cash costs (Iron ore, leasing, freight, overhead, energy and other)	(441)	(52.0)	(431)	(50.9)
Pre-operational & stoppage expenses	(18)	(2.1)	(17)	(2.0)
Expenses (Selling, R&D and other)	(5)	(0.6)	1	0.1
EBITDA	**894**	**105.3**	**748**	**88.4**

Iron ore fines and pellets cash break-even[9]

Iron ore and pellets cash break-even landed in China¹

US$/t	4Q20	3Q20	4Q19	2020	2019
Vale's C1 cash cost ex-third-party purchase cost	12.7	12.5	13.3	13.7	13.9
Third party purchases cost adjustments	2.6	2.4	1.2	2.1	1.4
Vale's iron ore cash cost (ex-ROM, ex-royalties), FOB (US$ /t)	15.3	14.9	14.5	15.8	15.3
Iron ore fines freight cost (ex-bunker oil hedge)	15.1	15.7	18.2	15.3	17.8
Iron ore fines distribution cost	1.1	0.7	0.9	0.9	1.1
Iron ore fines stoppage expenses² related to Brumadinho	1.1	1.6	2.5	1.8	3.4
Iron ore fines expenses² & royalties	4.7	4.5	4.3	4.6	3.7
Iron ore fines moisture adjustment	3.3	3.3	3.6	3.4	3.5
Iron ore fines quality adjustment	(3.2)	(3.7)	(3.8)	(4.1)	(4.6)
Iron ore fines EBITDA break-even (US$/dmt)	**37.4**	**37.0**	**40.2**	**37.7**	**40.2**
Iron ore fines pellet adjustment	(1.1)	(0.9)	(2.6)	(1.2)	(3.7)
Iron ore fines and pellets EBITDA break-even (US$/dmt)	**36.3**	**36.1**	**37.6**	**36.5**	**36.5**
Iron ore fines sustaining investments	7.9	5.8	8.0	7.7	5.5
Iron ore fines and pellets cash break-even landed in China (US$/dmt)	**44.2**	**41.9**	**45.6**	**44.2**	**42.0**

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

² Net of depreciation and includes dividends received

Manganese and ferroalloys

Adjusted EBITDA of manganese ore and ferroalloys was US$ 9 million in 4Q20, US$ 14 million higher than in 3Q20, mainly due to higher sales prices (US$ 8 million) and lower expenses (US$ 5 million).

Volume sold by destination – Iron ore and pellets

'000 metric tons	4Q20	3Q20	4Q19	2020	2019
Americas	**8,543**	**7,663**	**7,736**	**29,129**	**32,927**
Brazil	7,126	5,639	6,437	23,782	25,422
Others	1,417	2,024	1,299	5,347	7,505
Asia	**75,848**	**60,833**	**70,304**	**230,811**	**235,097**
China	63,933	50,448	58,143	191,764	190,229
Japan	6,272	5,314	6,529	19,369	23,494
Others	5,643	5,071	5,632	19,678	21,374
Europe	**4,048**	**3,104**	**7,684**	**16,850**	**30,925**
Germany	505	468	3,661	4,193	13,432
France	376	591	1,101	2,075	4,408
Others	3,167	2,045	2,922	10,582	13,085
Middle East	**2,061**	**1,616**	**2,014**	**5,523**	**8,182**
Rest of the World	**811**	**1,017**	**1,134**	**3,763**	**5,374**
Total	**91,311**	**74,233**	**88,872**	**286,076**	**312,505**

[9] Does not include the impact from the iron ore fines and pellets pricing system mechanism.

Selected financial indicators - Ferrous Minerals

US$ million	4Q20	3Q20	4Q19	2020	2019
Net Revenues	12,203	8,684	8,020	32,078	30,005
Costs[1]	(3,237)	(2,599)	(3,275)	(10,265)	(11,988)
Expenses[1]	(50)	(53)	(92)	(166)	(351)
Pre-operating and stoppage expenses[1]	(150)	(146)	(214)	(647)	(823)
R&D expenses	(52)	(32)	(53)	(136)	(142)
Dividends and interests on associates and JVs	86	2	152	141	296
Adjusted EBITDA	8,800	5,856	4,538	21,005	16,997
Depreciation and amortization	(465)	(403)	(556)	(1,768)	(2,063)
Adjusted EBIT	8,335	5,453	3,982	19,237	14,934
Adjusted EBIT margin (%)	68.3	62.8	49.7	60.0	49.8

[1] Net of depreciation and amortization

Selected financial indicators - Iron ore fines

US$ million	4Q20	3Q20	4Q19	2020	2019
Adjusted EBITDA (US$ million)	7,881	5,090	3,641	18,289	13,398
Volume Sold (Mt)	82.4	65.6	77.3	254.0	268.0
Adjusted EBITDA (US$/t)	96	78	47	72	50

Selected financial indicators - Pellets

US$ million	4Q20	3Q20	4Q19	2020	2019
Adjusted EBITDA (US$ million)	894	748	850	2,626	3,432
Volume Sold (Mt)	8.5	8.5	11.0	31.2	43.2
Adjusted EBITDA (US$/t)	105	88	78	84	79

Selected financial indicators - Ferrous ex Manganese and Ferroalloys

US$ million	4Q20	3Q20	4Q19	2020	2019
Adjusted EBITDA (US$ million)	8,791	5,861	4,533	20,990	16,946
Volume Sold (Mt)[1]	91.3	74.2	88.9	286.1	312.5
Adjusted EBITDA (US$/t)	96	79	51	73	54

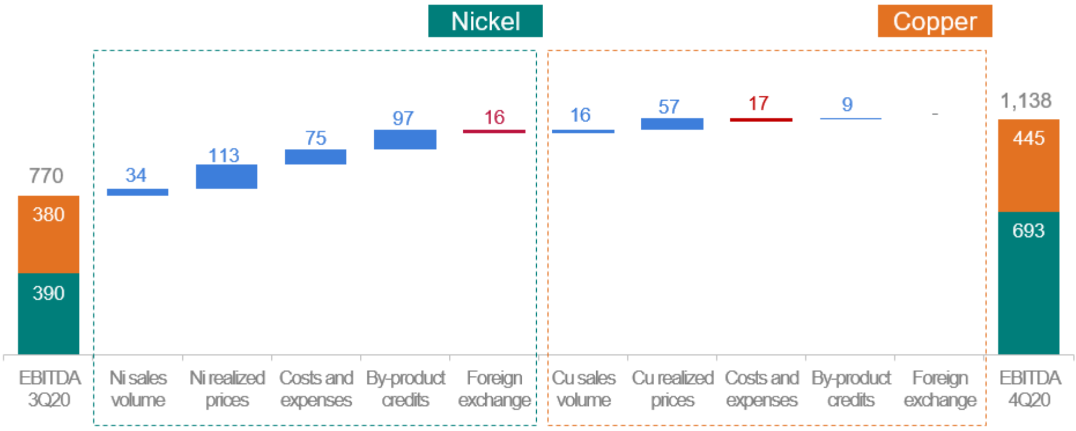
[1] Volume including iron ore fines, pellets and ROM.

