



# Interim Financial Statements

## September 30, 2022

BRGAAP in R\$ (English)

## Interim Financial Statements Contents

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(A free translation of the original in Portuguese)

## **Report on review of quarterly information**

To the Board of Directors and Stockholders

Vale S.A.

### **Introduction**

We have reviewed the accompanying parent company and consolidated interim accounting information of Vale S.A. ("Company"), included in the Quarterly Information Form (ITR) for the quarter ended September 30, 2022, which comprises the balance sheet as of September 30, 2022 and the respective income statements and the statements of comprehensive income for the three and nine-month periods then ended, the statement of changes in equity for the nine-month period then ended, the parent company statement of cash flows for the nine-month period then ended and the consolidated statements of cash flows for the three and nine-month periods then ended, and explanatory notes.

Management is responsible for the preparation of the parent company and consolidated interim accounting information in accordance with the accounting standard CPC 21, Interim Financial Reporting, of the Brazilian Accounting Pronouncements Committee (CPC) and International Accounting Standard (IAS) 34, Interim Financial Reporting issued by the International Accounting Standards Board (IASB), as well as the presentation of this information in accordance with the standards issued by the Brazilian Securities Commission (CVM), applicable to the preparation of the Quarterly Information (ITR). Our responsibility is to express a conclusion on this interim accounting information based on our review.

### **Scope of review**

We conducted our review in accordance with Brazilian and International Standards on Reviews of Interim Financial Information (NBC TR 2410 - Review of Interim Financial Information Performed by the Independent Auditor of the Entity and ISRE 2410 - Review of Interim Financial Information Performed by the Independent Auditor of the Entity, respectively). A review of interim information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Brazilian and International Standards on Auditing and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.



(A free translation of the original in Portuguese)

## **Conclusion on the interim information**

### **Other matters**

#### **Value added statements**

The quarterly information referred to above includes the parent company and consolidated statements of value added for the nine-month period ended September 30, 2022. These statements are the responsibility of the Company's management and are presented as supplementary information under IAS 34. These statements have been subjected to review procedures performed together with the review of the interim accounting information for the purpose of concluding whether they are reconciled with the interim accounting information and accounting records, as applicable, and if their form and content are in accordance with the criteria defined in the accounting standard CPC 09 - "Statement of Value Added". Based on our review, nothing has come to our attention that causes us to believe that these statements of value added have not been properly prepared, in all material respects, in accordance with the criteria established in this accounting standard, and consistent with the parent company and consolidated interim accounting information taken as a whole.

Rio de Janeiro, October 27, 2022

PricewaterhouseCoopers

Audidores Independentes Ltda.

CRC 2SP000160/O-5

Patricio Marques Roche

Contador CRC 1RJ081115/O-4

## Income Statement

In millions of Brazilian reais, except earnings per share data



	Notes	Consolidated			
		Three-month period ended September 30,		Nine-month period ended September 30,	
		2022	2021	2022	2021
<b>Continuing operations</b>					
Net operating revenue	4(d)	52,080	64,418	163,773	220,202
Cost of goods sold and services rendered	5(a)	(33,043)	(28,631)	(86,594)	(80,976)
<b>Gross profit</b>		<b>19,037</b>	<b>35,787</b>	<b>77,179</b>	<b>139,226</b>
<b>Operating expenses</b>					
Selling and administrative	5(b)	(626)	(598)	(1,880)	(1,870)
Research and development		(888)	(700)	(2,264)	(1,974)
Pre-operating and operational stoppage	23	(474)	(858)	(1,810)	(2,648)
Brumadinho event and de-characterization of dams	21 and 23	(1,759)	(847)	(3,988)	(2,437)
Other operating expenses, net	5(c)	(223)	(139)	(1,642)	(638)
		<b>(3,970)</b>	<b>(3,142)</b>	<b>(11,584)</b>	<b>(9,567)</b>
Impairment reversal (impairment and disposals) of non-current assets, net	14 and 16	(226)	(336)	4,773	(1,196)
<b>Operating income</b>		<b>14,841</b>	<b>32,309</b>	<b>70,368</b>	<b>128,463</b>
Financial income	6	743	471	2,203	1,184
Financial expenses	6	(1,033)	(1,249)	(4,557)	(4,563)
Other financial items, net	6	12,457	(1,038)	17,172	3,437
Equity results and other results in associates and joint ventures	13, 14 and 22	401	670	1,238	(1,544)
<b>Income before income taxes</b>		<b>27,409</b>	<b>31,163</b>	<b>86,424</b>	<b>126,977</b>
<b>Income taxes</b>	7				
Current tax		(2,760)	(12,867)	(9,885)	(27,409)
Deferred tax		(1,421)	10,446	(9,681)	4,020
		<b>(4,181)</b>	<b>(2,421)</b>	<b>(19,566)</b>	<b>(23,389)</b>
<b>Net income from continuing operations</b>		<b>23,228</b>	<b>28,742</b>	<b>66,858</b>	<b>103,588</b>
Net income (loss) attributable to noncontrolling interests		(58)	155	311	289
<b>Net income from continuing operations attributable to Vale's stockholders</b>		<b>23,286</b>	<b>28,587</b>	<b>66,547</b>	<b>103,299</b>
<b>Discontinued operations</b>	14				
Net income (loss) from discontinued operations		-	(8,168)	9,818	(12,993)
Net income (loss) attributable to noncontrolling interests		-	216	-	(556)
<b>Net income (loss) from discontinued operations attributable to Vale's stockholders</b>		<b>-</b>	<b>(8,384)</b>	<b>9,818</b>	<b>(12,437)</b>
<b>Net income</b>		<b>23,228</b>	<b>20,574</b>	<b>76,676</b>	<b>90,595</b>
Net income (loss) attributable to noncontrolling interests		(58)	371	311	(267)
<b>Net income attributable to Vale's stockholders</b>		<b>23,286</b>	<b>20,203</b>	<b>76,365</b>	<b>90,862</b>
<b>Basic and diluted earnings per share attributable to Vale's stockholders:</b>	8				
Common share (R\$)		5.12	3.98	16.34	17.94

As described in note 14, the coal segment is presented in these interim financial statements as discontinued operation. Therefore, comparative financial information for the nine-month period ended September 30, 2021 has been restated to reflect the sale of the coal operation.

The accompanying notes are an integral part of these interim financial statements.

## Income Statement

In millions of Brazilian reais, except earnings per share data



	Parent Company			
	Three-month period ended		Nine-month period ended	
	September 30,		September 30,	
	2022	2021	2022	2021
<b>Continuing operations</b>				
Net operating revenue	39,200	72,587	110,749	178,123
Cost of goods sold and services rendered	(16,510)	(16,689)	(44,188)	(44,094)
<b>Gross profit</b>	<b>22,690</b>	<b>55,898</b>	<b>66,561</b>	<b>134,029</b>
<b>Operating expenses</b>				
Selling and administrative	(334)	(281)	(943)	(986)
Research and development	(395)	(407)	(1,054)	(974)
Pre-operating and operational stoppage	(454)	(470)	(1,747)	(1,797)
Equity results and others results from subsidiaries	4,521	(25,999)	28,662	(2,944)
Brumadinho event and de-characterization of dams	(1,759)	(847)	(3,988)	(2,437)
Other operating expenses, net	(258)	(424)	(1,610)	(1,385)
	<b>1,321</b>	<b>(28,428)</b>	<b>19,320</b>	<b>(10,523)</b>
Impairment and disposals of non-current assets	(171)	(212)	(569)	(335)
<b>Operating income</b>	<b>23,840</b>	<b>27,258</b>	<b>85,312</b>	<b>123,171</b>
Financial income	462	292	1,579	608
Financial expenses	(1,706)	(1,269)	(4,563)	(4,559)
Other financial items, net	4,904	(1,191)	9,103	(3,418)
Equity results and other results in associates and joint ventures	401	670	1,238	(1,544)
<b>Income before income taxes</b>	<b>27,901</b>	<b>25,760</b>	<b>92,669</b>	<b>114,258</b>
<b>Income taxes</b>				
Current tax	(2,324)	(12,388)	(8,726)	(25,654)
Deferred tax	(2,291)	6,831	(7,578)	2,258
	<b>(4,615)</b>	<b>(5,557)</b>	<b>(16,304)</b>	<b>(23,396)</b>
<b>Net income from continuing operations attributable to Vale's stockholders</b>	<b>23,286</b>	<b>20,203</b>	<b>76,365</b>	<b>90,862</b>
<b>Basic and diluted earnings per share attributable to Vale's stockholders:</b>				
Common share (R\$)	5.12	3.98	16.34	17.94

The accompanying notes are an integral part of these interim financial statements.

## Statement of Comprehensive Income

In millions of Brazilian reais



	Consolidated			
	Three-month period ended		Nine-month period ended	
	September 30,		September 30,	
	2022	2021	2022	2021
<b>Net income</b>	<b>23,228</b>	<b>20,574</b>	<b>76,676</b>	<b>90,595</b>
<b>Other comprehensive income:</b>				
<b>Items that will not be reclassified to income statement</b>				
Employee post-retirement obligations (note 26)	43	498	761	2,270
Fair value adjustment to investment in equity securities (i)	-	834	-	1,901
	<b>43</b>	<b>1,332</b>	<b>761</b>	<b>4,171</b>
<b>Items that may be reclassified to income statement</b>				
Translation adjustments	(1,346)	7,310	(6,906)	3,009
Net investment hedge (note 17)	(246)	(662)	162	(441)
Cash flow hedge (note 17)	206	50	203	(56)
Reclassification of cumulative translation adjustment to income statement (notes 13 and 14)	(8,275)	(48)	(23,690)	(8,490)
	<b>(9,661)</b>	<b>6,650</b>	<b>(30,231)</b>	<b>(5,978)</b>
<b>Total comprehensive income</b>	<b>13,610</b>	<b>28,556</b>	<b>47,206</b>	<b>88,788</b>
Comprehensive income (loss) attributable to noncontrolling interests	193	688	543	(108)
<b>Comprehensive income attributable to Vale's stockholders</b>	<b>13,417</b>	<b>27,868</b>	<b>46,663</b>	<b>88,896</b>

  

	Parent Company			
	Three-month period ended		Nine-month period ended	
	September 30,		September 30,	
	2022	2021	2022	2021
<b>Net income</b>	<b>23,286</b>	<b>20,203</b>	<b>76,365</b>	<b>90,862</b>
<b>Other comprehensive income:</b>				
<b>Items that will not be reclassified to income statement</b>				
Employee post-retirement obligations	(8)	(7)	(21)	(17)
Fair value adjustment to investment in equity securities (i)	-	685	-	1,559
Equity results	51	654	782	2,629
	<b>43</b>	<b>1,332</b>	<b>761</b>	<b>4,171</b>
<b>Items that may be reclassified to income statement</b>				
Translation adjustments	(1,596)	6,993	(7,137)	2,850
Net investment hedge	(247)	(662)	161	(441)
Cash flow hedge	(8)	31	(70)	56
Equity results	214	19	273	(112)
Reclassification of cumulative translation adjustment to income statement	(8,275)	(48)	(23,690)	(8,490)
	<b>(9,912)</b>	<b>6,333</b>	<b>(30,463)</b>	<b>(6,137)</b>
<b>Total comprehensive income</b>	<b>13,417</b>	<b>27,868</b>	<b>46,663</b>	<b>88,896</b>

(i) Fair value adjustment to shares received as part of the consideration for the sale of Vale's fertilizer business to The Mosaic Company. In November 2021, the Company sold all shares for R\$6,919 (US\$1,259 million) in a block trade.

