



Newly built public school in Macacos - MG, Brazil

# Vale's Performance in 1Q19

Rio de Janeiro, May 10<sup>th</sup>, 2019



“This presentation may include statements that present Vale's expectations about future events or results. All statements, when based upon expectations about the future and not on historical facts, involve various risks and uncertainties. Vale cannot guarantee that such statements will prove correct. These risks and uncertainties include factors related to the following: (a) the countries where we operate, especially Brazil and Canada; (b) the global economy; (c) the capital markets; (d) the mining and metals prices and their dependence on global industrial production, which is cyclical by nature; and (e) global competition in the markets in which Vale operates. To obtain further information on factors that may lead to results different from those forecast by Vale, please consult the reports Vale files with the U.S. Securities and Exchange Commission (SEC), the Brazilian Comissão de Valores Mobiliários (CVM), the French Autorité des Marchés Financiers (AMF) and in particular the factors discussed under “Forward-Looking Statements” and “Risk Factors” in Vale’s annual report on Form 20-F.”

“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://http://us.sec.gov/edgar.shtml>.”

# Agenda

1. Opening remarks
2. Highlights of Vale's performance in 1Q19
3. Capital Allocation
4. Business segment performance



**Opening remarks**

# Relief and reparation actions promptly followed emergency aid

- **US\$ 76 million** in donations<sup>1</sup>

**US\$ 13 million** in donations<sup>1</sup>

to Fire Department, Civil Defense  
and Police Force

- Provision<sup>1</sup> of **US\$ 2.3 billion**  
for **agreements**



Registration process in Brumadinho, MG

<sup>1</sup> As recorded in 1Q19 Earnings Results



# We are taking action to reduce the environmental impact on the Paraopeba river

- **65** monitoring points and daily analysis of water and sediments
- **5** membranes installed to retain sediments
- Investments in **Water Treatment Stations** to restrain environmental impact and reestablish community water supply



Test phase in the Ferro-Carvão Stream Water Treatment Station

Tailings have not reached the São Francisco River

# Beyond repairing – building something better

## NEW STRATEGIC PILLARS

● Vale Day 2018 ● New pillars



**Maximize flight to quality in Iron Ore**

- To leverage our strengths in Ferrous Minerals world-class reserves, assets and logistics to maximize the value in our premium portfolio of products



**Discipline in capital allocation**

- To keep focus on value creation and safety of assets, investing in the sustainability of production and in the protection/increase of margins



**Base Metals transformation**

- To keep on track with the transformation of the Base Metals business unit, applying best practices throughout all our operations



**New pact with society**

- To positively impact society, going beyond taxes, social projects and reparation in Brumadinho, becoming a development enabler in the areas we operate and fostering an effective redefinition of mining in Brazil



**Safety and Operational Excellence**

- To transform the way we operate in regards to three interconnected themes: (i) safety and risk management, (ii) assets management, and (iii) organization, processes and culture (VPS<sup>1</sup>)

<sup>1</sup> Vale Production System

# Safety and operational excellence are key elements throughout the organization

## Safety and Operational Excellence Area reporting to the CEO

- Define technical parameters
- Support use of **risk and asset management** models and standards by operational areas
- Focus on **standards and procedures**
- Audit with independence and transparency

## Business areas and functional units

- Responsible for management and **safety in operations**
- Comply with **operational excellence** guidelines
- Asset **risk management** report and whistleblowing
- Ensure technical expertise within the operational teams
- Mandatory VPS<sup>1</sup>

<sup>1</sup> Vale Production System



# We will work to take the Brazilian mining regulation beyond current standards and practices

## From...

- **Low visibility** of critical dams monitoring
- **Overlap** of regulation and regulation bodies
- **Limited cooperation** between industry and experts toward advances in safety standards
- **Interference** lacking technical criteria

## To...

- **Unified regulatory body**
- **Detailed technical norms based on best practices** (ex. Canada and Australia)
- **Incentives to sustainable production** processes
- **Experts** board and **independent accredited body** with collaboration of industry, government and society

Work together with regulators and main stakeholders to develop a transition phase

# What defines success for Vale

**1**

## Rebirth of Brumadinho

- Brumadinho sustainable development

**2**

## Cultural transformation

- Safety becomes an “obsession” with our risk perception and safety culture evolved into an interdependent mindset
- Sustainability entrenched in local operations and Vale perceived as a development agent

**3**

## Lean portfolio

- Optimization of risk and growth factors

**4**

## Recognition from society

- Support to our license to operate

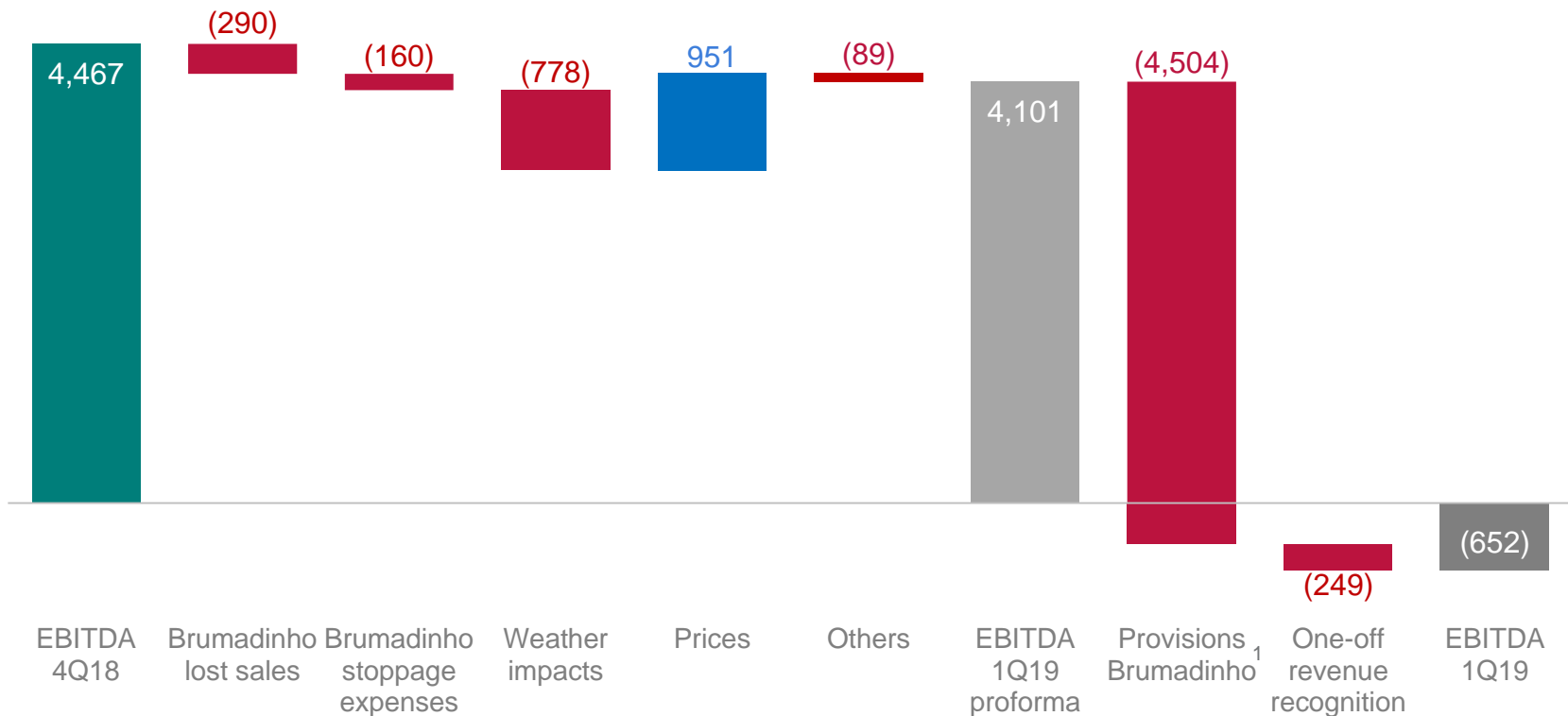
The safest and, therefore, most reliable mining company in the world



**Highlights of Vale's  
performance in 1Q19**

# Brumadinho dam rupture financial impacts led to Vale's first negative EBITDA in history

US\$ million



<sup>1</sup> Includes US\$ 2.423 billion for the compensation/remediation programs and agreements; US\$ 1.855 billion for decommissioning of tailing dams; US\$ 104 million of incurred expenses and US\$ 122 million in others.