Base Metals

Base Metals adjusted EBITDA was US$ 1,138 million in 4Q20, US$ 368 million higher than 3Q20, with the Copper business EBITDA reaching a record of US$ 445 million.

Base Metals - EBITDA 4Q20 vs. 3Q20

US$ million



The higher EBITDA in the quarter was mainly due to:

- Higher nickel and copper realized prices, on stronger LME reference price;
- Higher nickel by-product credits, mainly due to higher volumes of copper, rhodium and palladium;
- Lower maintenance costs in Ontario and Onça Puma due to the successful work performed during 3Q20; and
- Higher nickel sales volumes, as higher production allowed Vale to take advantage of better prices environment.

Base Metals EBITDA overview – 4Q20

US$ million	North Atlantic	PTVI Site	VNC Site	Onça Puma	Sossego	Salobo	Others Ni & Cu	Total Base Metals
Net Revenues	**1,115**	**194**	**99**	**96**	**214**	**468**	**182**	**2,368**
Costs	(665)	(116)	(128)	(45)	(83)	(129)	(58)	(1,224)
Selling and other expenses	45	(3)	(2)	(1)	(4)	1	(6)	30
Pre-operating and stoppage expenses	-	-	-	-	-	(1)	-	(1)
R&D	(10)	(1)	(2)	-	(5)	-	(17)	(35)
EBITDA	**485**	**74**	**(33)**	**50**	**122**	**339**	**101**	**1,138**

Average prices

US$/ metric ton	4Q20	3Q20	4Q19	2020	2019
Nickel - LME	15,930	14,210	15,450	13,788	13,936
Copper - LME	7,166	6,519	5,881	6,180	6,000
Nickel - realized prices	16,851	15,145	16,251	15,291	14,064
Copper - realized prices[1]	7,133	6,268	5,732	5,864	5,445
Gold (US$/oz)	1,895	2,177	1,542	1,857	1,419
Silver (US$/oz)	29.9	22.5	17.6	21.1	15.4
Cobalt (US$/t)	31,991	30,083	29,860	28,785	26,093

[1]Considers Salobo and Sossego operations.

Nickel operations

Nickel operations – EBITDA by operation

US$ million	4Q20	3Q20	4Q19	2020	2019
North Atlantic operation[1]	485	294	369	1,263	1,217
PTVI	74	85	130	273	233
VNC	(33)	(22)	(63)	(150)	(237)
Onça Puma	50	1	(3)	59	9
Others Nickel[2]	117	32	(22)	230	21
Total	**693**	**390**	**411**	**1,676**	**1,243**

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

[2] 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 4Q20 mainly due to (i) higher nickel realized prices, (ii) higher by-product credits and (iii) lower expenses and costs related to maintenance, which was concentrated in 3Q20 after being postponed from 1H20. The positive effects were partially offset by Canadian dollar depreciation compared to US dollar.

PTVI's lower EBITDA in 4Q20 was mainly due to the impact of lower production volumes at the site on the dilution of fixed costs, which were partially offset by higher nickel realized prices.

VNC's EBITDA was lower in 4Q20 mainly due to the stoppage of operations since December 10th, 2020 caused by protests in New Caledonia, which were partially offset by higher nickel realized prices.

Onça Puma's EBITDA was higher in 4Q20 mainly due to (i) higher sales volumes, (ii) higher nickel realized prices and (iii) higher dilution of fixed costs after successful maintenance works during 3Q20.

Nickel Revenue and Realized Price

Net operating revenue by product - Nickel operations

US$ million	4Q20	3Q20	4Q19	2020	2019
Nickel	1,115	882	764	3,226	2,892
Copper	194	129	185	581	659
Gold as by-product	30	27	31	110	87
Silver as by-product	10	7	5	31	15
PGMs	178	155	148	664	469
Cobalt	30	28	28	118	112
Others Nickel	129	89	6	265	23
Total	**1,686**	**1,317**	**1,167**	**4,995**	**4,257**

Volume sold - Nickel operations

'000 metric tons	4Q20	3Q20	4Q19	2020	2019
Nickel	66	58	47	211	206
Upper Class I nickel [1]	18	15	21	74	100
Lower Class I nickel [1]	18	20	6	46	24
Class II nickel [1]	19	12	12	54	57
Intermediates [1]	11	11	8	36	25
Copper	26	18	33	99	122
Gold as by-product ('000 oz)	16	14	21	63	63
Silver as by-product ('000 oz)	292	367	283	1,471	1,012
PGMs ('000 oz)	82	60	90	325	319
Cobalt (metric ton)	936	945	941	4,088	4,273

[1] 3Q19 reconciled as per new classification.

Nickel realized price

US$/t	4Q20	3Q20	4Q19
LME average nickel price	15,930	14,210	15,450
Average nickel realized price	16,851	15,145	16,251
Contribution to the NRP by category:			
Nickel average aggregate premium	(30)	(40)	72
Other timing and pricing adjustments contribution	951	975	729

Nickel realized price in 4Q20 rose 11.3% from 3Q20 mainly due to 12.1% higher LME nickel prices, which was partially offset by (i) lower premiums for Class I nickel, (ii) higher discounts for Class II nickel, as well as (iii) higher share of Class II nickel in the product mix, which commands lower premiums than Class I nickel.

Premiums / discount by nickel product

US$/t	4Q20	3Q20	4Q19
Upper Class I nickel	1,035	1,080	1,450
Lower Class I nickel	74	70	340
Class II nickel	(530)	(330)	(470)
Intermediates	(1,080)	(1,440)	(2,720)

Note: 4Q19 reconciled as per new classification.