Items above are stated net of tax and the related taxes are disclosed in note 7.

The accompanying notes are an integral part of these interim financial statements.

## Statement of Cash Flows

In millions of Brazilian reais



	Consolidated			
	Three-month period ended		Nine-month period ended	
	September 30,		September 30,	
	2022	2021	2022	2021
<b>Cash flows from operations (a)</b>	<b>23,038</b>	<b>53,928</b>	<b>80,581</b>	<b>155,138</b>
Interest on loans and borrowings paid (note 20)	(1,027)	(904)	(3,356)	(3,204)
Cash received (paid) on settlement of derivatives, net (note 17)	511	114	(78)	(674)
Payments related to Brumadinho event (note 21)	(2,179)	(489)	(4,093)	(2,051)
Payments related to de-characterization of dams (note 23)	(502)	(484)	(1,271)	(1,359)
Interest on participative stockholders' debentures paid (note 19)	-	-	(1,120)	(1,073)
Income taxes (including settlement program) (note 7)	(3,013)	(5,163)	(22,662)	(18,292)
<b>Net cash generated from operating activities from continuing operations</b>	<b>16,828</b>	<b>47,002</b>	<b>48,001</b>	<b>128,485</b>
Net cash generated (used) in operating activities from discontinued operations (note 14)	-	297	213	(2,203)
<b>Net cash generated from operating activities</b>	<b>16,828</b>	<b>47,299</b>	<b>48,214</b>	<b>126,282</b>
<b>Cash flow from investing activities:</b>				
Capital expenditures (note 4b)	(6,455)	(6,269)	(18,792)	(17,492)
Proceeds from sale of Midwestern System, net of cash (note 14)	745	-	745	-
Disbursement on VNC sale (note 14)	-	-	-	(3,134)
Proceeds from sale of CSI (note 14)	-	-	2,269	-
Dividends received from associates and joint ventures (note 13)	149	24	862	254
Short-term investment	618	2,193	1,104	834
Other investing activities, net	(372)	96	(103)	(1,576)
<b>Net cash used in investing activities from continuing operations</b>	<b>(5,315)</b>	<b>(3,956)</b>	<b>(13,915)</b>	<b>(21,114)</b>
Net cash used in investing activities from discontinued operations (note 14)	-	(255)	(534)	(12,027)
<b>Net cash used in investing activities</b>	<b>(5,315)</b>	<b>(4,211)</b>	<b>(14,449)</b>	<b>(33,141)</b>
<b>Cash flow from financing activities:</b>				
Loans and borrowings from third parties (note 20)	805	-	4,133	1,633
Payments of loans and borrowings from third parties (note 20)	(2,275)	(573)	(11,637)	(8,506)
Payments of leasing (note 20)	(252)	(281)	(744)	(807)
Dividends and interest on capital paid to stockholders (note 27c)	(16,243)	(40,200)	(34,092)	(73,112)
Dividends and interest on capital paid to noncontrolling interest	(16)	(16)	(51)	(47)
Share buyback program (note 27d)	(3,636)	(14,854)	(25,564)	(25,261)
<b>Net cash used in financing activities from continuing operations</b>	<b>(21,617)</b>	<b>(55,924)</b>	<b>(67,955)</b>	<b>(106,100)</b>
Net cash used in financing activities from discontinued operations (note 14)	-	(16)	(54)	(53)
<b>Net cash used in financing activities</b>	<b>(21,617)</b>	<b>(55,940)</b>	<b>(68,009)</b>	<b>(106,153)</b>
<b>Increase (reduction) in cash and cash equivalents</b>	<b>(10,104)</b>	<b>(12,852)</b>	<b>(34,244)</b>	<b>(13,012)</b>
Cash and cash equivalents at the beginning of the period	37,633	68,275	65,409	70,086
Effect of exchange rate changes on cash and cash equivalents	486	3,634	(3,089)	1,983
Cash and cash equivalents from subsidiaries sold, net (note 14)	-	-	(61)	-
<b>Cash and cash equivalents at end of the period</b>	<b>28,015</b>	<b>59,057</b>	<b>28,015</b>	<b>59,057</b>
<b>Cash flow from operating activities:</b>				
Income before taxation	27,409	31,163	86,424	126,977
<b>Adjusted for:</b>				
Equity results and other results in associates and joint ventures (note 13)	(401)	(670)	(1,238)	1,544
Impairment and disposals (impairment reversal) of non-current assets, net (note 14)	226	336	(4,773)	1,196
Provisions for Brumadinho (note 21)	740	-	1,377	-
Provision for de-characterization of dams (note 23)	183	-	375	-
Depreciation, depletion and amortization	4,069	3,393	11,652	11,796
Financial results, net (note 6)	(12,167)	1,816	(14,818)	(58)
<b>Changes in assets and liabilities:</b>				
Accounts receivable (note 9)	46	20,296	9,247	22,277
Inventories (note 10)	(1,798)	(3,057)	(4,493)	(4,900)
Suppliers and contractors (note 11) (i)	5,919	1,764	4,351	1,859
Payroll and other compensation	837	312	(429)	(859)
Other assets and liabilities, net	(2,025)	(1,425)	(7,094)	(4,694)
<b>Cash flows generated from operations (a)</b>	<b>23,038</b>	<b>53,928</b>	<b>80,581</b>	<b>155,138</b>
<b>Non-cash transactions:</b>				
Additions to property, plant and equipment - capitalized loans and borrowing costs	49	75	205	235

(i) Includes variable lease payments.

The accompanying notes are an integral part of these interim financial statements.



## Statement of Cash Flows

In millions of Brazilian reais



	Parent Company	
	Nine-month period ended September 30,	
	2022	2021
<b>Cash flows from operations (a)</b>	<b>61,177</b>	<b>148,015</b>
Interest on loans and borrowings paid	(3,570)	(3,993)
Cash received (paid) on settlement of derivatives, net	823	(896)
Payments related to Brumadinho event	(4,093)	(2,051)
Payments related to de-characterization of dams	(1,271)	(1,359)
Interest on participative stockholders' debentures paid	(1,120)	(1,073)
Income taxes (including settlement program)	(21,519)	(16,439)
<b>Net cash generated from operating activities</b>	<b>30,427</b>	<b>122,204</b>
<b>Cash flow from investing activities:</b>		
Capital expenditures	(12,968)	(10,644)
Additions to investments	(939)	(598)
Dividends received from associates and joint ventures	8,388	254
Proceeds from sale of Midwestern System (note 14)	815	-
Short-term investment	723	542
Other investing activities, net (i)	(5,557)	(10,946)
<b>Net cash used in investing activities</b>	<b>(9,538)</b>	<b>(21,392)</b>
<b>Cash flow from financing activities:</b>		
Loans and borrowings from third parties	967	1,633
Payments of loans and borrowings from third parties	(3,657)	(7,913)
Payments of leasing	(184)	(204)
Dividends and interest on capital paid to stockholders	(34,092)	(73,112)
Share buyback program	(11,849)	(15,574)
<b>Net cash used in financing activities</b>	<b>(48,815)</b>	<b>(95,170)</b>
<b>Increase (reduction) in cash and cash equivalents</b>	<b>(27,926)</b>	<b>5,642</b>
Cash and cash equivalents at the beginning of the period	34,266	14,609
Cash and cash equivalents from subsidiaries sold, net	85	1,195
<b>Cash and cash equivalents at end of the period</b>	<b>6,425</b>	<b>21,446</b>
<b>Cash flow from operating activities:</b>		
Income before taxation	92,669	114,258
<b>Adjusted for:</b>		
Equity results and others results from subsidiaries	(28,662)	2,944
Equity results and other results in associates and joint ventures	(1,238)	1,544
Impairment and disposals of non-current assets	569	335
Provisions for Brumadinho	1,377	-
Provision for de-characterization of dams	375	-
Depreciation, depletion and amortization	6,497	6,266
Financial results, net	(6,119)	7,369
<b>Changes in assets and liabilities:</b>		
Accounts receivable	(4,444)	17,201
Inventories	(238)	(401)
Suppliers and contractors (ii)	3,688	1,400
Payroll and other compensation	(73)	(148)
Other assets and liabilities, net	(3,224)	(2,753)
<b>Cash flows generated from operations (a)</b>	<b>61,177</b>	<b>148,015</b>
<b>Non-cash transactions:</b>		
Additions to property, plant and equipment - capitalized loans and borrowing costs	205	235

(i) Includes loans and advances with related parties.

(ii) Includes variable lease payments.

The accompanying notes are an integral part of these interim financial statements.