# Financial impact of the Brumadinho dam rupture was based on the facts and circumstances known at this point in time

US\$ million



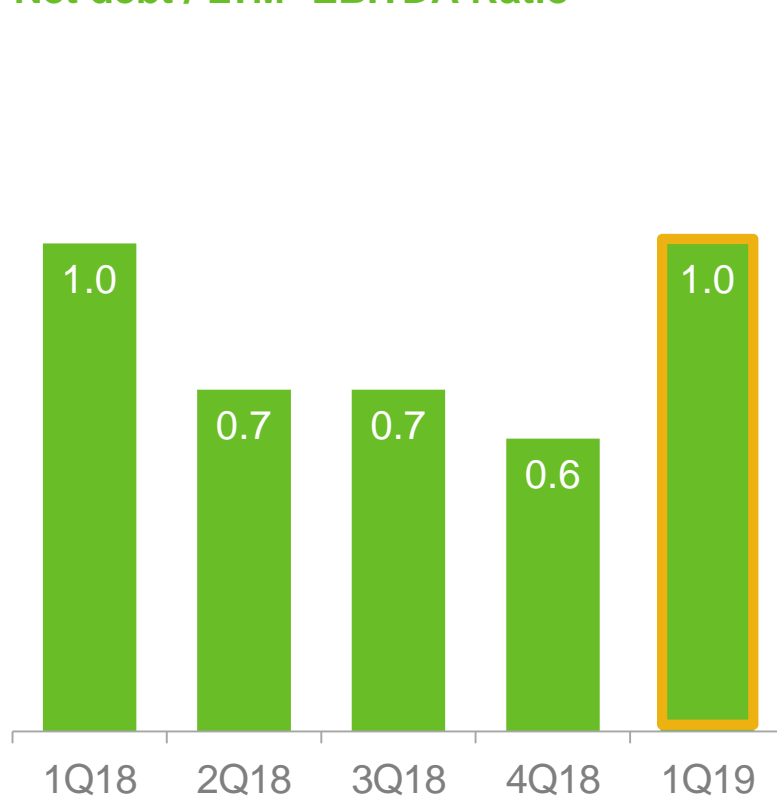


**Capital allocation**



# Net debt increased by US\$ 2.4 billion compared to 4Q18, as a result of frozen funds in the amount of US\$ 3.5 billion

## Net debt / LTM<sup>1</sup> EBITDA Ratio



  
 Net debt in  
 1Q19:  
 US\$ 12.031  
 billion

  
 LTM EBITDA /  
 LTM gross  
 interest:  
 11.0x

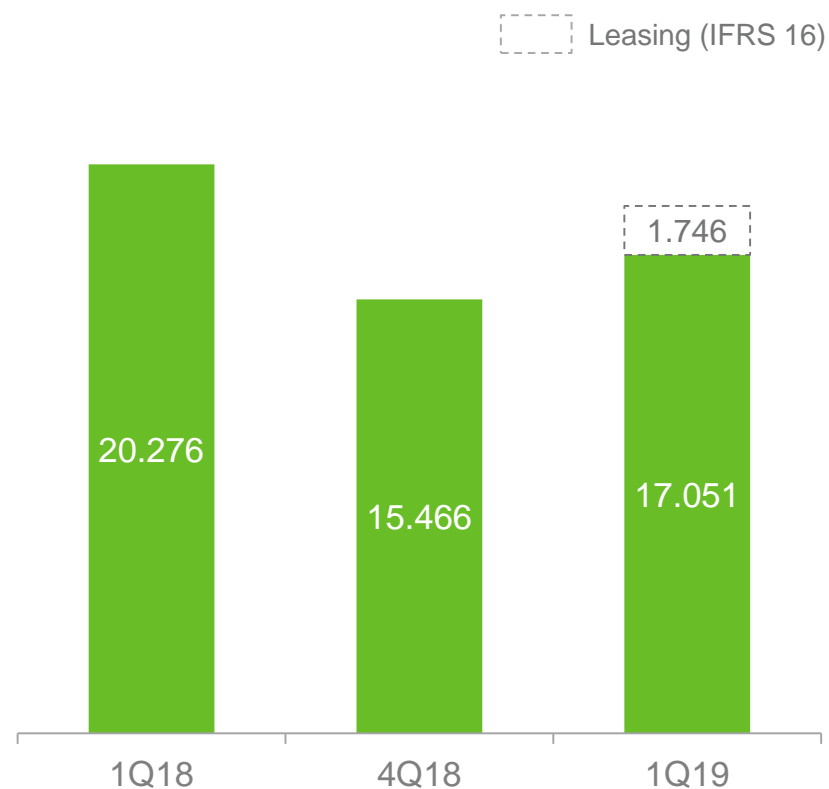
  
 Average  
 maturity:  
 7.96 years

  
 Average cost of  
 debt:  
 5.08% per annum

# Gross debt increased as a result of the addition of new credit lines raised to comply with the freeze of funds related to Brumadinho