Nickel products by source as % of sales - 4Q20

% of source sales	North Atlantic	PTVI	VNC	Onça Puma	Total 4Q20	Total 3Q20
Upper Class I	43	0	0	0	27	26
Lower Class I	42	0	0	0	27	34
Class II	14	41	38	100	29	21
Intermediates	1	59	62	0	17	19

Other timing and pricing adjustments had an aggregate positive impact of US$ 951/t. The main drivers for this positive adjustment in 4Q20 are (i) the effect of the hedging on Vale's nickel price realization, with a positive impact of US$ 1,089/t in the quarter[10]; (ii) the Quotational Period effects (based on sales distribution in the prior three months, as well as the differences between the LME price at the moment of sale and the LME average price), with an impact of negative US$ 88/t; and (iii) fixed price sales, with an impact of negative US$ 45/t.

Nickel Costs and Expenses

Nickel COGS - 3Q20 x 4Q20

		Variance drivers				
US$ million	3Q20	Volume	Exchange rate	Others	Total variation	4Q20
Nickel operations	894	86	16	16	118	1,012
Depreciation	242	3	4	1	8	250
Total	**1,136**	**89**	**20**	**17**	**126**	**1,262**

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

US$/t	4Q20	3Q20	4Q19	2020	2019
North Atlantic operations[1]	6,531	8,040	3,672	5,809	4,612
PTVI	7,109	6,291	6,784	6,675	7,457
VNC	16,602	13,322	18,415	15,971	21,753
Onça Puma	7,257	12,078	14,924	9,751	9,965

[1] North Atlantic figures include Clydach refining costs.

North Atlantic operations' unit cash costs after by-products decreased in 4Q20 mainly due to the higher dilution of fixed cost and higher by-product credits as Sudbury increased production significantly after the successful maintenance in 3Q20.

PTVI's unit cash costs was higher in 4Q20 as a result of lower dilution of fixed costs on lower volumes at PTVI site production.

VNC's unit cash costs after by-products was higher in 4Q20 mainly as consequence of the stoppage of operations caused by protests in New Caledonia.

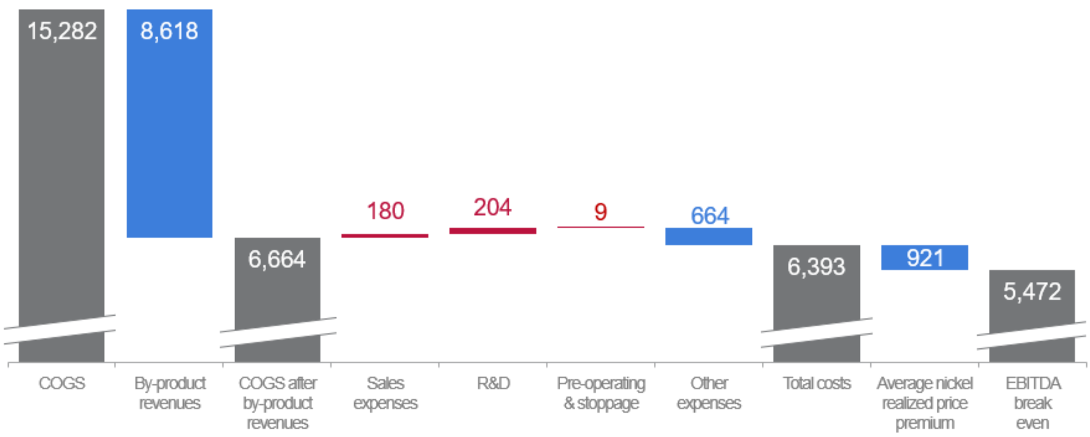
[10] In March 2020 Vale decided to unwind its Nickel Revenue Hedging Program. The gain was recognized in equity and is periodically reclassified to net income aligned with the hedged future nickel sales.

Onça Puma's unit cash costs was significantly lower in 4Q20 as a result of higher dilution of fixed costs, a consequence of successful maintenance works during 3Q20, which allowed for a strong performance in 4Q20.

Selling expenses and other expenses totaled a revenue of US$ 33 million in 4Q20 due to tax credits (US$ 50 million) offset by selling expenses (US$ 12 million), mines under care and maintenance in North Atlantic (US$ 13 million) and expenses related to other projects (US$ 5 million).

R&D expenses were US$ 13 million in 4Q20, higher than the US$ 10 million recorded in 3Q20. These expenses encompass R&D initiatives for further operational improvements, with the main expenses associated with North Atlantic and VNC operations, corresponding to US$ 10 million and US$ 2 million, respectively, in the quarter.

EBITDA breakeven – nickel operations[11]



Selected financial indicators - Nickel operations

US$ million	4Q20	3Q20	4Q19	2020	2019
Net Revenues	1,686	1,317	1,167	4,995	4,257
Costs¹	(1,012)	(894)	(709)	(3,216)	(2,867)
Expenses¹	33	(23)	(29)	(25)	(75)
Pre-operating and stoppage expenses¹	-	-	-	(29)	(28)
R&D expenses	(14)	(10)	(18)	(49)	(44)
Dividends and interests on associates and JVs	-	-	-	-	-
Adjusted EBITDA	693	390	411	1,676	1,243
Depreciation and amortization	(250)	(242)	(283)	(934)	(1,099)
Adjusted EBIT	443	148	128	742	144
Adjusted EBIT margin (%)	26.3	11.2	11.0	14.9	3.4

[1] Net of depreciation and amortization

[11] 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$ 5,641/t.

Copper operations – Salobo and Sossego

Copper – EBITDA by operation

US$ million	4Q20	3Q20	4Q19	2020	2019
Salobo	339	287	273	1,030	877
Sossego	122	104	(19)	329	86
Others Copper[1]	(16)	(10)	(16)	(54)	(32)
Total	**445**	**380**	**238**	**1,305**	**931**

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

Salobo and **Sossego**'s EBITDA was higher in 4Q20 mainly due to higher copper realized prices and higher copper and gold sales volumes, which were partially offset by lower gold prices.