## Statement of Financial Position

In millions of Brazilian reais



		Consolidated		Parent Company	
		September 30, 2022	December 31, 2021	September 30, 2022	December 31, 2021
	Notes				
Assets					
Current assets					
Cash and cash equivalents	20	28,015	65,409	6,425	34,266
Short-term investments	20	225	1,028	17	906
Accounts receivable	9	11,624	21,840	51,299	47,912
Other financial assets	12	821	619	336	410
Inventories	10	28,480	24,429	7,962	7,246
Recoverable taxes	7(e)	4,639	4,809	3,093	3,519
Other		1,466	1,198	3,921	1,867
		75,270	119,332	73,053	96,126
Non-current assets held for sale					
		-	5,468	-	35
		75,270	124,800	73,053	96,161
Non-current assets					
Judicial deposits	25(c)	6,968	6,808	6,735	6,543
Other financial assets	12	1,276	796	760	480
Recoverable taxes	7(e)	6,024	5,220	3,822	2,650
Deferred income taxes	7(a)	53,124	63,847	45,548	54,119
Other		4,810	3,604	2,389	894
		72,202	80,275	59,254	64,686
Investments					
	13	9,706	9,771	114,982	143,640
Intangible	15	50,520	50,287	33,541	29,440
Property, plant, and equipment	16	228,135	233,995	130,591	123,959
		360,563	374,328	338,368	361,725
Total assets		435,833	499,128	411,421	457,886
Liabilities					
Current liabilities					
Suppliers and contractors	11	25,600	19,393	14,292	10,603
Loans, borrowings and leases	20	2,412	6,720	958	3,415
Other financial liabilities	12	7,736	10,946	28,660	11,954
Taxes payable	7(e)	1,637	12,150	1,038	11,129
Settlement program ("REFIS")	7(c)	1,900	1,810	1,900	1,810
Liabilities related to associates and joint ventures	22	10,959	9,964	10,959	9,964
Provisions	24	5,025	5,830	3,817	4,019
Liabilities related to Brumadinho	21	7,127	6,449	7,127	6,449
De-characterization of dams and asset retirement obligations	23	3,787	3,468	3,363	3,126
Other		4,070	6,106	2,602	2,744
		70,253	82,836	74,716	65,213
Liabilities associated with non-current assets held for sale		-	1,978	-	-
		70,253	84,814	74,716	65,213
Non-current liabilities					
Loans, borrowings, and leases	20	63,565	70,189	15,766	16,520
Participative stockholders' debentures	19	14,379	19,078	14,379	19,078
Other financial liabilities	12	10,533	14,344	65,665	95,636
Settlement program ("REFIS")	7(c)	10,064	10,962	10,064	10,962
Deferred income taxes	7(a)	8,696	10,494	-	-
Provisions	24	12,697	19,082	7,782	7,496
Liabilities related to Brumadinho	21	10,341	13,288	10,341	13,288
De-characterization of dams and asset retirement obligations	23	32,040	41,753	22,194	23,658
Liabilities related to associates and joint ventures	22	6,037	7,407	6,038	7,407
Streaming transactions		8,810	9,927	-	-
Other		932	732	4,938	6,225
		178,094	217,256	157,167	200,270
Total liabilities		248,347	302,070	231,883	265,483
Stockholders' equity					
	27				
Equity attributable to Vale's stockholders		179,538	192,403	179,538	192,403
Equity attributable to noncontrolling interests		7,948	4,655	-	-
Total stockholders' equity		187,486	197,058	179,538	192,403
Total liabilities and stockholders' equity		435,833	499,128	411,421	457,886

The accompanying notes are an integral part of these interim financial statements.

## Statement of Changes in Equity

In millions of Brazilian reais



	Share capital	Capital reserve	Profit reserves	Treasury stocks	Other reserves	Cumulative translation adjustments	Retained earnings	Equity attributable to Vale's stockholders	Equity attributable to noncontrolling interests	Total stockholders' equity
<b>Balance at December 31, 2021</b>	<b>77,300</b>	<b>3,634</b>	<b>87,621</b>	<b>(29,189)</b>	<b>(6,899)</b>	<b>59,936</b>	<b>-</b>	<b>192,403</b>	<b>4,655</b>	<b>197,058</b>
<b>Net income</b>	-	-	-	-	-	-	<b>76,365</b>	<b>76,365</b>	<b>311</b>	<b>76,676</b>
Other comprehensive income	-	-	-	-	1,070	(30,772)	-	(29,702)	232	(29,470)
Dividends and interest on capital of Vale's stockholders (note 27c)	-	-	(17,849)	-	-	-	(16,243)	(34,092)	-	(34,092)
Dividends of noncontrolling interests	-	-	-	-	-	-	-	-	(30)	(30)
Derecognition of noncontrolling interests	-	-	-	-	-	-	-	-	2,780	2,780
Share buyback (note 27d)	-	-	-	(25,564)	-	-	-	(25,564)	-	(25,564)
Share-based payment	-	-	-	-	29	-	-	29	-	29
Treasury shares used and cancelled (note 27b)	-	-	(34,055)	34,154	-	-	-	99	-	99
<b>Balance at September 30, 2022</b>	<b>77,300</b>	<b>3,634</b>	<b>35,717</b>	<b>(20,599)</b>	<b>(5,800)</b>	<b>29,164</b>	<b>60,122</b>	<b>179,538</b>	<b>7,948</b>	<b>187,486</b>

  

	Share capital	Capital reserve	Profit reserves	Treasury stocks	Other reserves	Cumulative translation adjustments	Retained earnings	Equity attributable to Vale's stockholders	Equity attributable to noncontrolling interests	Total stockholders' equity
<b>Balance at December 31, 2020</b>	<b>77,300</b>	<b>3,634</b>	<b>36,598</b>	<b>(6,452)</b>	<b>(7,307)</b>	<b>82,012</b>	<b>-</b>	<b>185,785</b>	<b>(4,799)</b>	<b>180,986</b>
<b>Net income (loss)</b>	-	-	-	-	-	-	<b>90,862</b>	<b>90,862</b>	<b>(267)</b>	<b>90,595</b>
Other comprehensive income	-	-	-	-	3,943	(5,909)	-	(1,966)	159	(1,807)
Dividends and interest on capital of Vale's stockholders (note 27c)	-	-	(22,935)	-	-	-	(43,834)	(66,769)	-	(66,769)
Dividends of noncontrolling interests	-	-	-	-	-	-	-	-	(141)	(141)
Acquisitions and derecognition of noncontrolling interests	-	-	-	-	(1,666)	-	-	(1,666)	9,219	7,553
Share buyback (note 27d)	-	-	-	(25,261)	-	-	-	(25,261)	-	(25,261)
Share-based payment	-	-	-	-	274	-	-	274	-	274
Treasury shares used and cancelled (note 27b)	-	-	(6,347)	6,384	-	-	-	37	-	37
<b>Balance at September 30, 2021</b>	<b>77,300</b>	<b>3,634</b>	<b>7,316</b>	<b>(25,329)</b>	<b>(4,756)</b>	<b>76,103</b>	<b>47,028</b>	<b>181,296</b>	<b>4,171</b>	<b>185,467</b>

The accompanying notes are an integral part of these interim financial statements.

## Value Added Statement

In millions of Brazilian Reals



	Consolidated		Parent Company	
	2022	2021	Nine-month period ended September 30,	
	2022	2021	2022	2021
<b>Generation of value added</b>				
<b>Gross revenue</b>				
Revenue from products and services	165,731	222,878	112,622	180,645
Revenue from the construction of own assets	6,077	6,435	4,937	2,472
Other revenues	1,190	2,048	765	1,401
<b>Less:</b>				
Cost of products, goods and services sold	(28,499)	(27,313)	(16,810)	(16,457)
Material, energy, third-party services and other	(36,494)	(30,930)	(14,103)	(10,342)
Impairment reversal (impairment and disposals) of non-current assets, net	4,773	(1,196)	(569)	(335)
Brumadinho event and de-characterization of dams	(3,988)	(2,437)	(3,988)	(2,437)
Other costs and expenses	(10,999)	(10,599)	(7,274)	(6,422)
<b>Gross value added</b>	<b>97,791</b>	<b>158,886</b>	<b>75,580</b>	<b>148,525</b>
Depreciation, amortization and depletion	(11,652)	(11,796)	(6,497)	(6,266)
<b>Net value added</b>	<b>86,139</b>	<b>147,090</b>	<b>69,083</b>	<b>142,259</b>
<b>Received from third parties</b>				
Equity results from entities	1,238	(1,544)	29,900	(4,488)
Financial income	455	3,562	353	3,568
<b>Total value added from continuing operations to be distributed</b>	<b>87,832</b>	<b>149,108</b>	<b>99,336</b>	<b>141,339</b>
Value added from discontinued operations to be distributed (note 14)	(1,733)	(16,425)	-	-
<b>Total value added to be distributed</b>	<b>86,099</b>	<b>132,683</b>	<b>99,336</b>	<b>141,339</b>
<b>Personnel and charges</b>				
Direct compensation	5,089	4,816	2,764	2,618
Benefits	1,882	1,967	1,185	1,349
F.G.T.S.	342	313	307	297
<b>Taxes and contributions</b>				
Federal taxes	24,996	30,297	21,562	30,454
State taxes	2,031	3,319	1,973	2,748
Municipal taxes	106	110	67	68
<b>Remuneration of third-party capital</b>				
Interest (net derivatives and monetary and exchange rate variation)	(14,951)	3,267	(6,353)	10,804
Leasing	1,479	1,431	1,466	2,139
<b>Remuneration of own capital</b>				
Reinvested net income from continuing operations	66,547	103,299	76,365	90,862
Net income attributable to noncontrolling interest	311	289	-	-
<b>Distributed value added from continuing operations</b>	<b>87,832</b>	<b>149,108</b>	<b>99,336</b>	<b>141,339</b>
Distributed value added from discontinued operations (note 14)	(1,733)	(16,425)	-	-
<b>Distributed value added</b>	<b>86,099</b>	<b>132,683</b>	<b>99,336</b>	<b>141,339</b>

The accompanying notes are an integral part of these interim financial statements.

## 1. Corporate information

Vale S.A. (the “Parent Company”) is a public company headquartered in the city of Rio de Janeiro, Brazil with securities traded on the stock exchanges of São Paulo – B3 S.A. (VALE3), New York - NYSE (VALE) and Madrid – LATIBEX (XVALO).

Vale S.A. and its subsidiaries (“Vale” or the “Company”) are global producers of: (i) iron ore and iron ore pellets, which are key raw materials for steelmaking, (ii) nickel, that is used to produce stainless steel, electric vehicles and metal alloys employed in the production process of several products, (iii) copper, used in the construction sector to produce pipes and electrical wires, and (iv) platinum, gold, silver, and cobalt as by-products of nickel and copper. Most of the Company’s products are sold to international markets by Vale International S.A. (“VISA”), a trading company located in Switzerland.

Vale also operates a railroad and port logistics system in Brazil to outflow its production and Vale has equity investments and assets with the objective of reducing energy costs, minimizing the risk of shortages and meeting its energy consumption needs through renewable sources.

In the second quarter of 2022, the Company concluded the sale of the thermal and metallurgical coal operations, as presented in note 14. Therefore, the results from coal operation until closing are presented in these interim financial statements as “discontinued operations”.

## 2. Basis of preparation of interim financial statements

The consolidated and individual interim financial statements of the Company (“interim financial statements”) have been prepared and are being presented in accordance with IAS 34 Interim Financial Reporting (CPC 21) of the International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”), as implemented in Brazil by the Brazilian Accounting Pronouncements Committee (“CPC”), approved by the Brazilian Securities Exchange Commission (“CVM”) and by the Brazilian Federal Accounting Council (“CFC”). All relevant information for the interim financial statements, and only this information, are presented and consistent to those used by the Company’s Management.

