

Vale's Performance in 3Q22

October 28th, 2022



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1. Opening remarks

Business and Financial highlights

Iron Ore

- Iron ore production increased 21% q/q to 89.7 Mt
- C1 cash cost ex-3rd-party purchases decreased US\$1.5/t q/q

Base Metals

- Nickel production increased 51% q/q while nickel sales lagged due to 4Q commitments
- Copper production increased 33% q/q, following extended maintenance

Climate change

- Sol do Cerrado solar project is commissioning; ramp up until Jul/23
- Two battery-powered 72t off-road trucks delivered
- Decarbonization MoU¹ signed with Germany steelmaker Stahl-Holding-Saar

Focusing and strengthening the core

- Opening of the Copper Cliff Complex South Mine Project – Phase 1 (CCM 1)
- Onça Puma 2nd furnace approval
- Reorganization of base metals in Brazil

Capital allocation

- US\$ 3.1 billion dividend paid in September 2022
- 25.2% of current buyback program completed²

Leading the mining transition



Powershift: Decarbonizing our fleet

- Two 100% electric offroad trucks – in Brazil and in Indonesia
- Second 100% electric locomotive successfully delivered
- 49 electric vehicles currently in operation in Canada.

Moving to 100% renewable electricity

- **Sol do Cerrado** commissioning; ramp up until Jul/23
- **766 MWp** – one of the largest solar projects in Latin America
 - **US\$ 591 million** investment
 - 16% of Vale's total electricity demand in Brazil¹.

We have a distinct portfolio to a low carbon economy

Base Metal: essential to energy transition

1st Quartile in scopes 1&2 CO₂ emissions¹

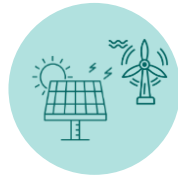
Carbon verified Low carbon emissions assurance



40 – 60kg of nickel
for a Ni-rich EV battery
vs. 1–2kg for ICE vehicles



~25kg of copper
for a DC fast charger



~4.6t of copper
per MW in solar
power systems

Iron ore: committed to low-carbon solutions



Green briquettes:

Tubarão 1&2 plants:
6 Mtpy capacity
53% complete
Start-up: 2023



Partnerships with clients

~30 steel companies
~50% of our scope 3 emissions

¹ Nickel and copper products. Source: Skarn, Vale.

Making progress with dam safety

Dam decharacterization program 40% complete



12 eliminated since 2019, 40% of the total

No dam at critical safety condition by 2025



7 dams removed from emergency level since the start of the year

2. Base Metals

Advancing our Base Metals agenda

CCM 1

Nickel, Canada

- CCM south shaft commissioned in August
- CCM Phase 1 mine opened in early October



Onça Puma 2nd furnace

Nickel, Brazil

- Approval of US\$ 555 million investment
- Adds 12-15 ktpy of nickel
- Start-up in 2025



Pomalaa

Nickel, Indonesia

- Approval to establish the Pomalaa project JV¹
- Project capacity of up to 120 ktpy