Copper revenue and realized price

Net operating revenue by product - Copper operations

US$ million	4Q20	3Q20	4Q19	2020	2019
Copper	476	390	315	1,450	1,327
Gold as by-product	201	192	157	709	564
Silver as by-product	5	5	4	16	13
Total	**682**	**587**	**476**	**2,175**	**1,904**

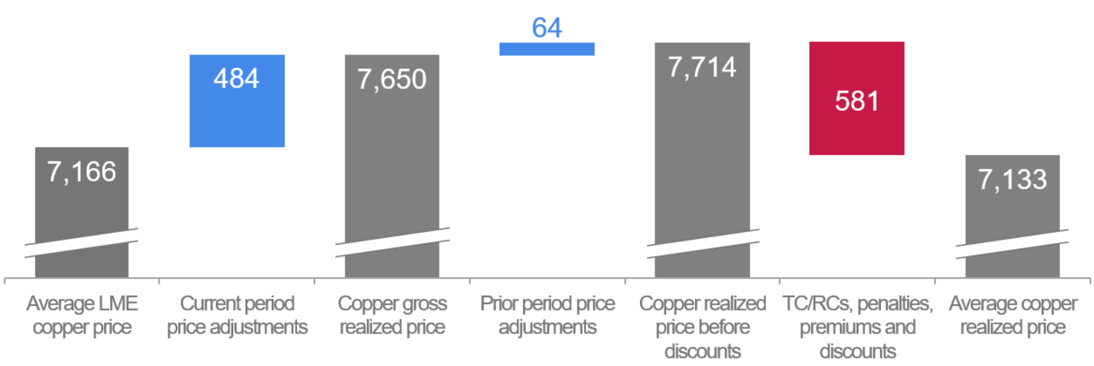
Volume sold - Copper operations

'000 metric tons	4Q20	3Q20	4Q19	2020	2019
Copper	67	62	55	247	244
Gold as by-product ('000 oz)	106	86	101	378	396
Silver as by-product ('000 oz)	199	193	231	760	818

Vale's copper products are sold on a provisional pricing basis[12] during the quarter with final prices determined in a future period, generally one to four months forward.

Price realization – copper operations

US$/t, 4Q20



[12] On December 31th, 2020, Vale had provisionally priced copper sales from Sossego and Salobo totaling 58,145 tons valued at an LME forward price of US$ 7,755/t, subject to final pricing over the following months.

- 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$ 476/t and prior period price adjustments of US$ 64/t were mainly due to the forward price steadily rising during the fourth quarter.

Copper Costs and Expenses

Salobo had solid performance reaching consecutive negative unit cash costs after by-products in the quarter, while Sossego remained at sub-US$ 2,000/t unit cash cost in the quarter.

Copper COGS - 3Q20 x 4Q20

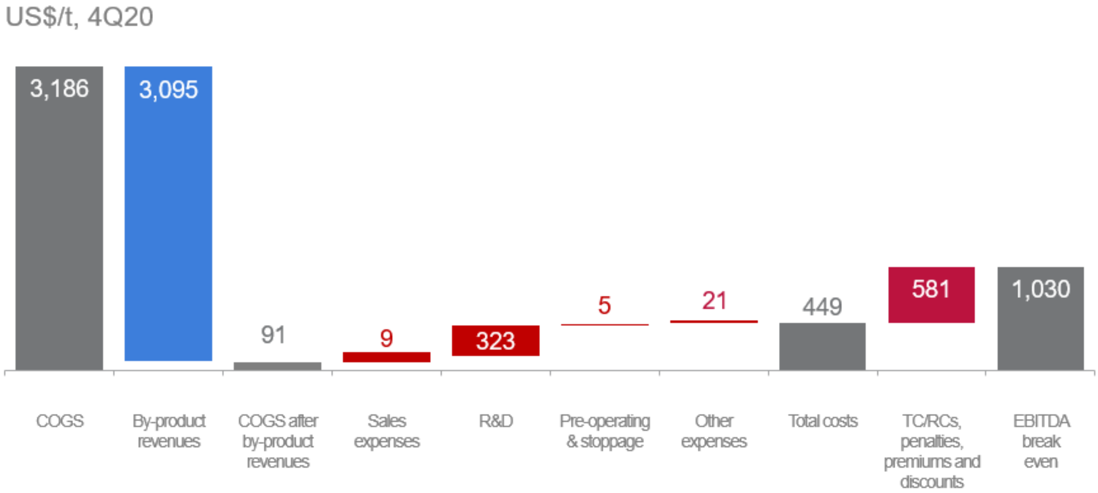
		Variance drivers				
US$ million	3Q20	Volume	Exchange rate	Others	Total variation	4Q20
Copper operations	190	13	-	9	22	212
Depreciation	29	6	-	-	6	35
Total	**219**	**19**	**-**	**9**	**28**	**247**

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

US$/t	4Q20	3Q20	4Q19	2020	2019
Salobo	(808)	(806)	53	(586)	525
Sossego	1,742	1,269	6,409	1,998	3,765

Selling expenses and other expenses totaled US$ 3 million in 4Q20. Research and development expenses were US$ 21 million in 4Q20, with Hu'u-related expenditures amounting to US$ 16 million and Sossego amounting to US$ 5 million in the quarter.

EBITDA breakeven – copper operations[13]



The realized price to be used against the EBITDA break-even should be the copper realized price before discounts (US$ 7,714/t), given that TC/RCs, penalties and other discounts are already part of the EBITDA break-even build-up.

Selected financial indicators - Copper operations

US$ million	4Q20	3Q20	4Q19	2020	2019
Net Revenues	682	587	476	2,175	1,904
Costs[1]	(212)	(190)	(200)	(794)	(905)
Expenses[1]	(3)	(2)	-	(7)	(5)
Pre-operating and stoppage expenses[1]	(1)	-	(20)	(1)	(20)
R&D expenses	(21)	(15)	(18)	(68)	(43)
Dividends and interests on associates and JVs	-	-	-	-	-
Adjusted EBITDA	445	380	238	1,305	931
Depreciation and amortization	(35)	(29)	(53)	(138)	(195)
Adjusted EBIT	410	351	185	1,167	736
Adjusted EBIT margin (%)	60.1	59.8	38.9	53.7	38.7

[1] Net of depreciation and amortization

[13] 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$ 2,205/t.