The interim financial statements have been prepared to update users on the relevant events and transactions that occurred in the period and must be analyzed together with the financial statements for the year ended December 31, 2021. Accounting policies, accounting estimates and judgments, management of risk and measurement methods are the same as those adopted in the preparation of the latest annual financial statements. The selected notes of the Parent Company are presented in a summarized form in note 29.

These interim financial statements were authorized for issue by the Company’s Board of Directors in a meeting held on October 27, 2022.

### a) Statement of Value Added

The presentation of the parent company and consolidated statements of value added is required by the Brazilian corporate legislation and the accounting practices adopted in Brazil for listed companies, while it is not required by IFRS. Therefore, under the IFRS, the presentation of such statements is considered supplementary information, and not part of the set of financial statements. The Statement of Value Added was prepared in accordance with the criteria defined in Technical Pronouncement CPC 09 - “Statement of Value Added”.

### b) Functional currency and presentation currency

The interim financial statements of the Company and its associates and joint ventures are measured using the currency of the primary economic environment in which the entity operates (“functional currency”), in the case of the Parent Company and its associates and joint ventures in Brazil, is the Brazilian real (“R\$”). The functional currency of direct subsidiaries operating in an international economic environment is the US dollar (“US\$”).

The main exchange rates used by the Company to translate its foreign operations are as follows:

	Closing rate		Three-month period ended September 30,		Average rate Nine-month period ended September 30,	
	September 30, 2022	December 31, 2021	2022	2021	2022	2021
US Dollar ("US\$")	5.4066	5.5805	5.2462	5.2286	5.1360	5.3317
Canadian dollar ("CAD")	3.9318	4.3882	4.0189	4.1517	4.0024	4.2624
Euro ("EUR")	5.2904	6.3210	5.2838	6.1623	5.4629	6.3769

### c) Russia-Ukraine conflict

The Company's business is subject to external risk factors related to our global operations and the global profile of our client portfolio and supply chains. Global markets are experiencing volatility and disruption following the escalation of geopolitical tensions in connection with the military conflict between Russia and Ukraine.

The resulting economic sanctions imposed by the United States, Canada, the European Union, the UK and other countries as a direct consequence of this conflict may continue to significantly impact supply chains, lead to market disruptions including significant volatility in commodities' prices and bring heightened near-term uncertainty to the global financial system, including through instability of credit and of capital markets.

At this time, the effects of the Russia-Ukraine conflict have not caused significant impacts on the Company's operations nor on the fair value of its assets and liabilities. However, escalation of the Russia-Ukraine conflict may adversely affect the Company's business, such as disruption of international trade flows, extreme market pricing volatility, with particular impact on the energy sector, industrial and agricultural supply chains, shipping, and regulatory and contractual uncertainty, and increased geopolitical tensions around the world.

## 3. Significant events of the current period

Balance Sheet, Cash Flows and Income Statement were particularly affected by the following events and transactions during the three-month period ended September 30, 2022:

**Capital reduction in a foreign subsidiary (notes 6 and 13).** In August 2022, the Company approved the capital reduction of VISA in the amount of R\$7,885 (US\$1,500 million), which has generated a gain of R\$7,938 (US\$1,543 million), recorded under "Other financial items, net", due to the reclassification of the cumulative translation adjustments from stockholders' equity to the income statement.

**Sale of Midwestern System assets (note 14).** In July 2022, the Company concluded the sale of the Midwestern System to J&F Mineração Ltda. ("J&F") and received R\$815 (US\$153 million), in addition to transferring to J&F the obligations related to the take-or-pay logistics contracts. These assets were classified as held for sale and a gain of R\$5,620 (US\$1,121 million) was recorded in the nine-month period ended September 30, 2022, due to the reversal of the impairment of property, plant and equipment and the remeasurement of the onerous contract liability. In addition, the Company recognized a gain of R\$188 (US\$37 million) due to the reclassification of the cumulative translation adjustments from stockholders' equity to the income statement.

**Sale of Companhia Siderúrgica do Pecém ("CSP") (note 14).** In July 2022, the Company and the other shareholders of CSP signed a binding agreement with ArcelorMittal for the sale of CSP for approximately R\$11,527 (US\$2,132 million), which will be received at the closing of the transaction and it will be fully used for the early settlement of CSP's net debt in the amount of approximately R\$12,435 (US\$2,300 million). The Company does not expect any material impact at closing, which is expected to occur in the first quarter 2023, subject to customary regulatory approvals.

**Share buyback (note 27d).** During the three-month period ended September 30, 2022, the Company repurchased 48,670,681 common shares and their respective ADRs, corresponding to R\$3,636 (US\$686 million), of which R\$1,898 (US\$358 million) were acquired through wholly owned subsidiaries and R\$1,738 (US\$328 million) by the Parent Company.

**Cancellation of common shares held in treasury (note 27b).** In July 2022, the Company approved the cancellation of 220,150,800 common shares held in treasury. The effect of R\$19,466 (US\$3,786 million) was recorded in shareholders' equity as "Treasury shares used and cancelled".

**Stockholder's remuneration (note 27c).** In July 2022, the Company approved the remuneration to its shareholders in the amount of R\$16,243 (US\$3,000 million), which was fully paid in September 2022.

#### 4. Information by business segment and geographic area

The Company operates the following reportable segments: Ferrous Minerals, Base Metals and Coal (presented as discontinued operations). The segments are aligned with products and reflect the structure used by Management to evaluate the Company's performance. The responsible bodies for making operational decisions, allocating resources and evaluating performance are the Executive Boards and Board of Directors. Accordingly, the performance of the operating segments is assessed based on a measure of adjusted LAJIDA (EBITDA), among other measures.

The Company allocates to "Other" the revenues and cost of other products, services, research and development, investments in joint ventures and associates of other business and unallocated corporate expenses. Costs related to the Brumadinho event are allocated to "Other" as well.

In 2022, the Company has allocated the financial information of the Midwestern System to "Other" as this operation is no longer analyzed by the chief operating decision maker as part of the performance of the Ferrous Minerals business segment due to the binding agreement to sell this operation. The comparative information was reclassified to reflect the revision in the allocation criteria.

##### a) Adjusted LAJIDA (EBITDA)

The definition of Adjusted LAJIDA (EBITDA) for the Company is the operating income or loss plus dividends received and interest from associates and joint ventures, and excluding the amounts charged as (i) depreciation, depletion and amortization and (ii) impairment reversal (impairment and disposals) of non-current assets, net.

	Consolidated						
	Three-month period ended September 30, 2022						
	Net operating revenue	Cost of goods sold and services rendered	Sales, administrative and other operating expenses	Research and development	Pre operating and operational stoppage	Dividends received and interest from associates and joint ventures	Adjusted EBITDA
Ferrous minerals							
Iron ore	31,708	(16,195)	(233)	(251)	(330)	5	14,704
Iron ore pellets	8,700	(3,748)	(37)	(4)	(25)	23	4,909
Other ferrous products and services	622	(430)	22	(5)	(23)	-	186
	41,030	(20,373)	(248)	(260)	(378)	28	19,799
Base metals							
Nickel and other products	8,221	(6,966)	12	(162)	(1)	-	1,104
Copper	2,518	(1,441)	(38)	(195)	(18)	-	826
	10,739	(8,407)	(26)	(357)	(19)	-	1,930
Brumadinho event and de-characterization of dams	-	-	(1,759)	-	-	-	(1,759)
Other	311	(317)	(527)	(271)	(2)	121	(685)
Total	52,080	(29,097)	(2,560)	(888)	(399)	149	19,285

	Consolidated						
	Three-month period ended September 30, 2021						
	Net operating revenue	Cost of goods sold and services rendered	Sales, administrative and other operating expenses	Research and development	Pre operating and operational stoppage	Dividends received and interest from associates and joint ventures	Adjusted EBITDA
Ferrous minerals							
Iron ore	43,977	(15,661)	(161)	(276)	(315)	-	27,564
Iron ore pellets	10,492	(3,197)	(10)	(5)	(57)	-	7,223
Other ferrous products and services	730	(571)	3	(5)	(20)	-	137
	55,199	(19,429)	(168)	(286)	(392)	-	34,924
Base metals							
Nickel and other products	4,681	(4,092)	311	(100)	(268)	-	532
Copper	3,549	(1,267)	(30)	(125)	(5)	-	2,122
	8,230	(5,359)	281	(225)	(273)	-	2,654
Brumadinho event and de-characterization of dams	-	-	(847)	-	-	-	(847)
COVID-19	-	-	(52)	-	-	-	(52)
Other (i)	989	(695)	(737)	(190)	(8)	24	(617)
Total of continuing operations	64,418	(25,483)	(1,523)	(701)	(673)	24	36,062
Discontinued operations – Coal	1,843	(1,639)	(27)	(8)	-	-	169
Total	66,261	(27,122)	(1,550)	(709)	(673)	24	36,231

(i) Includes the reclassification of the EBITDA of Midwestern System in the amount of R\$203 (US\$40 million).

## Notes to the Interim Financial Statements

Expressed in millions of Brazilian reais, unless otherwise stated



	Consolidated						
	Nine-month period ended September 30, 2022						
	Net operating revenue	Cost of goods sold and services rendered	Sales, administrative and other operating expenses	Research and development	Pre operating and operational stoppage	Dividends received and interest from associates and joint ventures	Adjusted EBITDA
<b>Ferrous minerals</b>							
Iron ore	104,906	(41,975)	(759)	(648)	(1,280)	5	60,249
Iron ore pellets	24,601	(9,977)	1	(11)	(82)	374	14,906
Other ferrous products and services	1,869	(1,290)	13	(14)	(66)	-	512
	<b>131,376</b>	<b>(53,242)</b>	<b>(745)</b>	<b>(673)</b>	<b>(1,428)</b>	<b>379</b>	<b>75,667</b>
<b>Base metals</b>							
Nickel and other products	23,452	(16,313)	(91)	(372)	(2)	-	6,674
Copper	6,621	(3,953)	(14)	(481)	(37)	-	2,136
	<b>30,073</b>	<b>(20,266)</b>	<b>(105)</b>	<b>(853)</b>	<b>(39)</b>	<b>-</b>	<b>8,810</b>
Brumadinho event and de-characterization of dams	-	-	(3,988)	-	-	-	(3,988)
Other (i)	2,324	(1,934)	(2,505)	(737)	(11)	123	(2,740)
<b>Total of continuing operations</b>	<b>163,773</b>	<b>(75,442)</b>	<b>(7,343)</b>	<b>(2,263)</b>	<b>(1,478)</b>	<b>502</b>	<b>77,749</b>
<b>Discontinued operations – Coal</b>	<b>2,308</b>	<b>(1,370)</b>	<b>(57)</b>	<b>(7)</b>	<b>-</b>	<b>-</b>	<b>874</b>
<b>Total</b>	<b>166,081</b>	<b>(76,812)</b>	<b>(7,400)</b>	<b>(2,270)</b>	<b>(1,478)</b>	<b>502</b>	<b>78,623</b>

(i) Includes the reclassification of the EBITDA of Midwestern System in the amount of R\$381 (US\$77 million).