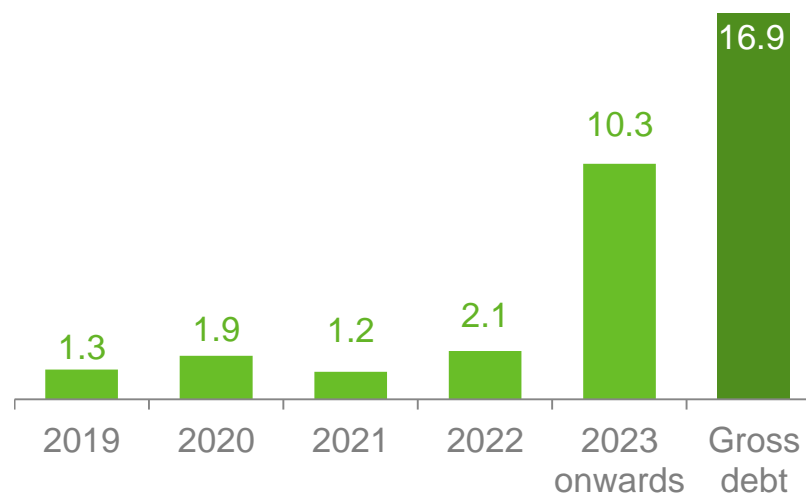
## Gross debt

US\$ billion



## Gross debt amortization schedule<sup>1</sup>

US\$ billion



**61% of our debt** settlement will occur **after 2023**



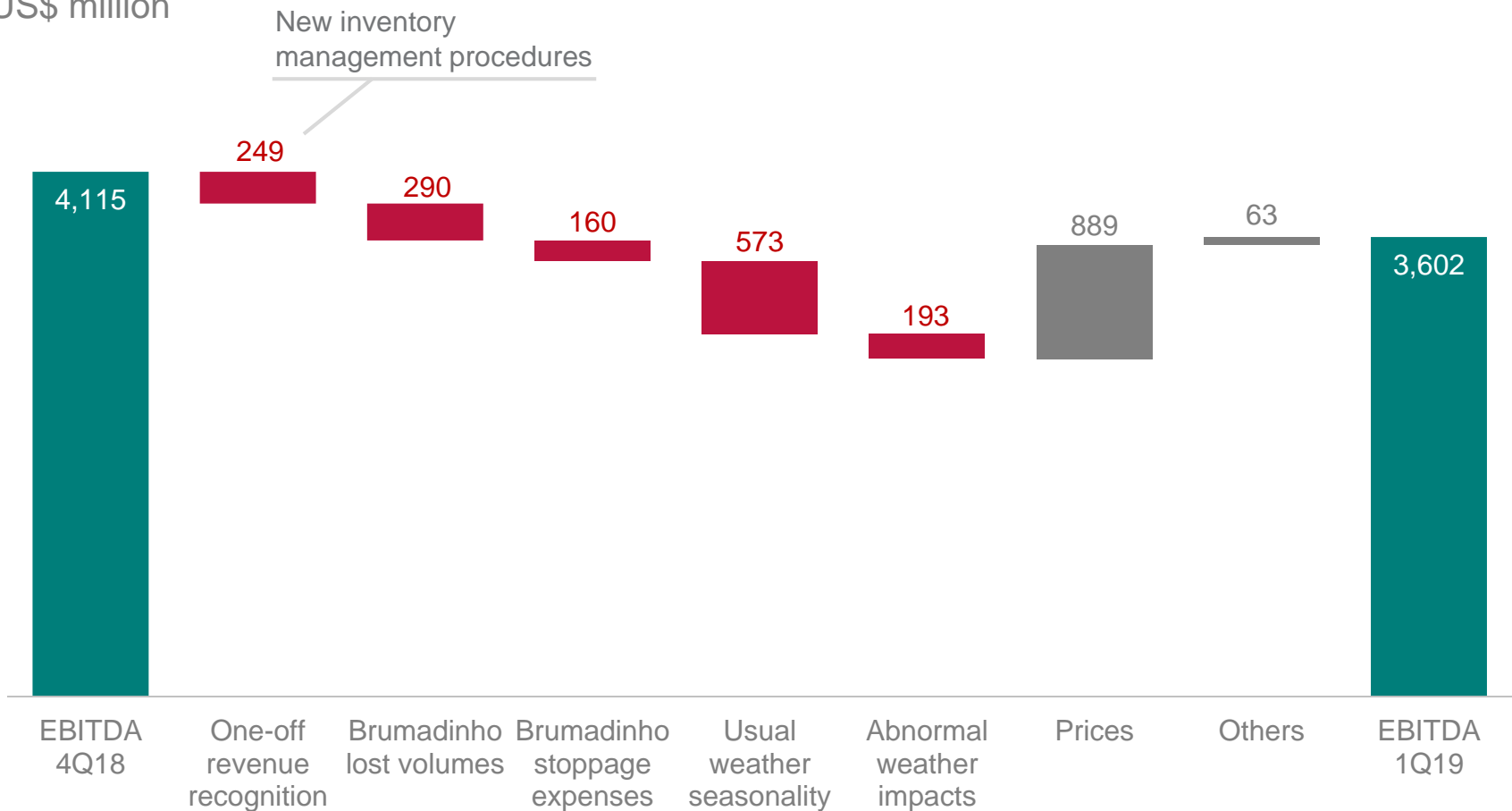
<sup>1</sup> As of March 31<sup>st</sup>, 2019. Does not include accrued charges.

4

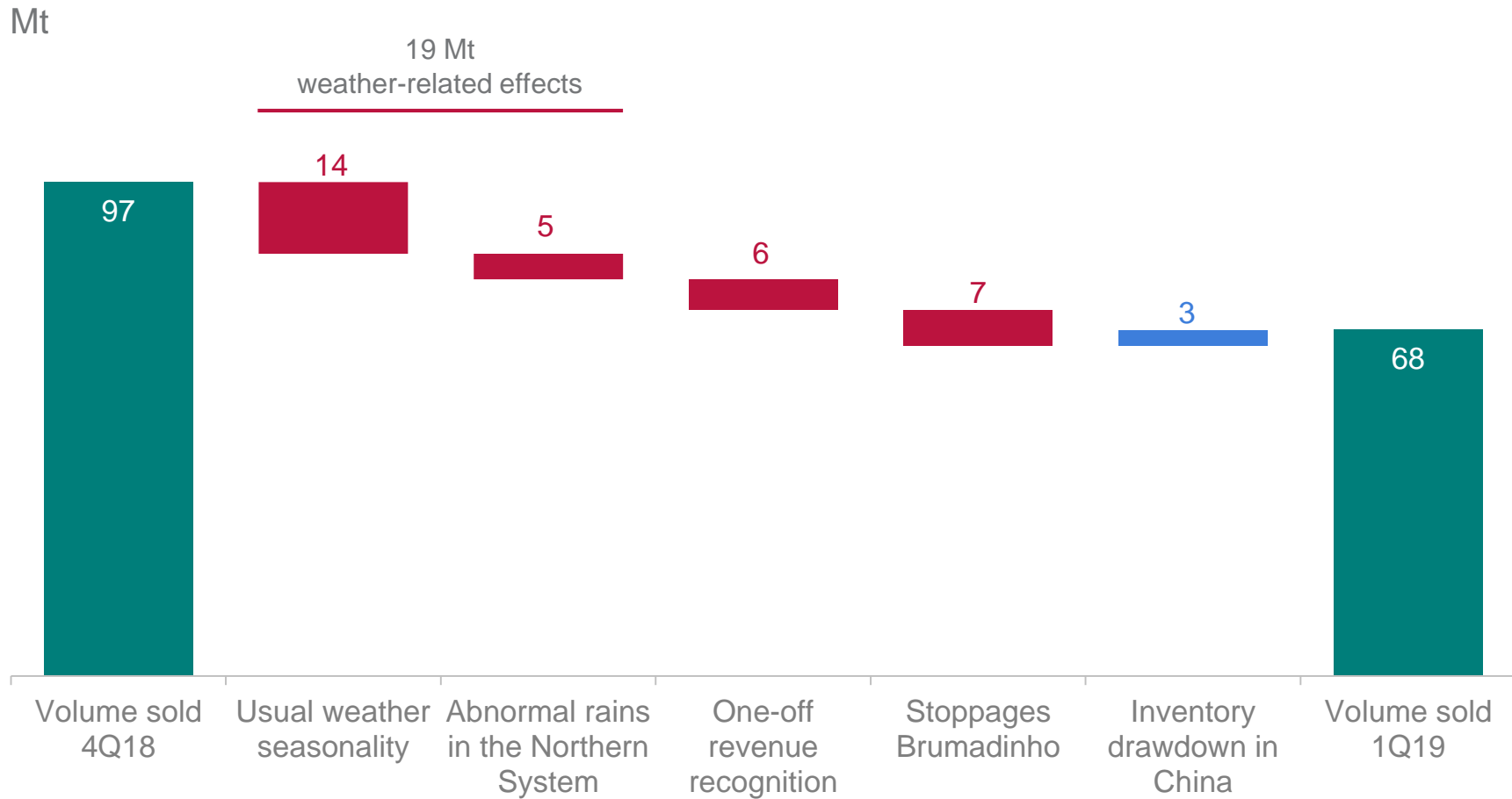
**Business segment  
performance**

## Ferrous Minerals EBITDA was affected by Brumadinho, new inventory management procedures in China and weather related impacts