Salobo

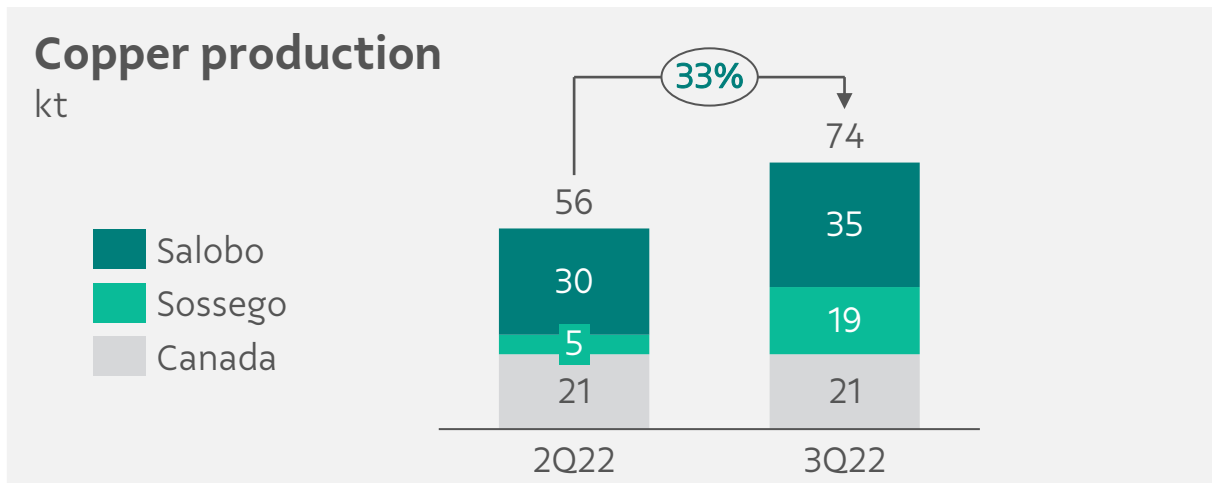
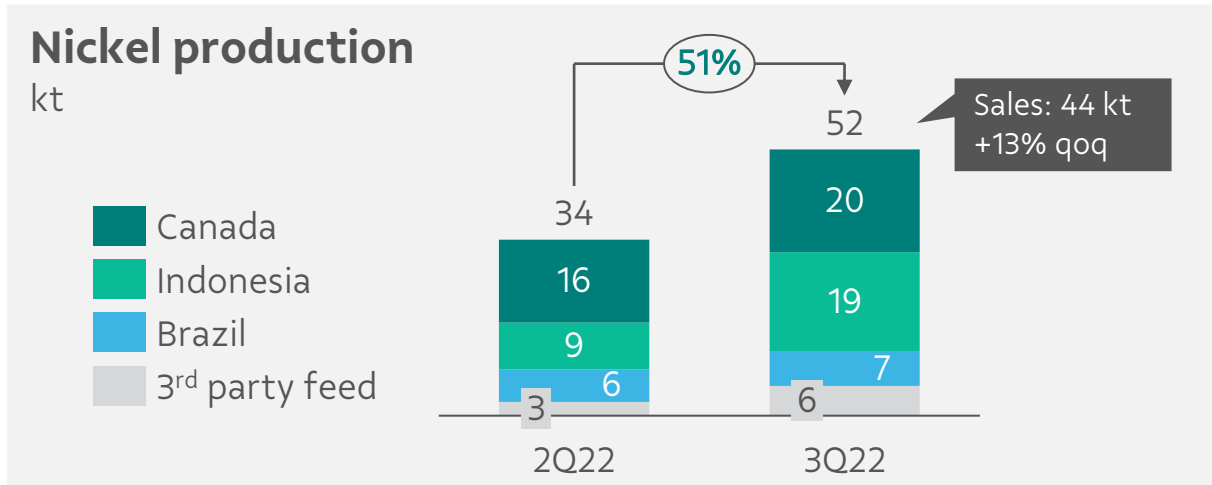
Copper, Brazil

- Salobo 3 project ended Q3 98% complete, on track to start up in December
- Adds 30-40 ktpy of copper



¹ PTVI to own 100% of the mine and has an option to acquire up to 30% of the plant.

Production recovered in Q3 after maintenance period in Q2



Significant operational improvements

- Nickel**
- Refineries came back from Q2 maintenance
 - Conclusion of furnace 4 rebuild at PTVI
- Copper**
- Mill maintenance at Sossego in H1
 - Improved plant performance at Salobo
 - Copper precipitates in North Atlantic

Nickel sales-production gap

- Port congestion in UK
- Challenges in hiring containerships at Vila do Conde
- Inventories held to meet sales commitments