	Consolidated						
	Nine-month period ended September 30, 2021						
	Net operating revenue	Cost of goods sold and services rendered	Sales, administrative and other operating expenses	Research and development	Pre operating and operational stoppage	Dividends received and interest from associates and joint ventures	Adjusted EBITDA
<b>Ferrous minerals</b>							
Iron ore	157,145	(41,191)	(609)	(686)	(1,210)	-	113,449
Iron ore pellets	27,390	(8,044)	159	(11)	(194)	114	19,414
Other ferrous products and services	2,304	(1,637)	9	(11)	(64)	-	601
	<b>186,839</b>	<b>(50,872)</b>	<b>(441)</b>	<b>(708)</b>	<b>(1,468)</b>	<b>114</b>	<b>133,464</b>
<b>Base metals</b>							
Nickel and other products	20,472	(13,379)	115	(257)	(570)	-	6,381
Copper	10,239	(3,390)	(36)	(332)	(16)	-	6,465
	<b>30,711</b>	<b>(16,769)</b>	<b>79</b>	<b>(589)</b>	<b>(586)</b>	<b>-</b>	<b>12,846</b>
Brumadinho event and de-characterization of dams	-	-	(2,437)	-	-	-	(2,437)
COVID-19	-	-	(145)	-	-	-	(145)
Other (i)	2,652	(2,279)	(1,840)	(675)	(17)	140	(2,019)
<b>Total of continuing operations</b>	<b>220,202</b>	<b>(69,920)</b>	<b>(4,784)</b>	<b>(1,972)</b>	<b>(2,071)</b>	<b>254</b>	<b>141,709</b>
<b>Discontinued operations – Coal</b>	<b>3,207</b>	<b>(5,180)</b>	<b>(18)</b>	<b>(29)</b>	<b>-</b>	<b>424</b>	<b>(1,596)</b>
<b>Total</b>	<b>223,409</b>	<b>(75,100)</b>	<b>(4,802)</b>	<b>(2,001)</b>	<b>(2,071)</b>	<b>678</b>	<b>140,113</b>

(i) Includes the reclassification of the EBITDA of Midwestern System in the amount of R\$642 (US\$120 million).



## Notes to the Interim Financial Statements

Expressed in millions of Brazilian reais, unless otherwise stated



Adjusted LAJIDA (EBITDA) is reconciled to net income as follows:

### Continuing operations

	Three-month period ended		Consolidated	
	September 30,		September 30,	
	2022	2021	2022	2021
<b>Net income from continuing operations attributable to Vale's stockholders</b>	<b>23,286</b>	<b>28,587</b>	<b>66,547</b>	<b>103,299</b>
Net income (loss) attributable to noncontrolling interests	(58)	155	311	289
<b>Net income</b>	<b>23,228</b>	<b>28,742</b>	<b>66,858</b>	<b>103,588</b>
Depreciation, depletion and amortization	4,069	3,393	11,652	11,796
Income taxes	4,181	2,421	19,566	23,389
Financial results	(12,167)	1,816	(14,818)	(58)
<b>EBITDA from continuing operations</b>	<b>19,311</b>	<b>36,372</b>	<b>83,258</b>	<b>138,715</b>
<b>Items to reconciled adjusted LAJIDA (EBITDA)</b>				
Equity results and other results in associates and joint ventures	(401)	(670)	(1,238)	1,544
Dividends received from associates and joint ventures	149	24	502	254
Impairment and disposals (impairment reversal) of non-current assets, net	226	336	(4,773)	1,196
<b>Adjusted EBITDA from continuing operations</b>	<b>19,285</b>	<b>36,062</b>	<b>77,749</b>	<b>141,709</b>

### Discontinued operations (Coal)

	Three-month period ended		Consolidated	
	September 30,		September 30,	
	2022	2021	2022	2021
<b>Net income (loss) from discontinued operations attributable to Vale's stockholders</b>	<b>-</b>	<b>(8,384)</b>	<b>9,818</b>	<b>(12,437)</b>
Net income (loss) attributable to noncontrolling interests	-	216	-	(556)
<b>Net income (loss)</b>	<b>-</b>	<b>(8,168)</b>	<b>9,818</b>	<b>(12,993)</b>
Depreciation, depletion and amortization	-	264	-	350
Income taxes	-	(4,336)	9	(4,336)
Financial results	-	123	(14,603)	(1,823)
Derecognition of noncontrolling interest	-	-	2,783	-
<b>EBITDA from discontinued operations</b>	<b>-</b>	<b>(12,117)</b>	<b>(1,993)</b>	<b>(18,802)</b>
<b>Items to reconciled adjusted LAJIDA (EBITDA)</b>				
Equity results in associates and joint ventures	-	-	-	144
Dividends received and interest from associates and joint ventures (i)	-	-	-	424
Impairment of non-current assets, net	-	12,286	2,867	16,638
<b>Adjusted EBITDA from discontinued operations</b>	<b>-</b>	<b>169</b>	<b>874</b>	<b>(1,596)</b>

(i) Includes the remuneration of the financial instrument of the Coal segment.

### b) Assets by segment

	September 30, 2022			Consolidated		
				December 31, 2021		
	Product inventory	Investments in associates and joint ventures	Property, plant and equipment and intangible	Product inventory	Investments in associates and joint ventures	Property, plant and equipment and intangible
Ferrous minerals	14,678	6,803	167,020	12,199	6,214	161,770
Base metals	8,713	-	101,068	7,725	95	112,317
Other	-	2,903	10,567	120	3,462	10,195
<b>Total</b>	<b>23,391</b>	<b>9,706</b>	<b>278,655</b>	<b>20,044</b>	<b>9,771</b>	<b>284,282</b>

	2022			Consolidated		
				Three-month period ended September 30,		
				2021		
	Capital expenditures			Capital expenditures		
	Sustaining capital (i)	Project execution	Depreciation, depletion and amortization	Sustaining capital (i)	Project execution	Depreciation, depletion and amortization
Ferrous minerals	2,605	1,044	2,315	3,048	714	2,129
Base metals	1,806	421	1,707	1,696	591	1,185
Other (ii)	86	493	47	31	189	79
<b>Total</b>	<b>4,497</b>	<b>1,958</b>	<b>4,069</b>	<b>4,775</b>	<b>1,494</b>	<b>3,393</b>

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						Consolidated
						Nine-month period ended September 30,
			2022			2021
Capital expenditures				Capital expenditures		Depreciation, depletion and amortization
Sustaining capital (i)	Project execution			Sustaining capital (i)	Project execution	
Ferrous minerals	7,595	2,964	6,937	8,757	1,750	6,637
Base metals	4,906	1,214	4,526	5,188	1,329	4,857
Other (ii)	367	1,746	189	120	348	302
<b>Total</b>	<b>12,868</b>	<b>5,924</b>	<b>11,652</b>	<b>14,065</b>	<b>3,427</b>	<b>11,796</b>

(i) According to the Company's remuneration policy, the sustaining capital investments are deducted from the 30% of the adjusted EBITDA. The calculation also considers the current investment of discontinued coal operations, which was R\$201 (US\$38 million) for the nine-month period ended September 30, 2022 (2021: R\$607 (US\$114 million)).

(ii) The sustaining capital investments related to the Midwestern System were reclassified from "ferrous minerals" to "other" for the three and nine-month periods ended September 30, 2021 in the amounts of R\$25 (US\$5 million) and R\$50 (US\$10 million), respectively. Depreciation, depletion and amortization were reclassified for the same periods in the amounts of R\$21 (US\$4 million) and R\$97 (US\$18 million), respectively.

### c) Assets by geographic area

								Consolidated
September 30, 2022				December 31, 2021				
Investments in associates and joint ventures	Intangible	Property, plant and equipment	Total	Investments in associates and joint ventures	Intangible	Property, plant and equipment	Total	
Brazil	9,706	40,684	140,072	190,462	9,656	39,339	132,772	181,767
Canada	-	9,823	58,111	67,934	-	10,927	69,429	80,356
Americas, except Brazil and Canada	-	-	19	19	-	-	15	15
Europe	-	-	4,068	4,068	-	-	4,124	4,124
Indonesia	-	4	14,575	14,579	-	8	15,197	15,205
Asia, except Indonesia and China	-	-	4,290	4,290	115	-	4,879	4,994
China	-	6	101	107	-	11	117	128
Oman	-	3	6,899	6,902	-	2	7,462	7,464
<b>Total</b>	<b>9,706</b>	<b>50,520</b>	<b>228,135</b>	<b>288,361</b>	<b>9,771</b>	<b>50,287</b>	<b>233,995</b>	<b>294,053</b>

### d) Net operating revenue by geographic area

The sales revenue from Ferrous minerals for the three and nine-month periods ended September 30, 2022, decreased from prior periods mainly due to the decline of 27%, in the average realized price of iron ore for both periods, following the decrease in the international price of this product.

					Consolidated
					Three-month period ended September 30, 2022
	Ferrous minerals	Base metals	Other	Total	
Americas, except United States and Brazil	670	728	-	1,398	
United States of America	531	1,689	-	2,220	
Germany	483	1,505	-	1,988	
Europe, except Germany	1,670	3,499	-	5,169	
Middle East, Africa, and Oceania	3,301	55	-	3,356	
Japan	3,601	880	-	4,481	
China	22,718	1,590	-	24,308	
Asia, except Japan and China	3,428	698	-	4,126	
Brazil	4,628	95	311	5,034	
<b>Net operating revenue</b>	<b>41,030</b>	<b>10,739</b>	<b>311</b>	<b>52,080</b>	

					Consolidated
					Three-month period ended September 30, 2021
	Ferrous minerals	Base metals	Other (i)	Total	
Americas, except United States and Brazil	1,052	415	140	1,607	
United States of America	370	1,432	-	1,802	
Germany	916	908	-	1,824	
Europe, except Germany	2,862	2,253	-	5,115	
Middle East, Africa, and Oceania	2,885	21	-	2,906	
Japan	6,752	749	-	7,501	
China	27,994	1,257	-	29,251	
Asia, except Japan and China	4,990	1,156	-	6,146	
Brazil	7,378	39	849	8,266	
<b>Net operating revenue</b>	<b>55,199</b>	<b>8,230</b>	<b>989</b>	<b>64,418</b>	

(i) Includes the reclassification of the revenues of Midwestern System in the amount of R\$583 (US\$112 million).