Coal

Coal adjusted EBITDA was negative US$ 291 million in 4Q20, US$ 78 million lower than in 3Q20, mainly as a result of higher costs (US$ 79 million) led by an increase in cash cost, and absence of interest received from the Nacala Logistic Corridor debt service in 3Q20[14], which were partially offset by higher revenues due to (i) better sales volumes (US$ 11 million), supported by inventories consumption and (ii) stronger average realized prices (US$ 14 million).

Vale resumed its maintenance plan in November 2020, with the first phase of the project currently running as scheduled. Vale expects to reach a run-rate of 15 Mtpy in 2H21 and 18 Mtpy in 2022.

On January 2021, Vale signed a Heads of Agreement with Mitsui allowing both parties to structure Mitsui's exit from the Moatize coal mine and the Nacala Logistics Corridor, as a first step towards Vale's divestment of the coal business.

Revenue and price realization

The higher quarter-on-quarter net revenues was due to a combination of stronger sales volumes and realized prices.

Volume sold

'000 metric tons	4Q20	3Q20	4Q19	2020	2019
Metallurgical coal	884	809	1,017	2,914	4,427
Thermal coal	651	572	1,025	2,953	4,356
Total	**1,535**	**1,381**	**2,042**	**5,867**	**8,783**

Net operating revenue by product

US$ million	4Q20	3Q20	4Q19	2020	2019
Metallurgical coal	91	76	134	313	764
Thermal coal	37	27	57	160	257
Total	**128**	**103**	**191**	**473**	**1021**

Coal prices

US$/ metric ton	4Q20	3Q20	4Q19	2020	2019
Metallurgical coal index price[1]	108.2	114.8	140.0	124.0	177.0
Vale's metallurgical coal realized price	103.3	93.8	131.4	107.4	172.5
Thermal coal index price[2]	72.8	55.4	75.8	65.3	71.5
Vale's thermal coal realized price	56.7	47.0	56.0	54.3	59.1
Vale's average realized price	**83.6**	**74.4**	**93.5**	**80.7**	**116.3**

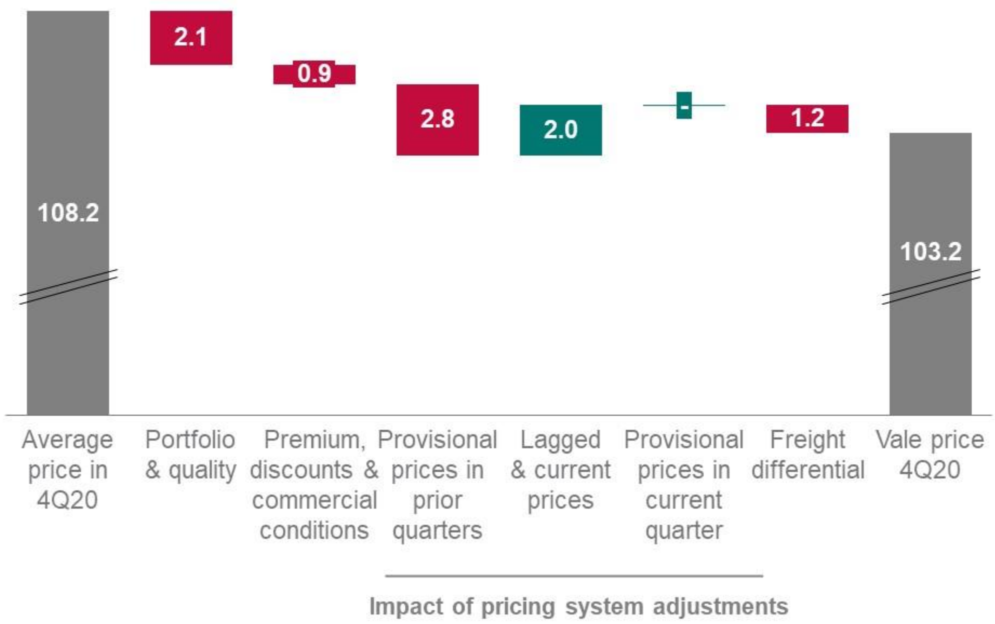
[1] Reference price Premium Low Vol Hard Coking Coal FOB Australia.

[2] McCloskey FOB Richards Bay

[14] 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.

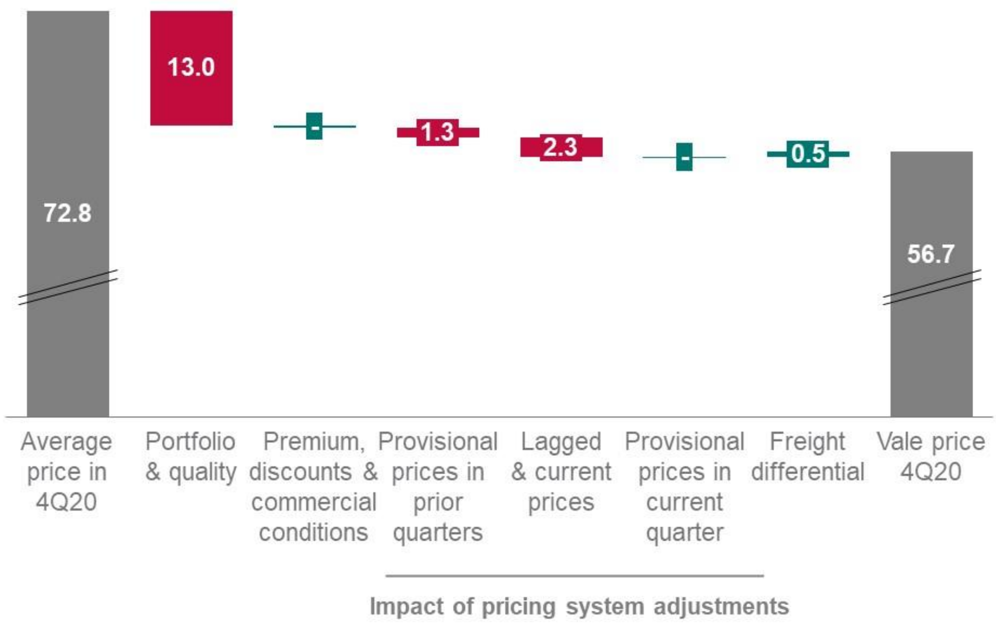
Price realization – Metallurgical coal

US$/t 4Q20



Price realization – Thermal coal

US$/t 4Q20



Costs and expenses

Costs totaled US$ 400 million in 4Q20, US$ 79 million higher than in 3Q20. Pro-forma C1 cash cost was US$ 127.5/t in 4Q20, up from 3Q20 due to (i) higher inventories' costs, given that the 3Q20 was positively impacted by a substantial reversion of inventory impairments (Other Costs) (ii) lower dilution of fixed costs due to the lower production led by the plant's revamp and (iii) the absence of interest received from the Nacala Logistic Corridor related to its debt service to Vale[15].