US\$ million

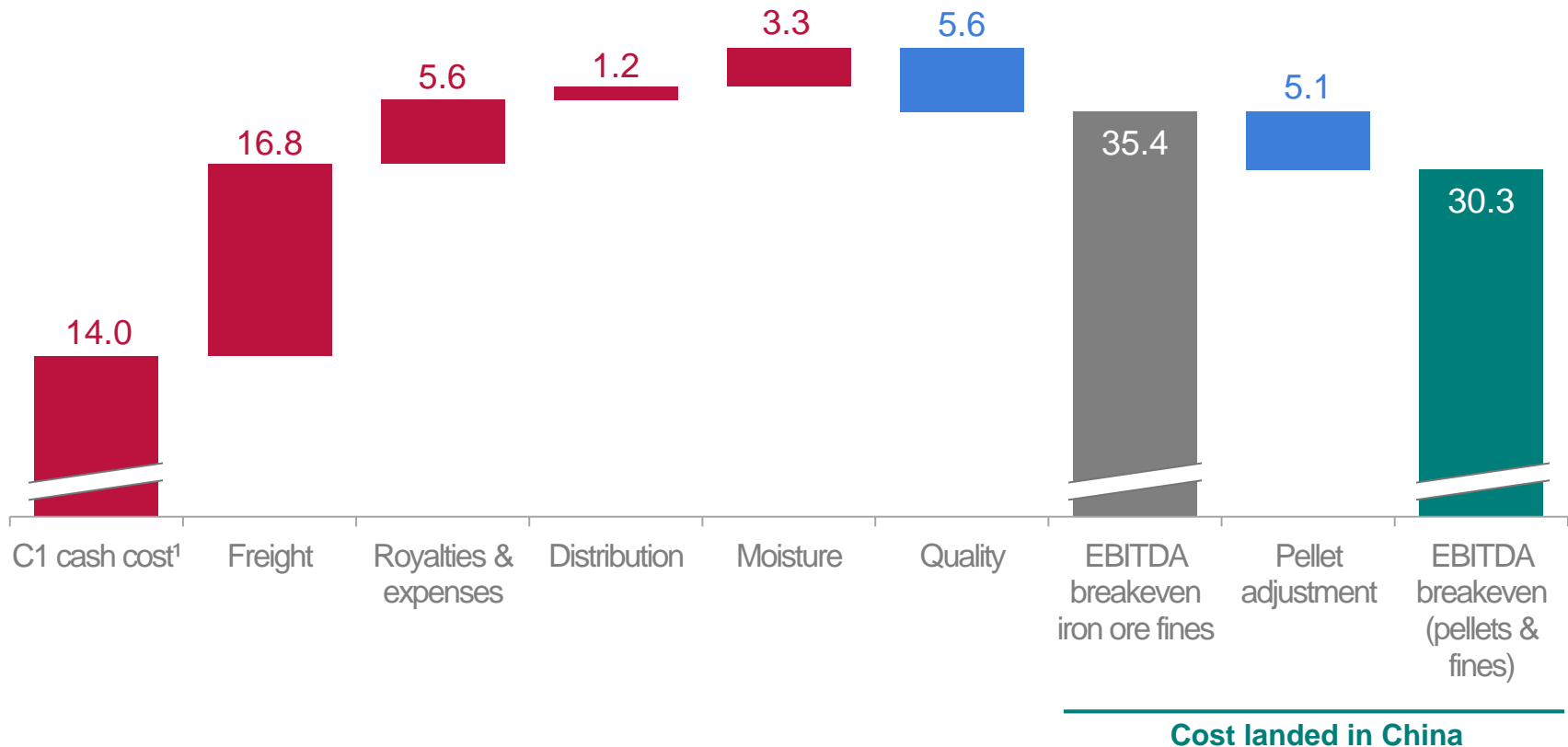


## Iron ore and pellets sales volume was mainly impacted by weather-related effects



## Iron ore fines and pellets EBITDA breakeven increased by US\$ 3/t mainly due to higher expenses and lower Carajás market premiums

US\$/t, 1Q19



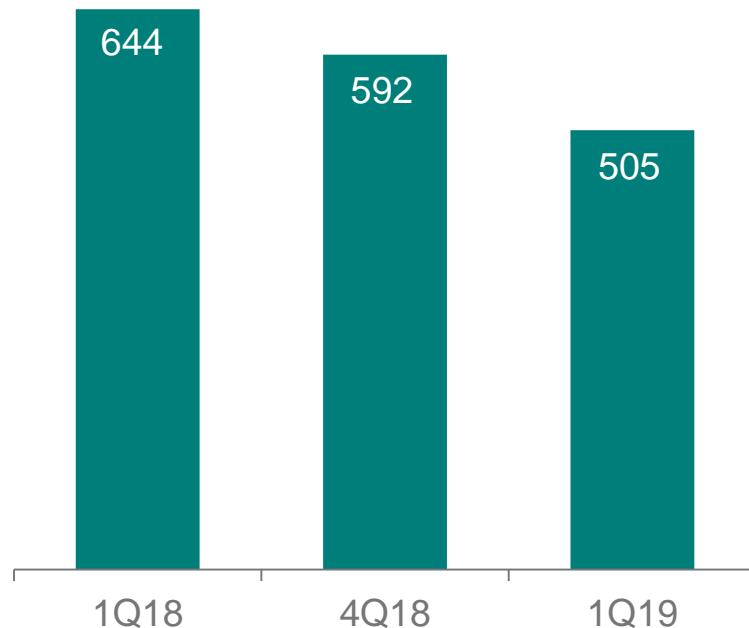
Higher stoppage expenses related to Brumadinho (US\$ 2.7/t), lower Carajás market premium (US\$ 2.5/t) and higher C1 cash cost (US\$ 1.2/t) were offset by lower freight costs (US\$ 2.0/t) and higher pellet contribution (US\$ 1.7/t)



## In Base Metals, lower sales volumes and higher costs were partially offset by higher prices

### Base Metals EBITDA

US\$ million



### Highlights 1Q19

The Base Metals business has its focus on the **stabilization plan for nickel operations**, preparing the business for the times ahead, and remains firm on the strategy to focus on **value over volume**

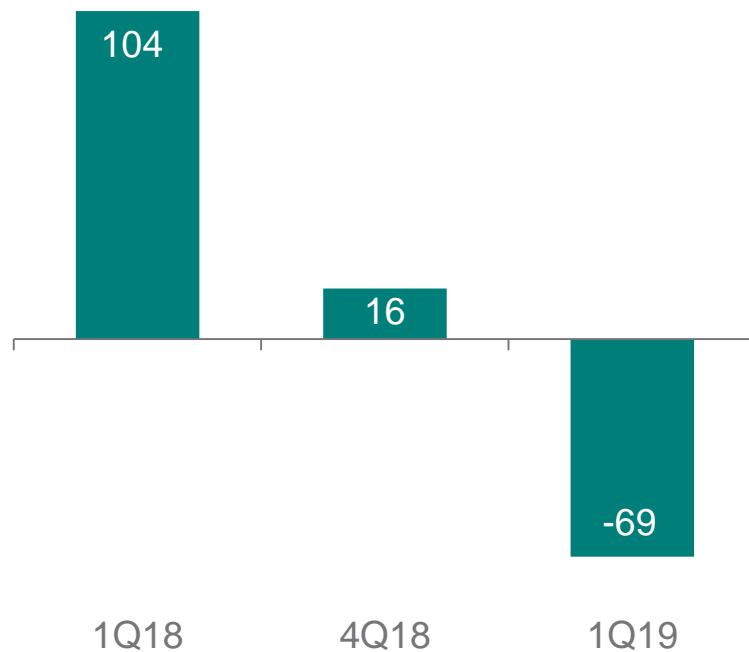
North Atlantic operations continued to reduce its unit costs to **sub-US\$ 4,000/t** as a result of **improvements and optimizations in the operations and higher by-product credits**

Scheduled maintenance in PTVI and VNC **impacted production** and, therefore, sales volumes and fixed cost dilution.