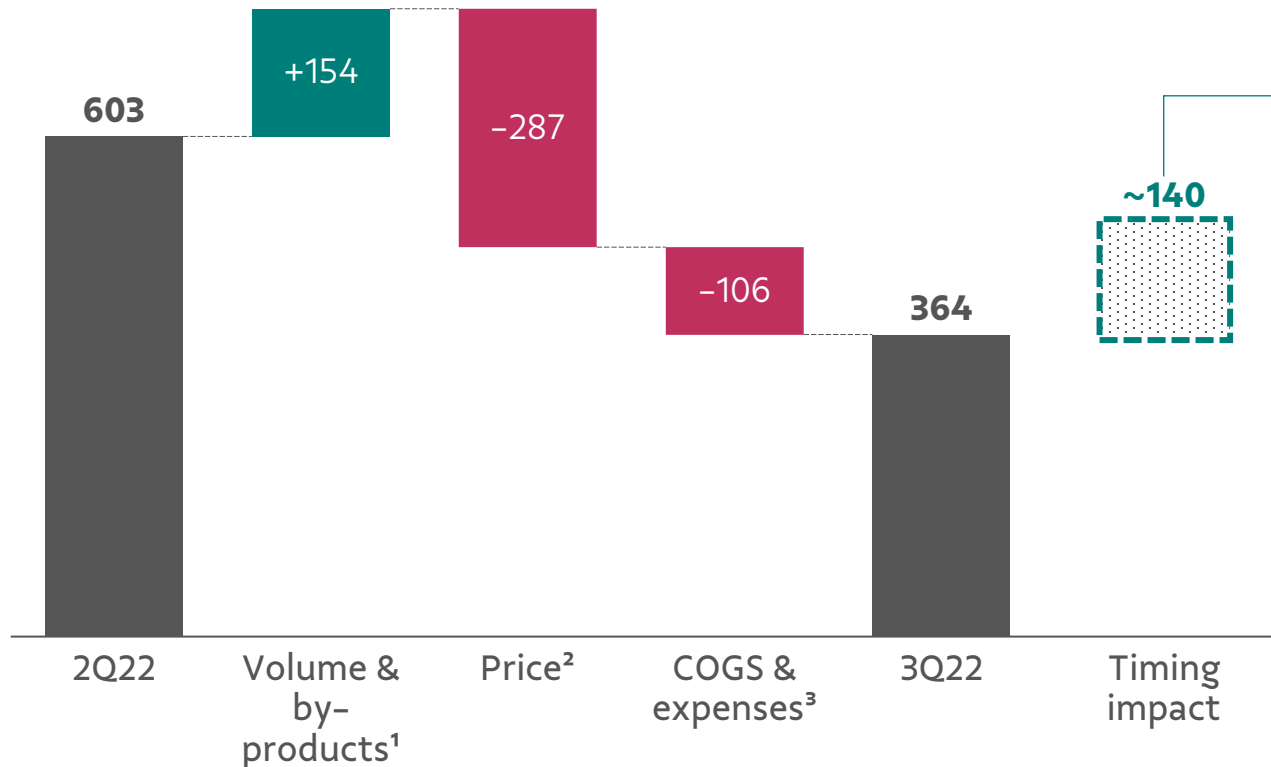
What to expect in Q4

- Nickel**
- Planned maintenance at Onça Puma, LHPP and Matsusaka
 - Sales-production timing gap expected to revert
- Copper**
- Additional maintenance in South Atlantic

EBITDA largely impacted by lower prices, higher fuel costs and carry-over of inventories costs from Q2

Base Metals EBITDA 2Q22 vs. 3Q22

US\$ million



Timing impact

Ni sales-production timing gap

Ni sales lower than production

~90
US\$ million

Carry-over of Ni costs

Refineries and smelter PMP⁴ in Q2

~50
US\$ million

Other relevant impacts

Fuel costs

Increase in fuel prices in Indonesia

3rd party feed

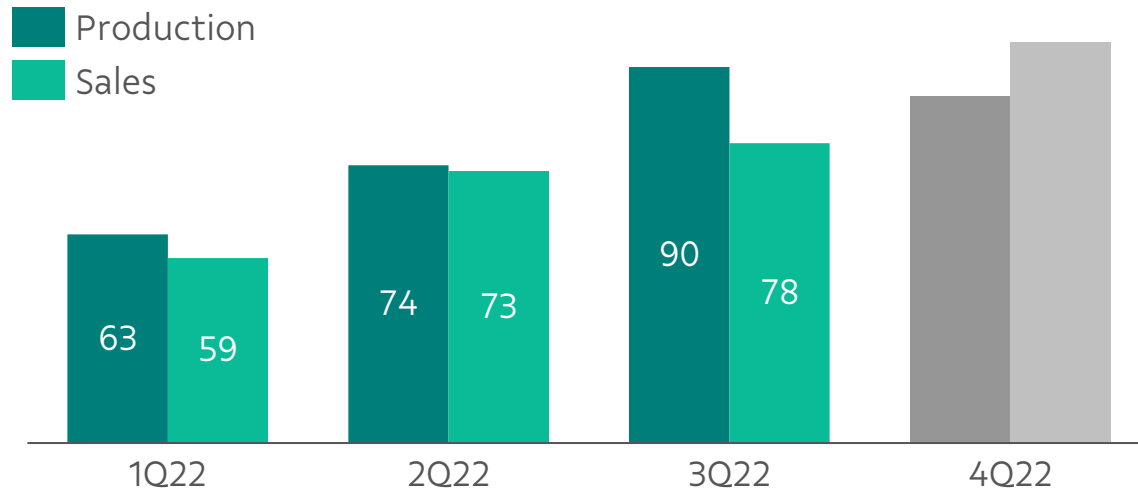
Production from 3rd party feed of 6 kt in Q3 vs. 3 kt in Q2

¹Including volume and price impact from by-products. ²Excluding by-products price impact. ³Including FX and fuel costs impact. ⁴Planned maintenance period.