Pro-forma cash cost

US$/ metric ton	4Q20	3Q20	4Q19	2020	2019
Pro-forma operational costs[1] (A)	113.8	103.9	143.1	124.4	132.0
Nacala non-operational tariff [2] (B)	13.4	31.4	55.6	39.9	50.8
Other costs (C) [3]	0.3	(43.5)	(7.2)	(0.9)	2.5
Cost at Nacala Port (D = A+B+C)	127.5	91.8	191.5	163.4	185.3
NLC's debt service to Vale (E)	-	14.5	13.7	16.2	12.9
Pro-forma C1 cash cost (F = D-E)	127.5	77.3	177.8	147.2	172.5
Idle capacity	133.7	140.9	-	84.8	-
Total	261.2	218.2	177.8	232.0	172.5

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

[2] Includes the inferred NLC tariff components related to sustaining capex, working capital, taxes and other financial items.

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

Selected financial indicators - Coal

US$ million	4Q20	3Q20	4Q19	2020	2019
Net Revenues	128	103	191	473	1,021
Costs[1] [2]	(400)	(321)	(392)	(1,456)	(1,638)
Expenses[1]	(15)	(5)	(5)	(15)	1
R&D expenses	(4)	(10)	(8)	(28)	(30)
Dividends and interests on associates and JVs	-	20	28	95	113
Adjusted EBITDA	(291)	(213)	(186)	(931)	(533)
Depreciation and amortization	-	-	(61)	(19)	(237)
Adjusted EBIT	(291)	(213)	(247)	(950)	(770)
Adjusted EBIT margin (%)	(227.3)	(206.8)	(129.3)	(200.8)	(75.4)

[1] Net of depreciation and amortization

[2] Including idle capacity

[15] 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.

VALE

ANNEXES

SIMPLIFIED FINANCIAL STATEMENTS

Income Statement

US$ million	4Q20	3Q20	4Q19	2020	2019
Net operating revenue	**14,769**	**10,762**	**9,964**	**40,018**	**37,570**
Cost of goods sold and services rendered	(5,733)	(4,816)	(5,632)	(19,039)	(21,187)
Gross profit	**9,036**	**5,946**	**4,332**	**20,979**	**16,383**
Gross margin (%)	61.2	55.2	43.5	199.0	43.6
Selling and administrative expenses	(188)	(127)	(139)	(554)	(487)
Research and evaluation expenses	(153)	(105)	(158)	(443)	(443)
Pre-operating and operational stoppage	(193)	(188)	(314)	(887)	(1,153)
Brumadinho event	(4,854)	(114)	(1,141)	(5,257)	(7,402)
Other operational expenses, net	(340)	(113)	(264)	(752)	(505)
Impairment and disposal of non-current assets	(1,513)	(298)	(4,731)	(2,243)	(5,074)
Operating income	**1,795**	**5,001**	**(2,415)**	**10,843**	**1,319**
Financial income	64	69	176	375	527
Financial expenses	(958)	(1,202)	(1,147)	(3,283)	(3,746)
Other financial items, net	213	(227)	(131)	(1,903)	(194)
Equity results and other results in associates and joint ventures	(322)	(40)	(154)	(1,063)	(681)
Income (loss) before income taxes	**792**	**3,601**	**(3,409)**	**4,969**	**(2,775)**
Current tax	(1,982)	(743)	(52)	(3,398)	(1,522)
Deferred tax	1,834	(51)	1,465	2,960	2,117
Net income (loss)	**644**	**2,807**	**(1,996)**	**4,531**	**(2,180)**
Loss attributable to noncontrolling interests	(95)	(101)	(434)	(350)	(497)
Net income (loss) attributable to Vale's stockholders	**739**	**2,908**	**(1,562)**	**4,881**	**(1,683)**

Equity income (loss) by business segment

US$ million	4Q20	%	3Q20	%	4Q19	%	2020	%	2019	%
Ferrous Minerals	13	(28)	19	(317)	11	183	50	(42)	254	111
Base Metals	-	-	(1)	17	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-	-	(2)	(1)
Others	(59)	128	(24)	400	(5)	(83)	(169)	142	(24)	(11)
Total	**(46)**	**100**	**(6)**	**100**	**6**	**100**	**(119)**	**100**	**228**	**100**

Balance sheet

US$ million	12/31/2020	9/30/2020	12/31/2019
Assets			
Current assets	**24,403**	**17,544**	**17,042**
Cash and cash equivalents	13,487	8,845	7,350
Short term investments	771	125	826
Accounts receivable	4,993	3,014	2,529
Other financial assets	329	454	607
Inventories	4,061	4,329	4,274
Prepaid income taxes	107	117	370
Recoverable taxes	402	357	552
Others	253	303	534
Non-current assets	**15,129**	**15,799**	**16,798**
Judicial deposits	1,268	2,040	3,133
Other financial assets	1,784	2,472	2,661
Prepaid income taxes	454	540	597
Recoverable taxes	637	531	607
Deferred income taxes	10,335	9,610	9,217
Others	651	606	583
Fixed assets	**52,475**	**46,638**	**57,873**
Total assets	**92,007**	**79,981**	**91,713**
Liabilities			
Current liabilities	**14,594**	**10,684**	**13,845**
Suppliers and contractors	3,367	3,099	4,107
Loans, borrowings and leases	1,136	1,024	1,439
Other financial liabilities	1,906	1,782	1,404
Taxes payable	952	807	512
Settlement program (REFIS)	340	313	431
Provisions	1,826	1,016	1,230
Liabilities related to associates and joint ventures	876	688	516
Liabilities related to Brumadinho	1,910	936	1,568
De-characterization of dams	381	320	309
Dividends payable	1,220	-	1,560
Others	680	699	769
Non-current liabilities	**42,592**	**36,088**	**38,875**
Loans, borrowings and leases	13,891	14,041	13,408
Participative stockholders' debentures	3,413	2,533	2,584
Other financial liabilities	4,612	2,756	1,788
Settlement program (REFIS)	2,404	2,287	3,476
Deferred income taxes	1,770	1,635	1,882
Provisions	8,434	7,781	8,493
Liabilities related to associates and joint ventures	1,198	797	1,184
Liabilities related to Brumadinho	2,665	614	1,415
De-characterization of dams	1,908	1,254	2,180
Streaming transactions	2,005	2,017	2,063
Others	292	373	402
Total liabilities	**57,186**	**46,772**	**52,720**
Stockholders' equity	**34,821**	**33,209**	**38,993**
Total liabilities and stockholders' equity	**92,007**	**79,981**	**91,713**