## Coal EBITDA was mainly impacted by lower market reference prices and sales volumes

### Coal Adjusted EBITDA

US\$ million



### Highlights 1Q19

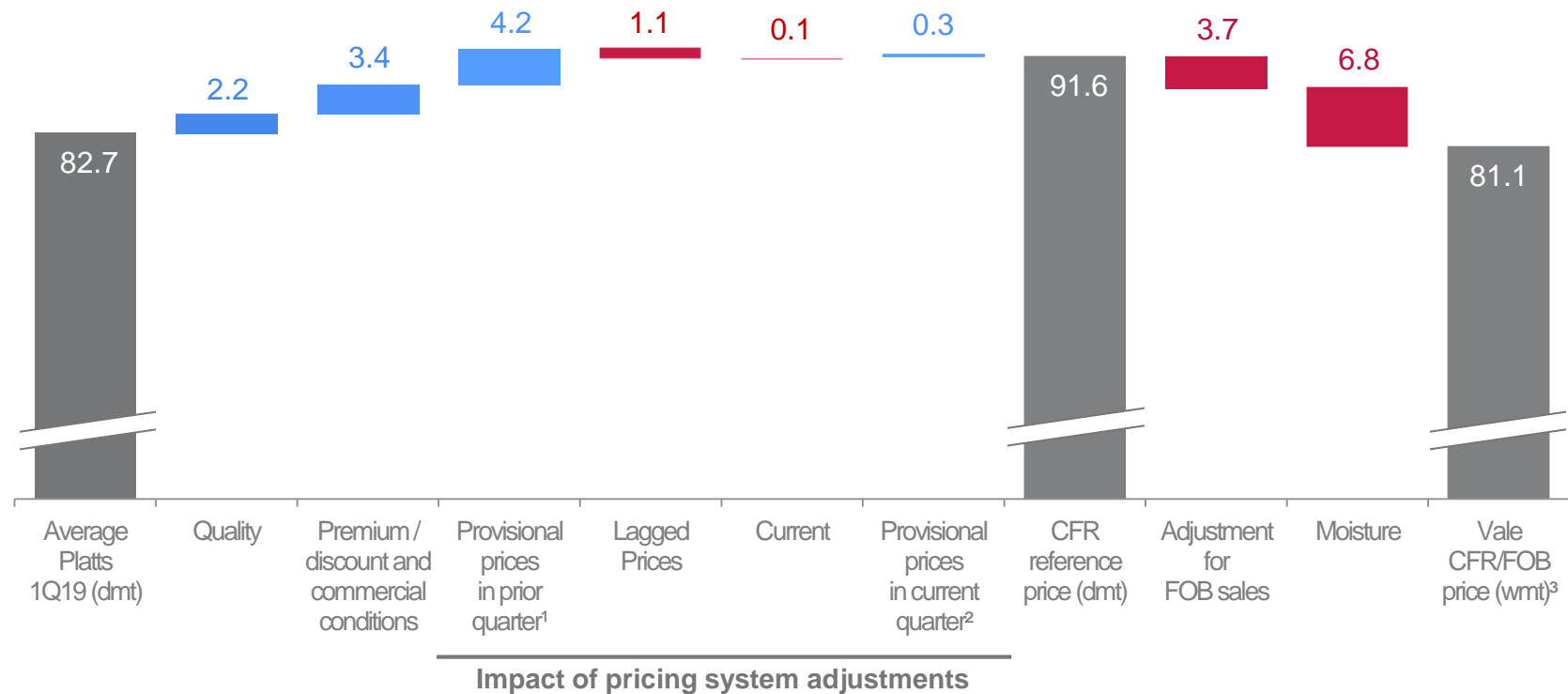
Coal volumes decreased due to the severe rainy season in Mozambique, which led to **lower dilution of fixed costs**

The negative effects of costs and sales volumes were offset by the combined positive effect of the pricing mechanism at metallurgical coal realized prices

**Additional  
information**

## Vale's iron ore CFR realized price was US\$ 8.9/t higher than the market reference for the 62% Fe content, totaling US\$ 91.6/t in 1Q19

US\$/t, 1Q19



<sup>1</sup> Adjustment as a result of provisional prices booked in 4Q18 at US\$ 69.3/t.

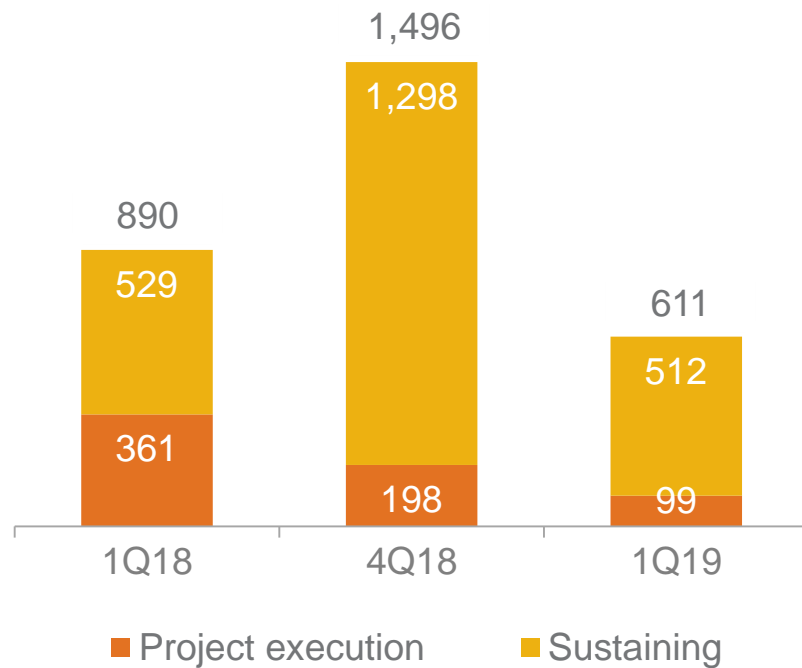
<sup>2</sup> Difference between the weighted average of the prices provisionally set at the end of 1Q19 at US\$ 85.1/t based on forward curves and US\$ 82.7/t from the 1Q19 62% Fe reference price.

<sup>3</sup> Vale price is net of taxes.

# Salobo III and Northern System 240 Mtpy are progressing as originally planned

## Project execution and sustaining capex

US\$ million



## 1Q19 Highlights

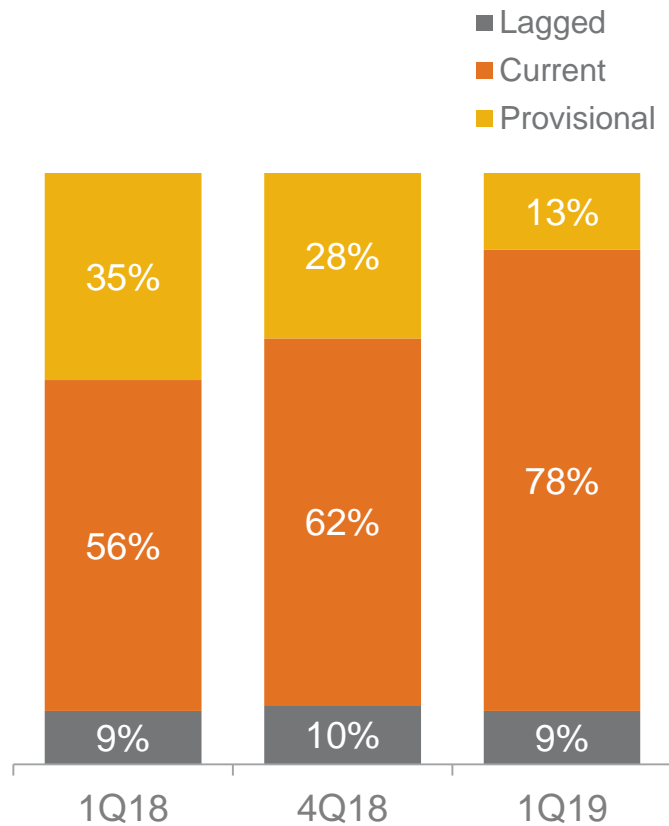
**Investments totaled US\$ 611 million** in 1Q19, consisting of US\$ 99 million in project executions and US\$ 512 million in maintenance of operations

Salobo III project concluded the vegetal suppression, the service access to the plant and initiated earthworks in the crushing and plant areas