3. Iron Ore

We delivered a solid production in Q3

Iron ore production/sales Mt



Production YTD: 227 Mt
Sales YTD: 210 Mt

Production guidance 2022: 310–320 Mt

Q3 production/sales gap



Transiting inventories across the supply chain



Larger share of Northern System production

We are progressing on assets debottleneck



Serra Norte



Gelado project: start-up phase 1 expected in 4Q22 and ramp-up in 2023



N3: previous license granted, and start-up expected in 2024



Applying for **rolling licenses** to sustain production level



S11D



New crushers, mobile plants and +10 Mtpy project (start-up in 4Q22) supporting production increase in 2023, but still limited by jaspilite restrictions



Jaspilite restrictions: waste crusher required to process large compact blocks



Itabira



Itabiruçu dam: first phase raising works concluded in 3Q22 and second phase in 2Q23



Licensing and development of tailings/waste stockpiles areas



Brucutu



Torto dam: works completed, pending licensing to start-up

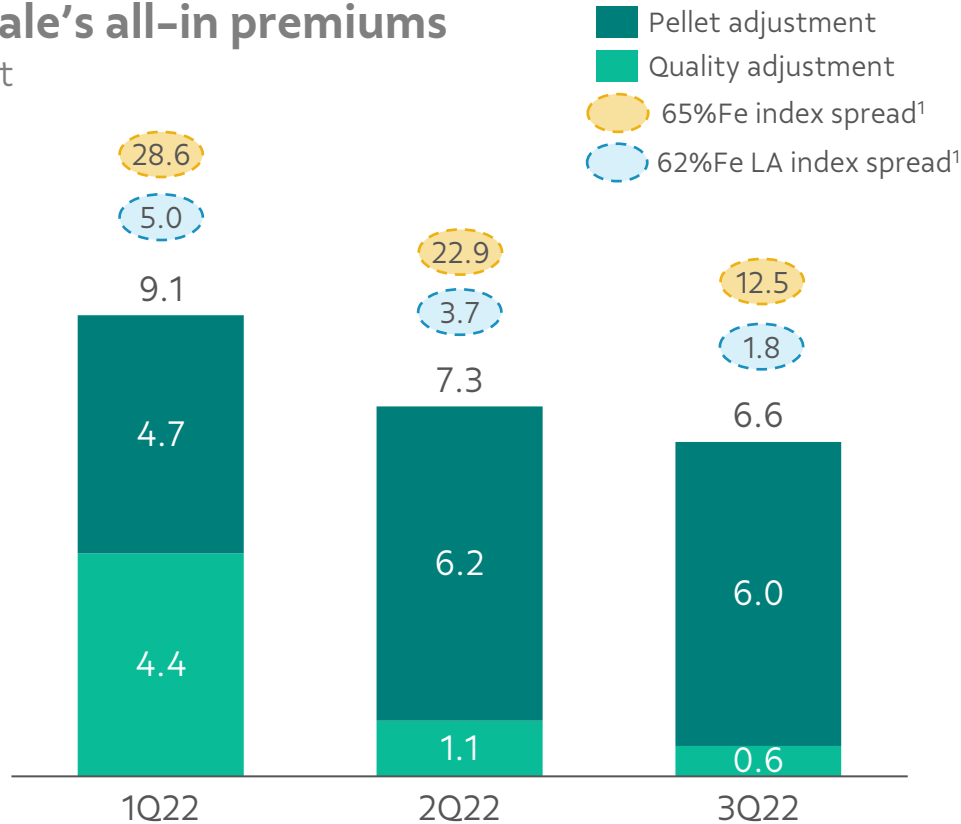


Licensing and development of tailings/waste stockpiles areas

Market conditions impacting short-term premiums, but long-term trend is intact

Vale's all-in premiums

Mt



2022 YTD

- Lower quality market premiums driven by lower steel margins
- Undersupply in the pellet market

Medium & long term

- Industry's lower availability of low alumina products
- Transition to more direct reduction demand and carbon pricing
- Structural higher premiums