Cash flow

US$ million	4Q20	3Q20	4Q19	2020	2019
Cash flow from operations	**7,330**	**5,567**	**3,797**	**17,030**	**15,623**
Interest on loans and borrowings paid	(140)	(203)	**(236)**	(755)	(1,186)
Derivatives received (paid), net	(63)	(130)	**(115)**	(34)	(324)
Interest on participative stockholders debentures paid	(95)	-	(104)	(183)	(194)
Income taxes (including settlement program)	(539)	(450)	(467)	(1,736)	(1,809)
Net cash provided by operating activities	**6,493**	**4,784**	**2,875**	**14,322**	**12,110**
Cash flows from investing activities:					
Capital expenditures	(1,444)	(872)	(1,472)	(4,430)	(3,704)
Additions to investments	**(56)**	-	(1)	(131)	(76)
Acquisition of subsidiary, net of cash	-	-	(13)	-	(926)
Proceeds from disposal of assets and investments	338	82	18	426	142
Dividends received from joint ventures and associates	94	2	160	173	353
Restricted cash and judicial deposits related to Brumadinho	-	9	(45)	(9)	(1,638)
Short term investments	-	-	98	630	(828)
Investment in fund applications	(697)	(31)	-	(824)	-
Other investment activities, net	(133)	(197)	(157)	(504)	(312)
Net cash provided by (used in) investing activities	**(1,898)**	**(1,007)**	**(1,412)**	**(4,669)**	**(6,989)**
Cash flows from financing activities:					
Loans and financing:					
Loans and borrowings from third parties	-	1,800	-	6,800	3,142
Payments of loans and borrowings from third parties	(308)	(5,265)	(1,871)	(6,064)	(5,417)
Payments of leasing	(75)	(45)	(93)	(219)	(224)
Payments to stockholders:					
Dividends and interest on capital paid to stockholders	**(23)**	**(3,327)**	**-**	(3,350)	-
Dividends and interest on capital paid to noncontrolling interest	(3)	(3)	(3)	(14)	(184)
Transactions with noncontrolling stockholders	171	-	(812)	171	(812)
Net cash provided by (used in) financing activities	**(238)**	**(6,840)**	**(2,779)**	**(2,676)**	**(3,495)**
Increase (decrease) in cash and cash equivalents	**4,357**	**(3,063)**	**(1,316)**	**6,977**	**1,626**
Cash and cash equivalents in the beginning of the period	8,845	12,113	8,559	7,350	5,784
Effect of exchange rate changes on cash and cash equivalents	300	(205)	107	(825)	(60)
Effects of disposals of subsidiaries, net of cash and cash equivalents	(15)	-	-	(15)	-
Cash and cash equivalents at the end of period	**13,487**	**8,845**	**7,350**	**13,487**	**7,350**
Non-cash transactions:					
Additions to property, plant and equipment - capitalized loans and borrowing costs	13	13	29	70	140
Cash flows from operating activities:					
Income before income taxes	**792**	**3,601**	**(3,409)**	**4,969**	**(2,775)**
Adjusted for:					
Provisions related to Brumadinho	4,727	-	898	4,748	6,550
Equity results and other results in associates and joint ventures	322	40	154	1,063	681
Impairment and disposal of non-current assets	1,513	298	4,731	2,243	5,074
Depreciation, depletion and amortization	838	774	1,032	3,234	3,726
Financial results, net	681	1,360	840	4,811	3,413
Change in assets and liabilities					
Accounts receivable	(1,963)	(276)	(296)	(2,540)	(25)
Inventories	470	(298)	411	(180)	110
Suppliers and contractors	85	214	(88)	(267)	655
Provision - Payroll, related charges and other remunerations	138	177	13	222	(94)
Payments related to Brumadinho	(221)	(218)	(381)	(809)	(989)
Other assets and liabilities, net	(52)	(105)	(108)	(464)	(703)
Cash flow from operations	**7,330**	**5,567**	**3,797**	**17,030**	**15,623**

REVENUES, VOLUMES SOLD, PRICES AND MARGINS

Net operating revenue by destination

US$ million	4Q20	%	3Q20	%	4Q19	%	2020	%	2019	%
North America	**302**	**2.0**	**283**	**2.6**	**576**	**5.8**	**1,300**	**3.2**	**2,199**	**5.9**
USA	297	2.0	278	2.6	349	3.5	1,041	2.6	1,335	3.6
Canada	5	0.0	5	0.0	169	1.7	258	0.6	717	1.9
Mexico	-	-	-	-	58	0.6	1	0.0	147	0.4
South America	**1,045**	**7.1**	**862**	**8.0**	**870**	**8.7**	**3,269**	**8.2**	**3,842**	**10.2**
Brazil	938	6.4	717	6.7	793	8.0	2,908	7.3	3,348	8.9
Others	107	0.7	145	1.3	77	0.8	361	0.9	494	1.3
Asia	**11,105**	**75.2**	**7,800**	**72.5**	**6,829**	**68.5**	**28,609**	**71.5**	**24,157**	**64.3**
China	9,208	62.3	6,416	59.6	5,182	52.0	23,140	57.8	18,242	48.6
Japan	775	5.2	558	5.2	796	8.0	2,213	5.5	2,603	6.9
South Korea	477	3.2	296	2.8	325	3.3	1,278	3.2	1,278	3.4
Others	645	4.4	530	4.9	526	5.3	1,978	4.9	2,034	5.4
Europe	**1,815**	**12.4**	**1,400**	**13.0**	**1,272**	**12.8**	**5,337**	**13.4**	**5,194**	**13.8**
Germany	498	3.4	441	4.1	471	4.7	1,666	4.2	1,683	4.5
Italy	105	0.7	58	0.5	58	0.6	270	0.7	356	0.9
Others	1,212	8.2	901	8.4	743	7.5	3,401	8.5	3,155	8.4
Middle East	**348**	**2.3**	**249**	**2.3**	**247**	**2.5**	**883**	**2.2**	**1,282**	**3.4**
Rest of the World	**154**	**1.0**	**168**	**1.6**	**170**	**1.7**	**620**	**1.5**	**896**	**2.4**
Total	**14,769**	**100.0**	**10,762**	**100.0**	**9,964**	**100.0**	**40,018**	**100.0**	**37,570**	**100.0**