The Northern System 240 Mtpy project works began in 1Q19

# Iron ore pricing systems

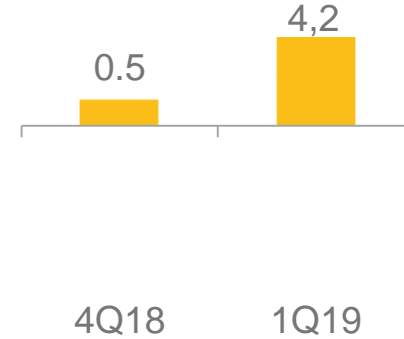
## Pricing system breakdown (%)



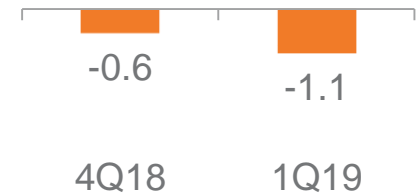
## Impact of pricing mechanisms

US\$/t

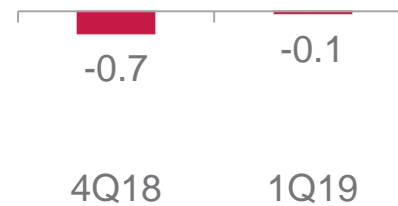
Provisional - prior quarter



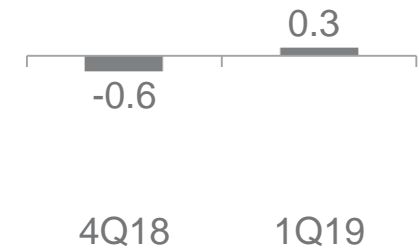
Lagged



Current



Provisional - current quarter

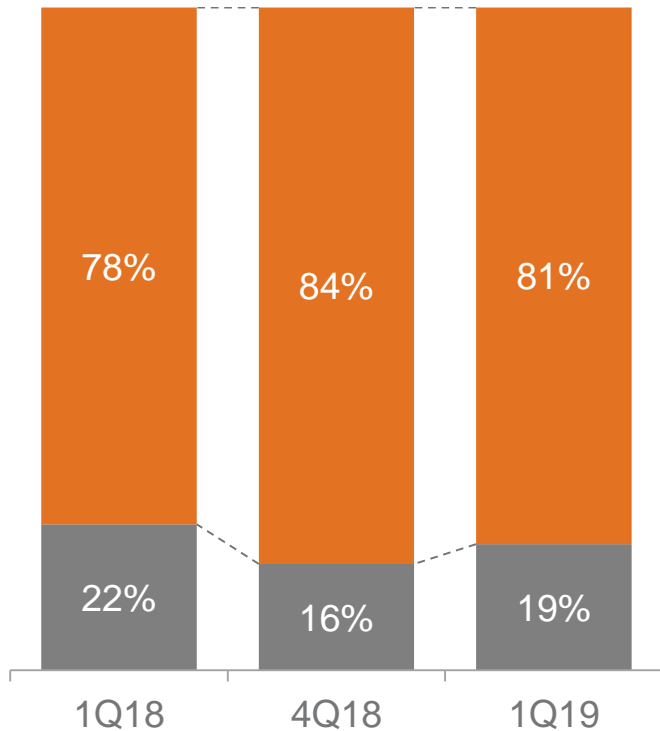




# Sales mix composition in 1Q19

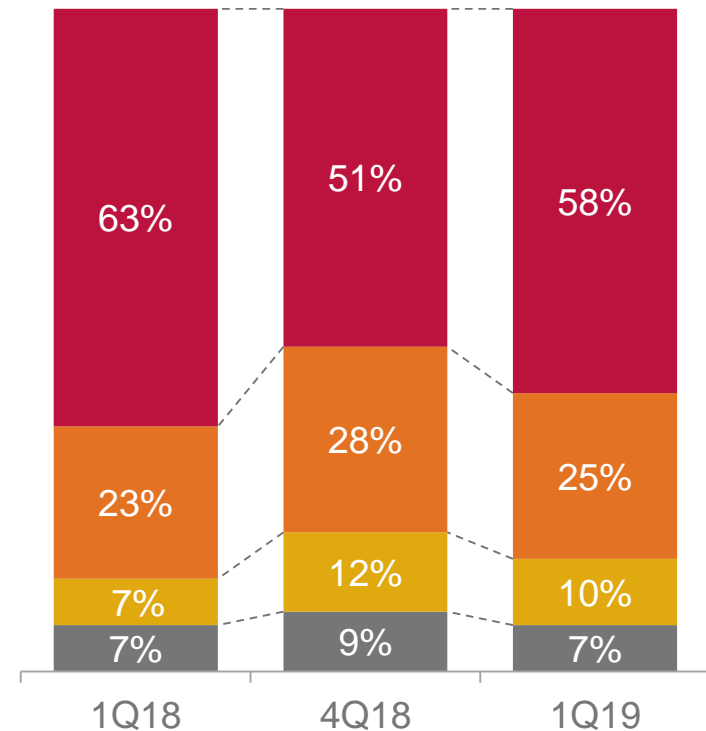
## Iron ore sales product mix (%)