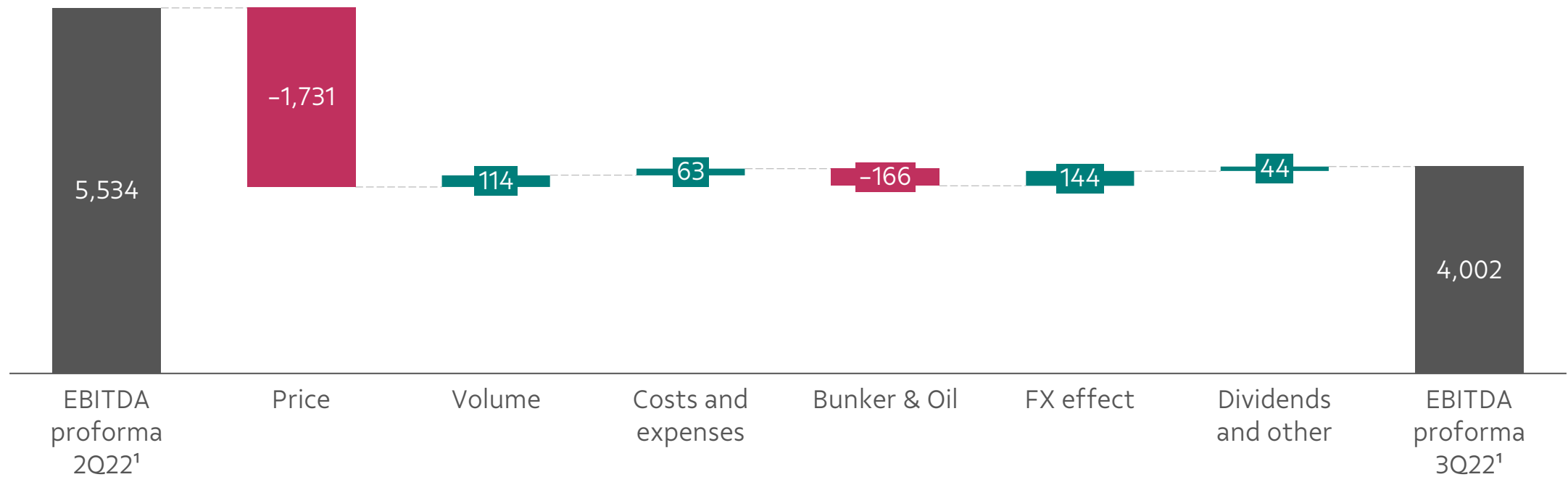
¹ Vs. 62%Fe reference price index.

4. Finance

EBITDA mainly impacted by lower realized prices

EBITDA – 3Q22 vs. 2Q22

US\$ million



¹ Net of Brumadinho expenses

C1 cash cost reduction partially offset by freight increase and lower premiums

Iron ore fines & pellets EBITDA break-even – 3Q22 US\$/t

	2Q22	3Q22
Vale's C1 cash cost ex-third-party purchase cost	20.9	19.4
Third-party purchases cost adjustments	3.3	3.4
Vale's iron ore cash cost (ex-ROM, ex-royalties), FOB	24.2	22.8
Iron ore fines freight cost	21.3	22.4
Iron ore fines distribution cost	2.2	2.2
Iron ore fines expenses & royalties	6.9	5.8
Iron ore fines moisture adjustment	4.9	4.7
Iron ore fines quality adjustment	(1.1)	(0.6)
Iron ore fines EBITDA break-even (US\$/dmt)	58.4	57.3
Iron ore fines pellet adjustment	(6.2)	(6.0)
Iron ore fines and pellets EBITDA break-even (US\$/dmt)	52.2	51.3

- Exchange rate: – US\$ 1.0/t
- Fixed costs dilution: – US\$ 1.0/t
- Demurrage: – US\$ 0.4/t
- Consumption of Q2 inventories: + US\$ 0.5/t
- Diesel: + US\$ 0.5/t

- Seasonally larger spot affreightment: + US\$ 1.4/t
- Lagged effect of higher bunker costs: + US\$ 0.4/t
- Lower spot freight rates: – US\$ 0.7/t
- US\$ 5.6/t of cost avoidance by scrubbers' installation

- Lower unit market premiums: US\$ 1.4/t
- Positive mix effect: US\$ 0.9/t

- Record contractual pellet premium
- Lower 65%Fe index spread
- Absence of dividends received