Volume sold - Minerals and metals

'000 metric tons	4Q20	3Q20	4Q19	2020	2019
Iron ore fines	82,391	65,607	77,301	254,012	267,992
ROM	434	162	605	853	1,314
Pellets	8,486	8,464	10,966	31,211	43,199
Manganese ore	461	428	570	1,378	1,063
Ferroalloys	15	15	35	67	127
Thermal coal	651	572	1,025	2,953	4,356
Metallurgical coal	884	809	1,017	2,914	4,427
Nickel	66	58	47	211	206
Copper	93	81	88	346	365
Gold as by-product ('000 oz)	122	100	122	441	458
Silver as by-product ('000 oz)	491	560	514	2,231	1,830
PGMs ('000 oz)	82	60	90	325	319
Cobalt (metric ton)	936	945	941	4,089	4,273

Average prices

US$/ton	4Q20	3Q20	4Q19	2020	2019
Iron ore fines CFR reference (dmt)	143.4	123.1	93.7	118.9	98.0
Iron ore fines CFR/FOB realized price	130.7	112.1	83.5	107.4	87.1
Pellets CFR/FOB (wmt)	152.6	141.2	125.7	135.9	137.7
Manganese ore	87.5	85.3	80.2	114.9	139.0
Ferroalloys	1,027.2	968.2	969.9	948.0	1,057.2
Thermal coal	56.7	47.0	56.0	54.3	59.1
Metallurgical coal	103.3	93.8	131.4	107.4	172.5
Nickel	16,851	15,145	16,251	15,291	14,064
Copper[1]	7,209	6,441	5,693	5,864	5,436
Gold (US$/oz)	1,895	2,177	1,542	1,857	1,419
Silver (US$/oz)	29.9	22.5	17.6	21.1	15.4
Cobalt (US$/t)	31,991	30,083	29,860	28,785	26,093

[1]Considers Salobo, Sossego and North Atlantic operations.

Operating margin by segment (EBIT adjusted margin)

%	4Q20	3Q20	4Q19	2020	2019
Ferrous Minerals	68.3	62.8	49.7	60.0	49.8
Base Metals	36.0	26.2	19.1	26.2	14.3
Coal	(227.3)	(206.8)	(129.3)	(200.8)	(75.4)
Total	**23.0**	**49.4**	**25.1**	**33.4**	**18.3**

RECONCILIATION OF IFRS AND "NON-GAAP" INFORMATION

(a) Adjusted EBIT

US$ million	4Q20	3Q20	4Q19
Net operating revenues	14,769	10,762	9,964
COGS	(5,733)	(4,816)	(5,632)
Sales and administrative expenses	(188)	(127)	(139)
Research and development expenses	(153)	(105)	(158)
Pre-operating and stoppage expenses	(193)	(188)	(314)
Brumadinho event	(4,854)	(114)	(1,141)
Other operational expenses, net	(340)	(113)	(264)
Dividends received and interests from associates and JVs	94	22	188
Adjusted EBIT	**3,402**	**5,321**	**2,504**

(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

US$ million	4Q20	3Q20	4Q19
Adjusted EBITDA	**4,240**	**6,095**	**3,536**
Working capital:			
Accounts receivable	(1,963)	(276)	(296)
Inventories	470	(298)	411
Suppliers and contractors	85	214	(88)
Provision - Payroll, related charges and other remunerations	138	177	13
Payments related to Brumadinho	(221)	(218)	(381)
Provisions related to Brumadinho	4,727	-	-
Others	(146)	(127)	602
Cash provided from operations	**7,330**	**5,567**	**3,797**
Income taxes paid - including settlement program	(539)	(450)	(467)
Interest on loans and borrowings paid	(140)	(203)	(236)
Interest on participative shareholders' debentures paid	(95)	-	(104)
Derivatives received (paid), net	(63)	(130)	(115)
Net cash provided by (used in) operating activities	**6,493**	**4,784**	**2,875**

Reconciliation between adjusted EBITDA and net income (loss)

US$ million	4Q20	3Q20	4Q19
Adjusted EBITDA	**4,240**	**6,095**	**3,536**
Depreciation, depletion and amortization	(838)	(774)	(1,032)
Dividends received and interest from associates and joint ventures	(94)	(22)	(188)
Impairment and disposal of non-current assets	(1,513)	(298)	(4,731)
Operating income	**1,795**	**5,001**	**(2,415)**
Financial results	(681)	(1,360)	(840)
Equity results and other results in associates and joint ventures	(322)	(40)	(154)
Income taxes	(148)	(794)	1,413
Net income (loss)	**644**	**2,807**	**(1,996)**
Net income (loss) attributable to noncontrolling interests	(95)	(101)	(434)
Net income (loss) attributable to Vale's stockholders	**739**	**2,908**	**(1,562)**

(c) Net debt

US$ million	4Q20	3Q20	4Q19
Total debt	13,360	13,444	13,056
Cash and cash equivalents[1]	14,258	8,970	8,176
Net debt	(898)	4,474	4,880

[1] Including financial investments

(d) Gross debt / LTM Adjusted EBITDA

US$ million	4Q20	3Q20	4Q19
Gross debt / LTM Adjusted EBITDA (x)	0.8	0.8	1.2
Gross debt / LTM operational cash flow (x)	0.9	1.3	1.1

(e) LTM Adjusted EBITDA / LTM interest payments

US$ million	4Q20	3Q20	4Q19
Adjusted LTM EBITDA / LTM gross interest (x)	20.3	19.4	10.7
LTM adjusted EBITDA / LTM interest payments (x)	22.0	18.7	8.9
LTM operational profit / LTM interest payments (x)	14.7	8.2	1.5