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	Consolidated			
	Nine-month period ended September 30, 2022			
	Ferrous minerals	Base metals	Other (i)	Total
Americas, except United States and Brazil	2,024	2,135	625	4,784
United States of America	903	5,293	-	6,196
Germany	1,596	4,630	-	6,226
Europe, except Germany	7,473	8,162	-	15,635
Middle East, Africa, and Oceania	9,117	100	123	9,340
Japan	11,166	2,853	-	14,019
China	73,732	4,079	-	77,811
Asia, except Japan and China	10,057	2,568	225	12,850
Brazil	15,308	253	1,351	16,912
<b>Net operating revenue</b>	<b>131,376</b>	<b>30,073</b>	<b>2,324</b>	<b>163,773</b>

	Consolidated			
	Nine-month period ended September 30, 2021			
	Ferrous minerals	Base metals	Other (i)	Total
Americas, except United States and Brazil	3,072	1,629	647	5,348
United States of America	1,762	4,515	-	6,277
Germany	2,669	5,926	-	8,595
Europe, except Germany	11,314	9,218	-	20,532
Middle East, Africa, and Oceania	7,926	62	-	7,988
Japan	14,655	1,904	-	16,559
China	110,663	3,526	-	114,189
Asia, except Japan and China	14,468	3,693	-	18,161
Brazil	20,310	238	2,005	22,553
<b>Net operating revenue</b>	<b>186,839</b>	<b>30,711</b>	<b>2,652</b>	<b>220,202</b>

(i) Includes the reclassification of the revenues of Midwestern System in the amount of R\$1,161 (US\$231 million) for the nine-month period ended September 30, 2022 (R\$1,731 (US\$325 million) for the nine-month period ended September 30, 2021).

## 5. Costs and expenses by nature

### a) Cost of goods sold, and services rendered

	Consolidated			
	Three-month period ended September 30,		Nine-month period ended September 30,	
	2022	2021	2022	2021
Personnel	2,382	1,846	6,627	6,201
Materials and services (i)	5,024	3,662	12,809	10,953
Fuel oil and gas (i)	2,608	1,290	5,841	3,571
Maintenance	3,956	3,655	11,213	11,023
Royalties	1,283	2,064	3,761	5,291
Energy	984	839	2,665	2,452
Acquisition of products	4,016	3,311	9,734	8,822
Depreciation, depletion and amortization	3,946	3,148	11,152	11,056
Freight	6,883	6,158	17,029	15,647
Other	1,961	2,658	5,763	5,960
<b>Total</b>	<b>33,043</b>	<b>28,631</b>	<b>86,594</b>	<b>80,976</b>
Cost of goods sold	32,249	27,799	84,370	78,658
Cost of services rendered	794	832	2,224	2,318
<b>Total</b>	<b>33,043</b>	<b>28,631</b>	<b>86,594</b>	<b>80,976</b>

(i) The increase in costs is mainly due to higher fuel prices and inflation of other inputs and services during the three and nine-month periods ended September 30, 2022.

### b) Selling and administrative expenses

	Consolidated			
	Three-month period ended September 30,		Nine-month period ended September 30,	
	2022	2021	2022	2021
Selling	89	127	302	343
Personnel	221	150	718	689
Services	145	149	411	361
Depreciation and amortization	48	61	166	162
Other	123	111	283	315
<b>Total</b>	<b>626</b>	<b>598</b>	<b>1,880</b>	<b>1,870</b>

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### c) Other operating expenses, net

	Consolidated			
	Three-month period ended September 30,		Nine-month period ended September 30,	
	2022	2021	2022	2021
Asset retirement obligations	-	-	200	-
Provision for litigations (note 25)	166	122	494	356
Profit sharing program	133	153	475	554
Other	(76)	(136)	473	(272)
<b>Total</b>	<b>223</b>	<b>139</b>	<b>1,642</b>	<b>638</b>

The breakdown of Research and Development expenses by operating segment is presented in note 4 (a).

## 6. Financial results

	Consolidated			
	Three-month period ended September 30,		Nine-month period ended September 30,	
	2022	2021	2022	2021
<b>Financial income</b>				
Short-term investments	622	368	1,898	731
Other	121	103	305	453
	<b>743</b>	<b>471</b>	<b>2,203</b>	<b>1,184</b>
<b>Financial expenses</b>				
Loans and borrowings gross interest	(736)	(815)	(2,377)	(2,688)
Capitalized loans and borrowing costs	49	75	205	235
Interest on REFIS	(219)	(87)	(583)	(180)
Interest on lease liabilities (note 20d)	(82)	(76)	(238)	(252)
Bond premium repurchase (note 20d)	-	-	(568)	(354)
Other	(45)	(346)	(996)	(1,324)
	<b>(1,033)</b>	<b>(1,249)</b>	<b>(4,557)</b>	<b>(4,563)</b>
<b>Other financial items, net</b>				
Net foreign exchange gains (losses)	1,048	1,936	(930)	1,748
Participative stockholders' debentures (note 19) (i)	2,478	825	3,800	(5,886)
Financial guarantees (i)	2	(180)	2,413	1,636
Derivative financial instruments (note 17)	1,003	(2,393)	4,064	(263)
Reclassification of cumulative translation adjustments to the income statement (notes 13 and 14)	8,275	48	8,275	6,356
Indexation losses, net	(349)	(1,274)	(450)	(154)
	<b>12,457</b>	<b>(1,038)</b>	<b>17,172</b>	<b>3,437</b>
<b>Total</b>	<b>12,167</b>	<b>(1,816)</b>	<b>14,818</b>	<b>58</b>

(i) These lines were reclassified from the prior period in order to present "Financial expenses" and "Other financial items, net" in similar line items from period to period.

### a) Financial guarantees

As of September 30, 2022, the total guarantees granted by the Company (within the limit of its direct or indirect interest) to certain associates and joint ventures totaled R\$8,061 (US\$1,491 million) (December 31, 2021: R\$8,443 (US\$1,513 million)). The fair value of these financial guarantees in the amount of R\$546 (US\$101 million) (December 31, 2021: R\$3,026 (US\$542 million)) is recorded as "Other non-current liabilities".

## 7. Taxes

### a) Deferred income tax assets and liabilities

	Consolidated		
	Assets	Liabilities	Deferred taxes, net
<b>Balance at December 31, 2021</b>	<b>63,847</b>	<b>10,494</b>	<b>53,353</b>
Tax effect in the income statement	(9,815)	(134)	(9,681)
Translation adjustment	(363)	(885)	522
Other comprehensive income	385	298	87
Transfers between assets and liabilities	(930)	(930)	-
Sale of California Steel Industries (note 14)	-	(147)	147
<b>Balance at September 30, 2022</b>	<b>53,124</b>	<b>8,696</b>	<b>44,428</b>

	Consolidated		
	Assets	Liabilities	Deferred taxes, net
<b>Balance at December 31, 2020</b>	<b>53,711</b>	<b>9,198</b>	<b>44,513</b>
Tax effect in the income statement	3,916	(104)	4,020
Transfers between assets and liabilities	34	34	-
Translation adjustment	709	369	340
Other comprehensive income	(686)	989	(1,675)
Tax loss carryforward from coal operations (note 14)	4,336	-	4,336
<b>Balance at September 30, 2021</b>	<b>62,020</b>	<b>10,486</b>	<b>51,534</b>

### b) Income tax reconciliation – Income statement

Income tax expense is recognized based on the estimate of the weighted average effective tax rate expected for the full year, adjusted for the tax effect of certain items that are recognized in full on the interim tax calculation. Therefore, the effective tax rate in the interim financial statements may differ from management's estimate of the effective tax rate for the year.

The total amount presented as income taxes in the income statement is reconciled to the statutory rate, as follows:

	Consolidated			
	Three-month period ended September 30,		Nine-month period ended September 30,	
	2022	2021	2022	2021
<b>Income before income taxes</b>	<b>27,409</b>	<b>31,163</b>	<b>86,424</b>	<b>126,977</b>
<b>Income taxes at statutory rate – 34%</b>	<b>(9,319)</b>	<b>(10,596)</b>	<b>(29,384)</b>	<b>(43,172)</b>
<b>Adjustments that affect the taxes basis:</b>				
Tax incentives	2,526	5,067	7,848	13,715
Equity results	154	358	303	539
Monetary exchange variation on tax losses carryforward	(272)	570	(2,630)	432
Other (i)	2,730	2,180	4,297	5,097
<b>Income taxes</b>	<b>(4,181)</b>	<b>(2,421)</b>	<b>(19,566)</b>	<b>(23,389)</b>

(i) Refers mainly to the reclassifications of accumulated translation adjustments to income for the periods presented (notes 13 and 14).

### c) Income taxes - Settlement program ("REFIS")

	Consolidated	
	September 30, 2022	December 31, 2021
Current liabilities	1,900	1,810
Non-current liabilities	10,064	10,962
<b>REFIS liabilities</b>	<b>11,964</b>	<b>12,772</b>
SELIC rate	13.75%	9.25%

It mainly relates to the settlement program of claims regarding the collection of income tax and social contribution on equity gains of foreign subsidiaries and affiliates from 2003 to 2012. This amount bears SELIC interest rate (Special System for Settlement and Custody) and will be paid in monthly installments until October 2028.

### d) Uncertain tax positions

There have been no relevant developments on matters related to the uncertain tax positions since the December 31, 2021 financial statements.