US\$ 3.8 billion allocated through dividends and buybacks

Free cash flow – 3Q22

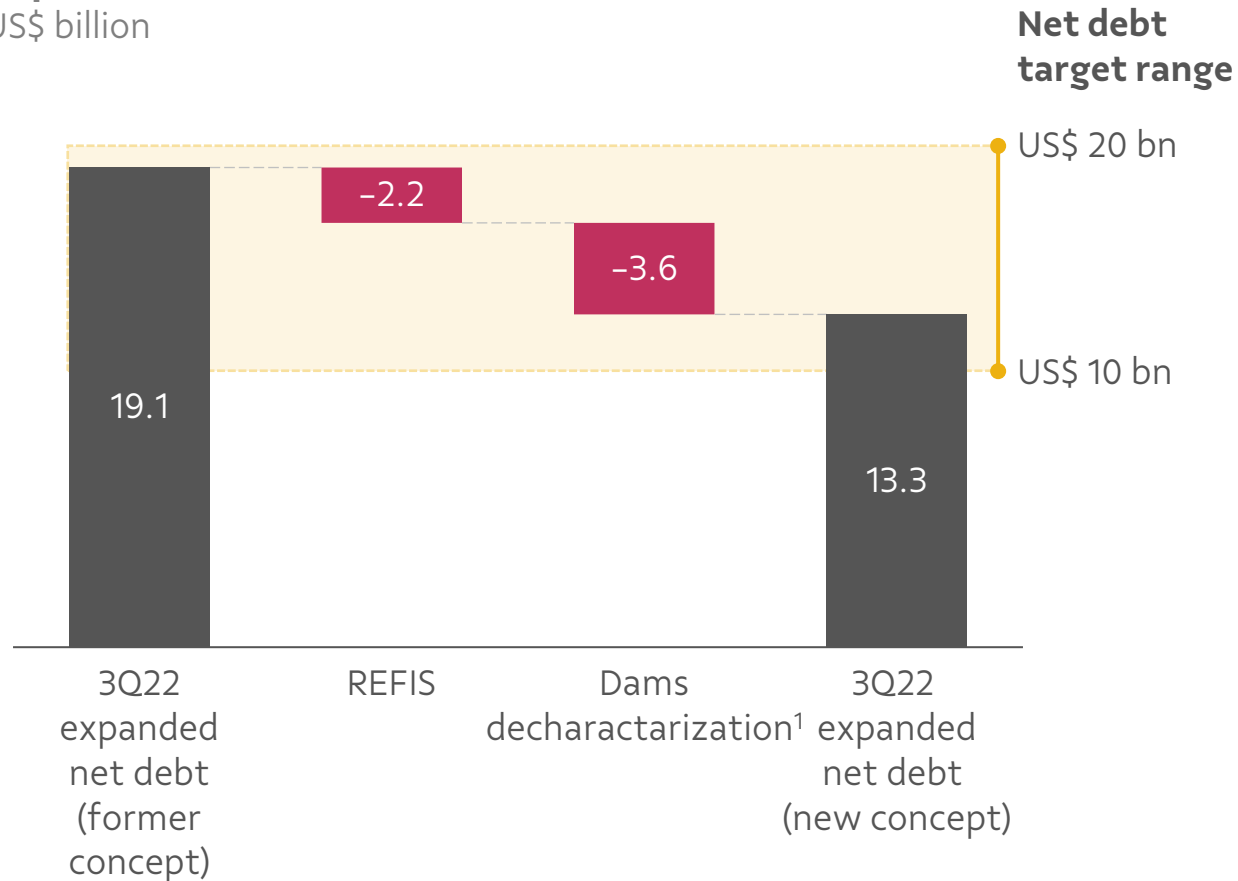
US\$ million



¹ Includes US\$ 518 million of disbursement of Brumadinho provisioned expenses and US\$ 160 million of Brumadinho incurred expenses. ² Includes interest on loans, derivatives, leasing, dividends paid to noncontrolling interest and others. ³ Includes US\$ 686 million of share buyback, US\$ 3,123 million of dividends paid, US\$ 298 million of debt repurchased and US\$ 153 million from the sale of Midwestern System.

Expanded net debt: capital discipline and allocation

Expanded net debt US\$ billion



Greater leveling of the concept with the market

Maintenance of items with relevant disbursement in the short-term

Exclusion of commitments linked to operational and regulatory obligations that are spread over several years

¹ Includes US\$ 191 million of Germano dam decharacterization provision.

Closing remarks

Substantial production increase in Iron Ore, Nickel and Copper

40% on de-characterization agenda concluded

Delivering on product portfolio to supply the energy transition

Capital discipline and return to shareholders to remain a priority



VALE