- Premium products<sup>1</sup>
- Other products<sup>2</sup>



## Nickel sales product mix (%)

- Class I
- Class II battery-suitable
- Class II
- Intermediates

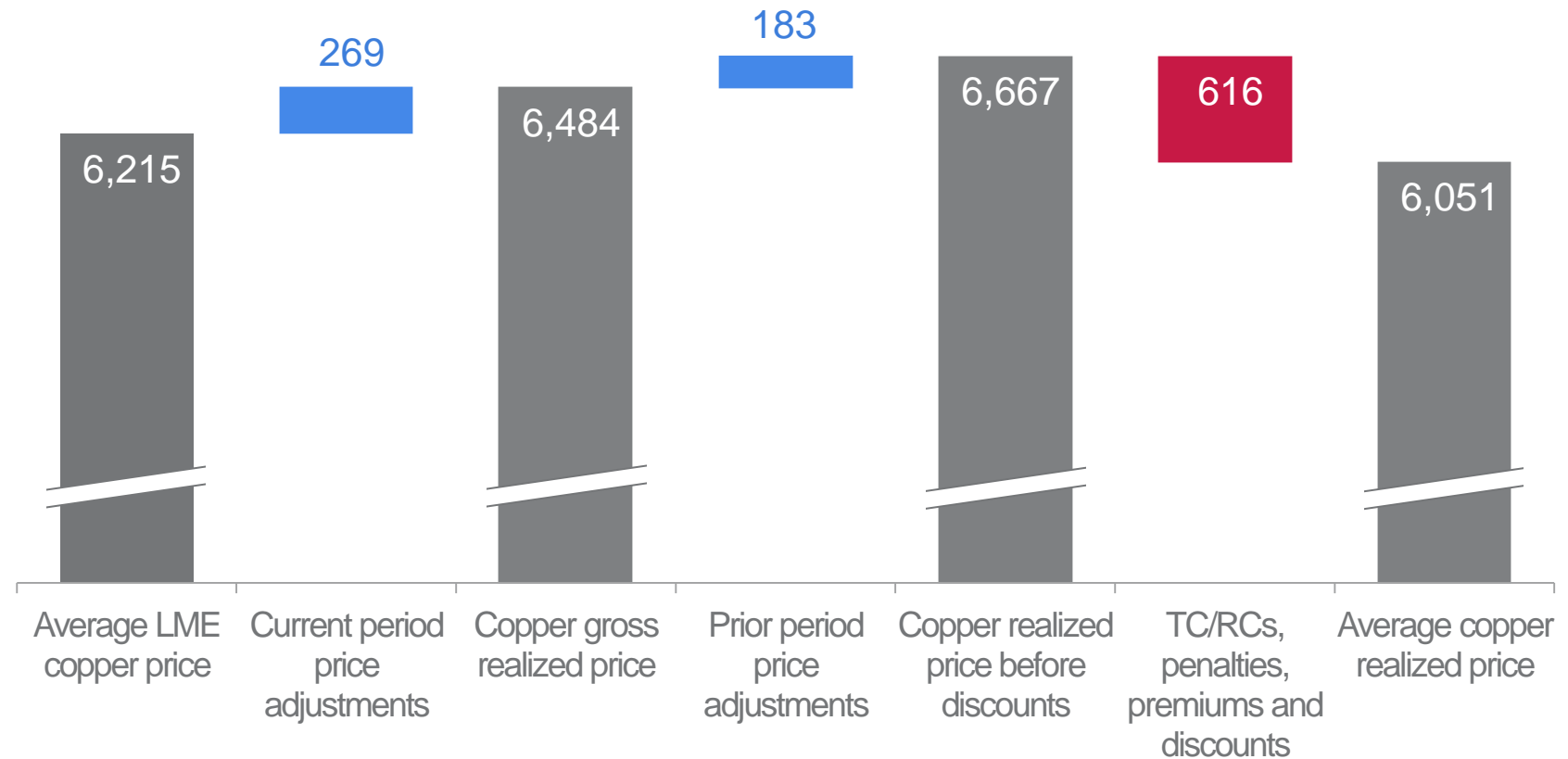


<sup>1</sup> Composed by pellets, Carajás, Brazilian Blend Fines (BRBF), pellet feed and Sinter Feed Low Alumina (SFLA)

<sup>2</sup> Composed by standard sinter feed, lump and high silica

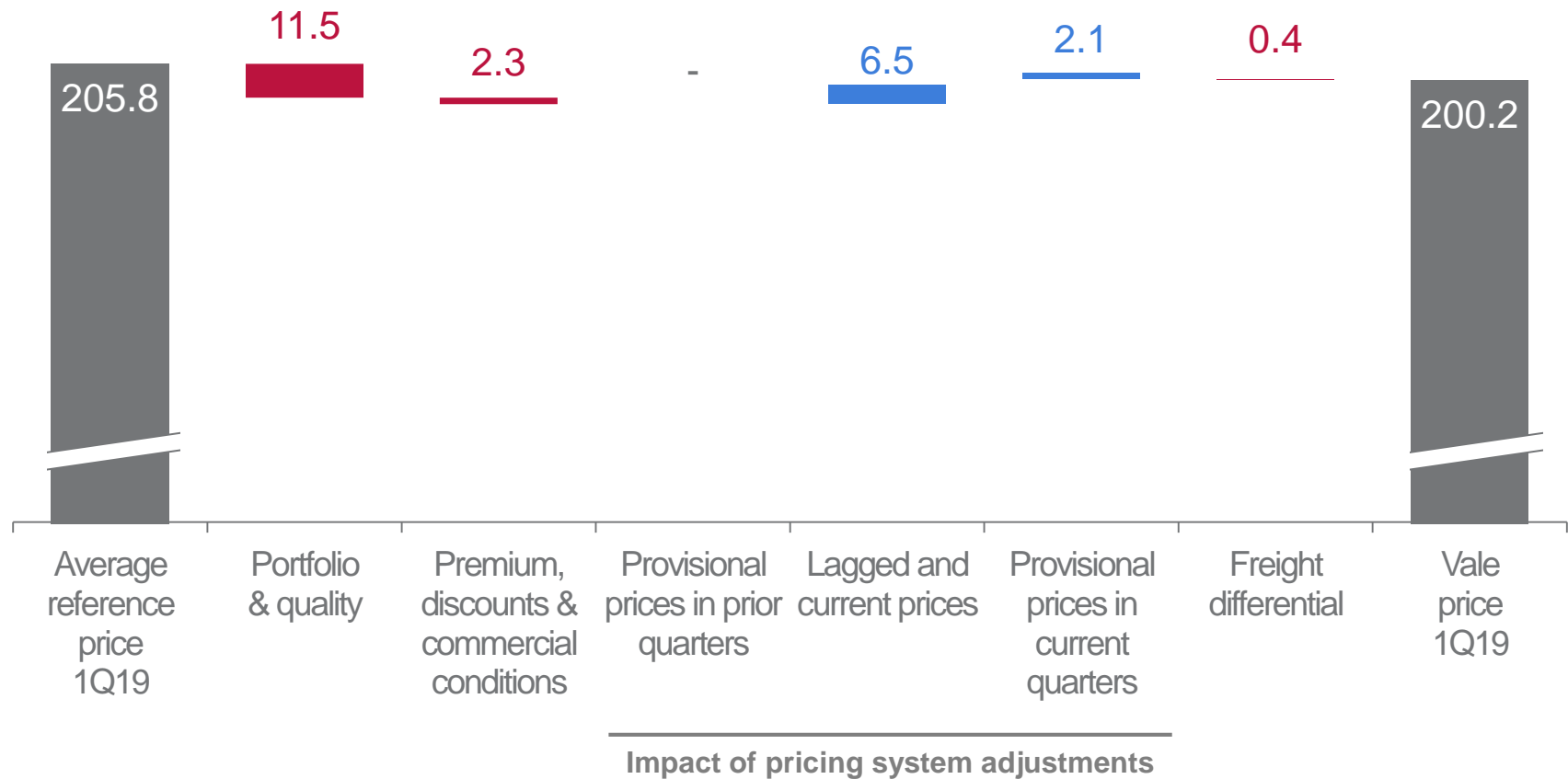
## Price realization – copper operations

US\$/t, 1Q19



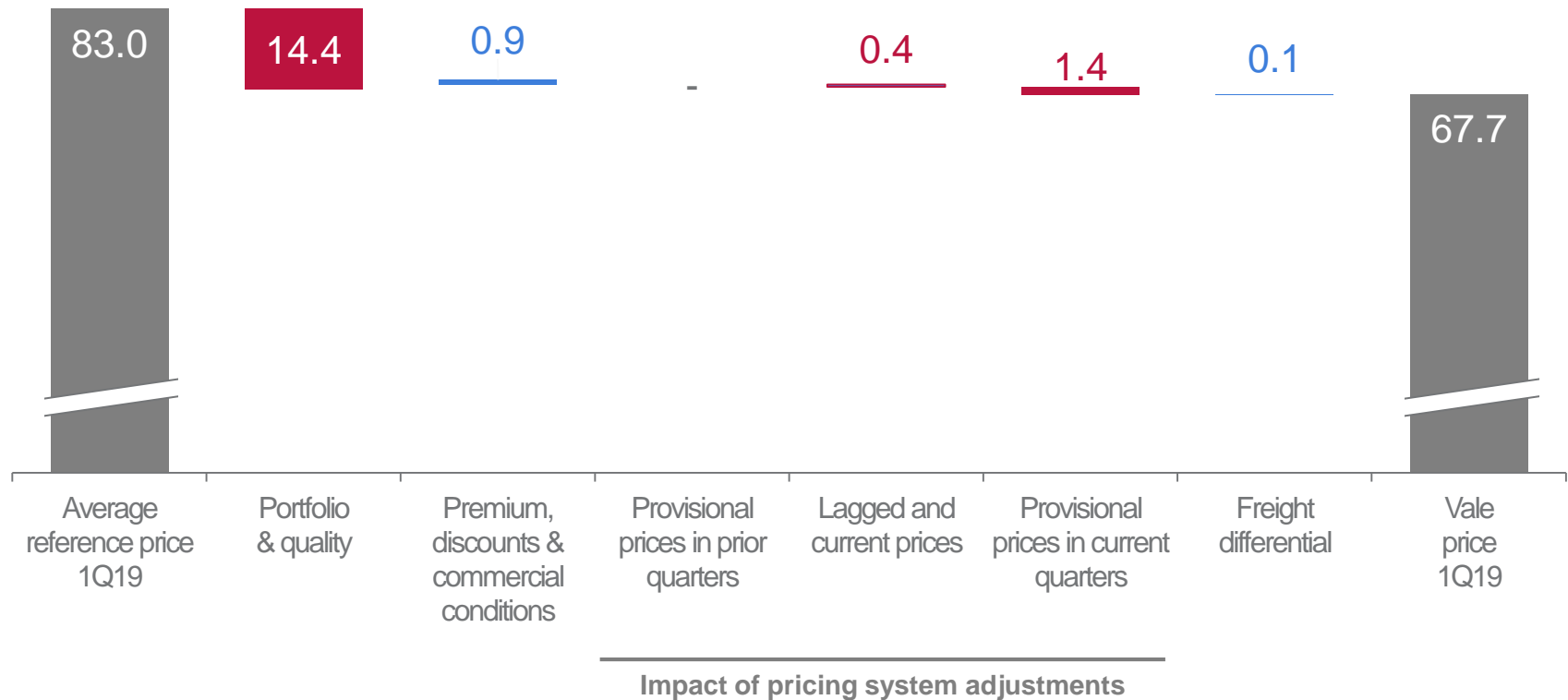
## Price realization – Metallurgical coal from Mozambique