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### e) Recoverable and payable taxes

	September 30, 2022			Consolidated December 31, 2021		
	Current assets	Non-current assets	Current liabilities	Current assets	Non-current assets	Current liabilities
Value-added tax	1,515	-	156	1,209	60	906
Brazilian federal contributions	2,446	3,659	284	2,903	2,851	66
Income taxes	620	2,365	442	630	2,309	10,385
Financial compensation for the exploration of mineral resources - CFEM	-	-	353	-	-	328
Other	58	-	402	67	-	465
<b>Total</b>	<b>4,639</b>	<b>6,024</b>	<b>1,637</b>	<b>4,809</b>	<b>5,220</b>	<b>12,150</b>

## 8. Basic and diluted earnings (loss) per share

	Three-month period ended September 30,		Nine-month period ended September 30,	
	2022	2021	2022	2021
<b>Net income attributable to Vale's stockholders:</b>				
Net income from continuing operations	23,286	28,587	66,547	103,299
Net income (loss) from discontinued operations	-	(8,384)	9,818	(12,437)
	<b>23,286</b>	<b>20,203</b>	<b>76,365</b>	<b>90,862</b>
<b>In thousands of shares</b>				
Weighted average number of common shares outstanding	4,549,205	5,080,890	4,674,248	5,065,750
Weighted average number of common shares outstanding and potential ordinary shares	4,553,843	5,085,314	4,678,886	5,070,174
<b>Basic and diluted earnings per share from continuing operations:</b>				
Common share (R\$)	5.12	5.63	14.24	20.39
<b>Basic and diluted earnings (loss) per share from discontinued operations:</b>				
Common share (R\$)	-	(1.65)	2.10	(2.46)
<b>Basic and diluted earnings per share:</b>				
Common share (R\$)	5.12	3.98	16.34	17.94

## 9. Accounts receivable

	Consolidated	
	September 30, 2022	December 31, 2021
<b>Receivables from contracts with customers</b>		
Related parties (note 28)	728	608
Third parties		
Ferrous minerals	7,684	16,868
Base metals	3,305	3,730
Other	116	900
<b>Accounts receivable</b>	<b>11,833</b>	<b>22,106</b>
Expected credit loss	(209)	(266)
<b>Accounts receivable, net</b>	<b>11,624</b>	<b>21,840</b>

No customer individually represented 10% or more of the Company's accounts receivable or revenues for the periods presented in these interim financial statements.

**Provisionally priced commodities sales** – The commodity price risk arises from volatility of iron ore, nickel and copper prices. The Company is mostly exposed to the fluctuations in the iron ore and copper price (note 17). The selling price of these products can be measured reliably at each period since the price is quoted in an active market.

The sensitivity of the Company's risk on final settlement of provisionally priced accounts receivables are presented below:

	Thousand metric tons	Provisional price (US\$/ton)	Change	September 30, 2022
				Effect on revenue
Iron ore	17,271	91.9	+/- 10%	+/- 833
Iron ore pellets	76	136.2	+/- 10%	+/- 5
Copper	81	9,652.0	+/- 10%	+/- 412

## 10. Inventories

	Consolidated	
	September 30, 2022	December 31, 2021
Finished products	18,861	15,615
Work in progress	4,659	4,566
Consumable inventory	5,525	4,777
Allowance to net realizable value	(565)	(529)
<b>Total</b>	<b>28,480</b>	<b>24,429</b>

Finished and work in progress products inventories by segments are presented in note 4(b) and the cost of goods sold is presented in note 5(a).

## 11. Suppliers and contractors

	Consolidated	
	September 30, 2022	December 31, 2021
Third parties - Brazil	12,204	9,856
Third parties - Abroad	11,463	9,029
Related parties (note 28)	1,933	508
<b>Total</b>	<b>25,600</b>	<b>19,393</b>

## 12. Other financial assets and liabilities

	Current		Consolidated Non-current	
	September 30, 2022	December 31, 2021	September 30, 2022	December 31, 2021
<b>Other financial assets</b>				
Restricted cash	-	-	420	653
Derivative financial instruments (note 17a)	821	619	824	110
Investments in equity securities	-	-	32	33
	<b>821</b>	<b>619</b>	<b>1,276</b>	<b>796</b>
<b>Other financial liabilities</b>				
Derivative financial instruments (note 17a)	558	1,355	1,467	3,301
Other financial liabilities - Related parties (note 28)	734	2,192	-	-
Financial guarantees provided (note 6a) (i)	-	-	546	3,026
Liabilities related to the concession grant	3,749	4,241	8,520	8,017
Contract liability	2,695	3,158	-	-
	<b>7,736</b>	<b>10,946</b>	<b>10,533</b>	<b>14,344</b>

(i) In July 2022, the Company signed a binding agreement with ArcelorMittal for the sale of CSP. At the closing, CSP's debt will be settled and the financial liability related to the guarantee granted will be derecognised by Vale.

### a) Liabilities related to the concession grant

On April 14, 2022, the Company prepaid R\$796 (US\$168 million) of its concession grant obligation related to the Estrada de Ferro Carajás ("EFC") as approved by the Board of Directors on October 28, 2021. The outstanding balance will be settled in quarterly installments until 2057.

	Liability		Discount rate	
	September 30, 2022	December 31, 2021	September 30, 2022	December 31, 2021
Concession grant	3,920	3,271	11.04%	11.04%
Midwestern Integration Railway ("FICO")	6,360	6,730	5.69%	5.29%
Infrastructure program	1,851	1,910	5.65%	5.43%
West-East Integration Railway ("FIOL")	138	347	8.72%	5.81%
<b>Total</b>	<b>12,269</b>	<b>12,258</b>		

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### 13. Investments in subsidiaries, associates, and joint ventures

	% ownership	% voting capital	Investments in associates and joint ventures		Equity results in the income statement				Dividends received			
			September 30, 2022	December 31, 2021	Three-month period ended September 30,		Nine-month period ended September 30,		Three-month period ended September 30,		Nine-month period ended September 30,	
					2022	2021	2022	2021	2022	2021	2022	2021
Associates and joint ventures												
Ferrous minerals												
Baovale Mineração S.A.	50.00	50.00	126	117	4	5	11	19	5	-	5	-
Companhia Coreano-Brasileira de Pelotização	50.00	50.00	464	284	79	77	192	161	-	-	48	9
Companhia Hispano-Brasileira de Pelotização	50.89	50.89	238	211	50	3	55	4	23	-	30	35
Companhia Ítalo-Brasileira de Pelotização	50.90	51.00	366	270	56	86	121	153	-	-	93	30
Companhia Nipo-Brasileira de Pelotização	51.00	51.11	788	720	61	81	170	147	-	-	203	40
MRS Logística S.A.	48.16	46.75	2,597	2,334	116	171	264	362	-	-	-	-
Samarco Mineração S.A. (note 22)	50.00	50.00	-	-	-	-	-	-	-	-	-	-
VLI S.A.	29.60	29.60	2,224	2,278	46	(121)	(54)	(168)	-	-	-	-
			6,803	6,214	412	302	759	678	28	-	379	114
Base metals												
Korea Nickel Corporation	25.00	25.00	-	95	3	1	16	2	-	-	-	-
			-	95	3	1	16	2	-	-	-	-
Other												
Aliança Geração de Energia S.A.	55.00	55.00	2,051	2,046	43	216	126	307	121	24	121	140
Aliança Norte Energia Participações S.A.	51.00	51.00	561	586	(8)	1	(25)	(16)	-	-	-	-
California Steel Industries, Inc. ("CSI") (note 14)	50.00	50.00	-	-	-	547	-	870	-	-	360	-
Companhia Siderúrgica do Pecém ("CSP") (note 14)	50.00	50.00	-	553	-	-	-	(237)	-	-	-	-
Mineração Rio do Norte S.A.	40.00	40.00	-	-	-	(14)	-	(29)	-	-	-	-
Other	-	-	291	277	5	(11)	17	(1)	-	-	2	-
			2,903	3,462	40	739	118	894	121	24	483	140
Total			9,706	9,771	455	1,042	893	1,574	149	24	862	254



## a) Changes in the period

		Consolidated
	2022	2021
Balance at January 1,	9,771	10,557
Translation adjustment	(22)	76
Equity results	893	1,574
Dividends declared	(291)	(701)
Impairment of CSP	(553)	-
Other	(92)	56
Balance at September 30,	9,706	11,562

**Capital reduction in a foreign subsidiary** – In August 2022, the Company approved a capital reduction in the amount of R\$7,885 (US\$1,500 million) of Vale International S.A. (“VISA”), a wholly-owned foreign subsidiary, leading to a reduction in the absolute value of the investment held by the Parent Company. Therefore, the return of capital received in September 2022 was determined as a partial disposal and, in accordance with the requirements of IAS 21/CPC 02, the exchange differences recorded in the stockholders’ equity were reclassified to the income statement in the same proportion as the reduction in the net investment held in VISA, leading to a gain of R\$7,938 (US\$1,543 million) presented as “Other financial items, net” (note 6). The remaining balance of cumulative translation adjustments of VISA represents R\$24,257 (US\$4,487 million) as of September 30, 2022.

## 14. Acquisitions and divestitures

	Nine-month period ended September 30, 2022				
	Cumulative translation adjustments			Result of the transaction	
	Other financial items, net	Equity results and other results in associates and joint ventures	Total recycling from OCI	Impairment reversal (impairment) of non-current assets	Equity results and other results in associates and joint ventures
Midwestern System	188	-	188	5,620	-
California Steel Industries	-	779	779	-	741
Companhia Siderúrgica do Pecém (i)	-	-	-	-	(685)
Other	149	-	149	12	(40)
	<b>337</b>	<b>779</b>	<b>1,116</b>	<b>5,632</b>	<b>16</b>
Discontinued operations (Coal)	14,636	-	14,636	(2,867)	-
	<b>14,973</b>	<b>779</b>	<b>15,752</b>	<b>2,765</b>	<b>16</b>

(i) Includes impairment of the investment in the amount of R\$553 (US\$111 million) and a provision for accounts receivable with CSP in the amount of R\$132 (US\$24 million).

	Nine-month period ended September 30, 2021				
	Cumulative translation adjustments			Result of the transaction	
	Other financial items, net	Equity results and other results in associates and joint ventures	Total recycling from OCI	Impairment of non-current assets	Equity results and other results in associates and joint ventures
Midwestern System	-	-	-	-	-
Vale Nouvelle-Calédonie S.A.S.	6,391	-	6,391	(549)	-
Vale Manganês	-	-	-	(147)	-
Other	(35)	-	(35)	-	(298)
	<b>6,356</b>	<b>-</b>	<b>6,356</b>	<b>(696)</b>	<b>(298)</b>
Discontinued operations (Coal)	2,134	-	2,134	(16,638)	-
	<b>8,490</b>	<b>-</b>	<b>8,490</b>	<b>(17,334)</b>	<b>(298)</b>

**Midwestern System** - During the first quarter of 2022, the Company classified the assets and liabilities related to the Midwestern System as held for sale due to the negotiations with interested parties in Vale’s iron ore, manganese and logistics assets in the Midwestern System, through its equity interests in Mineração Corumbaense Reunida S.A., Mineração Mato Grosso S.A., International Iron Company, Inc. and Transbarga Navegación S.A. These negotiations resulted in the execution of a binding agreement with J&F Mineração Ltda. (“J&F”) for the sale of these assets, which was signed on April 6, 2022.