US\$/t, 1Q19



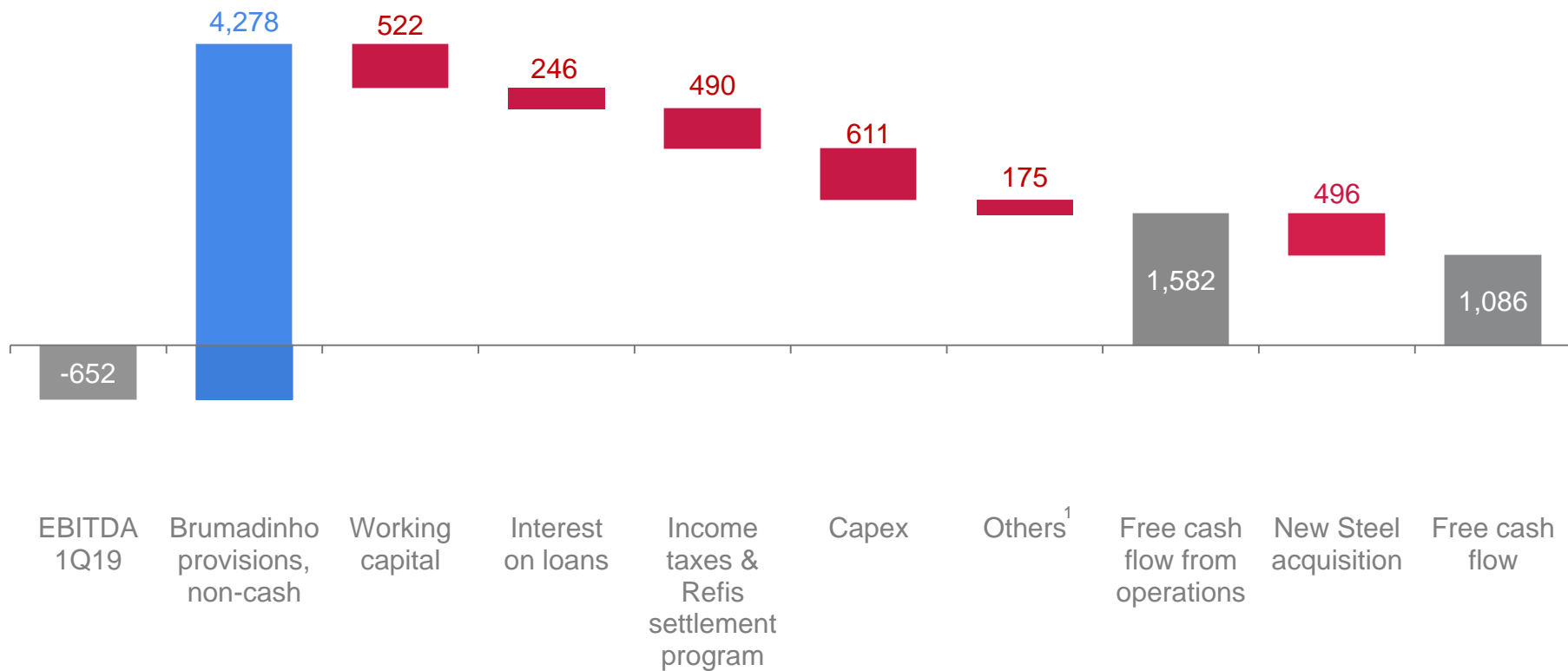
# Price realization – Thermal coal from Mozambique

US\$/t, 1Q19



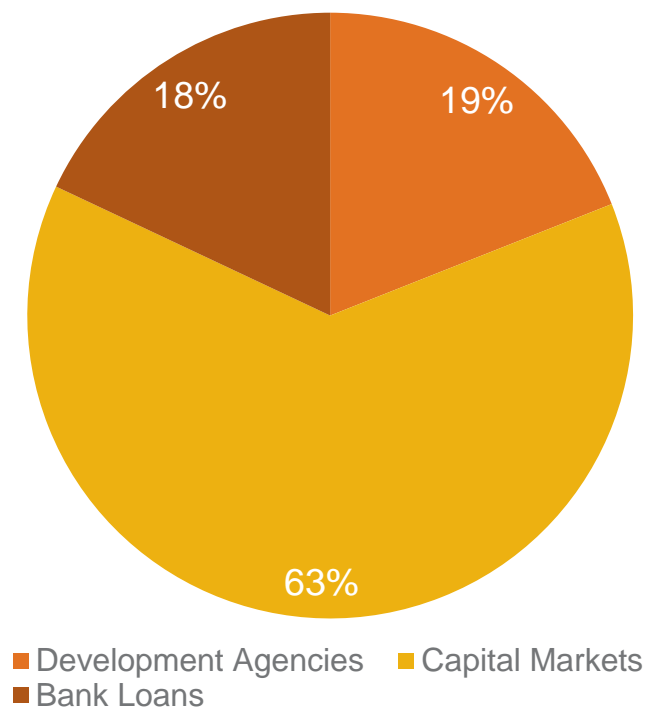
# Free cash flow

US\$ million, 1Q19

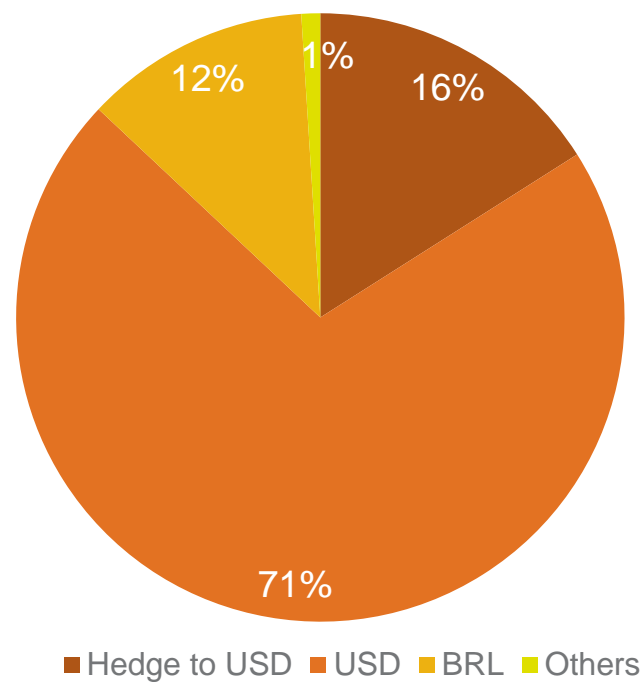


## Debt position breakdown

Debt breakdown by instrument (%)



Debt breakdown by currency (after hedge) (%)





VALE