The carrying amount of those assets were fully impaired in past years and the Company had a liability related to take-or-pay logistics contracts in the amount of R\$4,629 (US\$932 million) that were deemed onerous contracts under the Company's business model for the Midwestern System, which had negative reserves of R\$4,226 (US\$892 million) before reclassification to "Non-current assets and liabilities held for sale".

These offers received during the sale process of the assets represented an objective evidence of impairment reversal and the remeasurement of the existing provision, which led to a gain of R\$5,620 (US\$1,121 million) recorded as "Impairment reversal (impairment and disposals) of non-current assets, net", of which R\$1,121 (US\$214 million) relates to the impairment reversal on the Property, plant and equipment and R\$4,559 (US\$916 million) is due to the remeasurement of the onerous contract liability, partially offset by losses in working capital adjustments at the closing of the transaction in the amount of R\$60 (US\$9 million).

On July 15, 2022, the transaction was completed, and the Company received R\$815 (US\$153 million) and recorded a gain of R\$188 (US\$37 million), as the reclassification of the cumulative translation adjustments from the stockholders' equity to the income statement.

**California Steel Industries ("CSI")** - In December 2021, the Company entered into a binding agreement with Nucor Corporation ("Nucor") for the sale of its 50% interest in CSI for R\$2,269 (US\$437 million). In February 2022, the Company concluded the sale and recorded a gain of R\$1,520 (US\$292 million) for the nine-month period ended September 30, 2022, as "Equity results and other results in associates and joint ventures", of which R\$741 (US\$142 million) relates to a gain from the sale and R\$779 (US\$150 million) is due to the reclassification of the cumulative translation adjustments from the stockholders' equity to the income statement.

**Sale of Companhia Siderúrgica do Pecém ("CSP")** - In July 2022, the Company and the other shareholders of CSP signed a binding agreement with ArcelorMittal Brasil S.A. ("ArcelorMittal") for the sale of CSP for approximately R\$11,527 (US\$2,132 million). The completion of the transaction will be used in full for the prepayment of CSP's outstanding net debt of approximately R\$12,435 (US\$2,300 million), as the Company has already recognized an impairment loss of R\$685 (US\$135 million) for the nine-month period ended September 30, 2022. The Company does not expect any material impact at closing, which is expected to occur in the first quarter 2023, subject to customary regulatory approvals.

**Manganese ferroalloys operations in Minas Gerais** - In January 2022, the Company completed the sale of its ferroalloys operations in Barbacena and Ouro Preto and its manganese mining operations at Morro da Mina, in the state of Minas Gerais, to VDL Group ("VDL") for a total consideration of R\$210 (US\$40 million). As the Company had already adjusted the net assets to the fair value less cost of disposal, the closing did not result in an additional impact on the income statement for the nine-month period ended September 30, 2022 (2021: impairment of R\$147 (US\$28 million)). As a result, the Company no longer has manganese ferroalloys operations.

**Vale Nouvelle-Calédonie S.A.S. ("VNC")** - In December 2020, the Company signed a binding put option agreement to sell its interest in VNC for an immaterial consideration to Prony Resources consortium. With the final agreement signed in March 2021, the Company recorded a loss in the amount of R\$549 (US\$98 million), presented as "Impairment reversal (impairment and disposals) of non-current assets, net" in the income statement for the nine-month period ended September 30, 2021. In the same period, the Company also recorded a gain of R\$6,391 (US\$1,132 million) due to the cumulative translation adjustments reclassification from the stockholders' equity to the income statement as "Other financial items, net".

**Discontinued operations (Coal)** - In June 2021, in preparation for a sale of the coal operation, in connection with the sustainable strategic mining agenda, the Company carried out a corporate reorganization by acquiring the interests held by Mitsui in the coal assets, which consist of Moatize mine and the Nacala Logistics Corridor ("NLC"). Following the acquisition of Mitsui's stakes, and therefore, the simplification of the governance, the Company started the process of divesting its participation in the coal business.

In December 2021, the Company entered into a binding agreement with Vulcan Resources (formerly known as Vulcan Minerals - "Vulcan") for the sale of these assets. Under the sale agreement Vulcan has committed to pay the gross amount of R\$1,285 (US\$270 million), in addition of a 10-year royalty agreement subject to certain mine production and coal price conditions and so, due to the nature and uncertainties related to the measurement of these royalties, gains will be recognized as incurred.

Therefore, in 2021 the Company adjusted the net assets of the coal business to the fair value less costs of disposal, resulting in impairment losses, and started presenting the coal segment as a discontinued operation starting from the year ended December 31, 2021.

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On April 25, 2022, the transaction was completed and the Company recorded a net income from discontinued operations of R\$9,818 (US\$2,060 million) for the nine-month period ended September 30, 2022, which is mainly driven by the reclassification of the cumulative translation adjustments of R\$14,636 (US\$3,072 million), from the stockholders' equity to the income statement, as required by IAS 21 - *The Effects of Changes in Foreign Exchange Rates*, partially offset by the derecognition of noncontrolling interest of R\$2,783 (US\$585 million) due to the deconsolidation of the coal assets. Additionally, until the closing of the transaction, the Company recorded losses of R\$2,867 (US\$589 million), due to the impairment of assets acquired in the period and working capital adjustments. These effects are presented below:

### (a) Net income and cash flows from discontinued operations

	Consolidated			
	Three-month period ended September 30,		Nine-month period ended September 30,	
	2022	2021	2022	2021
<b>Net income from discontinued operations</b>				
Net operating revenue	-	1,843	2,308	3,207
Cost of goods sold and services rendered	-	(1,902)	(1,370)	(5,529)
Operating expenses	-	(36)	(64)	(48)
Impairment and disposals of non-current assets, net	-	(12,286)	(2,867)	(16,638)
<b>Operating loss</b>	-	<b>(12,381)</b>	<b>(1,993)</b>	<b>(19,008)</b>
Cumulative translation adjustments (i)	-	-	14,636	2,134
Other financial results, net	-	(123)	(33)	(311)
Derecognition of noncontrolling interest	-	-	(2,783)	-
Equity results in associates and joint ventures	-	-	-	(144)
<b>Net income (loss) before income taxes</b>	-	<b>(12,504)</b>	<b>9,827</b>	<b>(17,329)</b>
Income taxes	-	4,336	(9)	4,336
<b>Net income (loss) from discontinued operations</b>	-	<b>(8,168)</b>	<b>9,818</b>	<b>(12,993)</b>
Net income (loss) attributable to noncontrolling interests	-	216	-	(556)
<b>Net income (loss) attributable to Vale's stockholders</b>	-	<b>(8,384)</b>	<b>9,818</b>	<b>(12,437)</b>

(i) In 2021, the Company assessed that its Australian subsidiaries (part of the coal business), which were no longer operational, were considered "abandoned" under IAS 21 and, therefore, the Company recognized a gain related to the cumulative translation adjustments in the amount of R\$2,134 (US\$424 million), which was reclassified to the net income for the nine-month period ended September 30, 2021.

	Consolidated			
	Three-month period ended September 30,		Nine-month period ended September 30,	
	2022	2021	2022	2021
<b>Cash flow from discontinued operations</b>				
<b>Operating activities</b>				
Net income (loss) before income taxes	-	(12,504)	9,827	(17,329)
<b>Adjustments:</b>				
Equity results in associates and joint ventures	-	-	-	144
Impairment and disposals of non-current assets, net	-	12,286	2,867	16,638
Derecognition of noncontrolling interest	-	-	2,783	-
Financial results, net	-	123	(14,603)	(1,823)
Decrease in assets and liabilities	-	392	(661)	167
<b>Net cash generated (used) by operating activities</b>	-	<b>297</b>	<b>213</b>	<b>(2,203)</b>
<b>Investing activities</b>				
Additions to property, plant and equipment	-	(257)	(201)	(607)
Acquisition of NLC, net of cash	-	-	-	(11,800)
Disposal of coal, net of cash	-	-	(333)	-
Other	-	2	-	380
<b>Net cash used in investing activities</b>	-	<b>(255)</b>	<b>(534)</b>	<b>(12,027)</b>
<b>Financing activities</b>				
Payments	-	(16)	(54)	(53)
<b>Net cash used in financing activities</b>	-	<b>(16)</b>	<b>(54)</b>	<b>(53)</b>
<b>Net cash generated (used) by discontinued operations</b>	-	<b>26</b>	<b>(375)</b>	<b>(14,283)</b>

## 15. Intangible

	Consolidated				
	Goodwill	Concessions	Software	Research and development project and patents	Total
<b>Balance at December 31, 2021</b>	<b>17,905</b>	<b>29,149</b>	<b>479</b>	<b>2,754</b>	<b>50,287</b>
Additions	-	2,294	130	-	2,424
Disposals	-	(62)	-	-	(62)
Amortization	-	(896)	(166)	-	(1,062)
Translation adjustment	(1,062)	-	(5)	-	(1,067)
<b>Balance at September 30, 2022</b>	<b>16,843</b>	<b>30,485</b>	<b>438</b>	<b>2,754</b>	<b>50,520</b>
Cost	16,843	37,412	2,899	2,754	59,908
Accumulated amortization	-	(6,927)	(2,461)	-	(9,388)
<b>Balance at September 30, 2022</b>	<b>16,843</b>	<b>30,485</b>	<b>438</b>	<b>2,754</b>	<b>50,520</b>

	Consolidated				
	Goodwill	Concessions	Software	Research and development project and patents	Total
<b>Balance at December 31, 2020</b>	<b>17,141</b>	<b>28,015</b>	<b>396</b>	<b>2,757</b>	<b>48,309</b>
Additions	-	642	118	-	760
Disposals	-	(23)	-	-	(23)
Amortization	-	(994)	(124)	-	(1,118)
Acquisition of NLC (note 14)	-	7,188	-	-	7,188
Impairment (i)	-	(7,510)	-	-	(7,510)
Translation adjustment	525	345	7	-	877
<b>Balance at September 30, 2021</b>	<b>17,666</b>	<b>27,663</b>	<b>397</b>	<b>2,757</b>	<b>48,483</b>
Cost	17,666	40,717	4,030	2,757	65,170
Accumulated amortization	-	(13,054)	(3,633)	-	(16,687)
<b>Balance at September 30, 2021</b>	<b>17,666</b>	<b>27,663</b>	<b>397</b>	<b>2,757</b>	<b>48,483</b>

(i) The Company recognized an impairment loss related to coal assets incorporated in the acquisition of NLC in the amount of R\$7,510 (US\$1,422 million) for the nine-month period ended September 30, 2021.

## 16. Property, plant and equipment

	Consolidated								
	Building and land	Facilities	Equipment	Mineral properties	Railway equipment	Right of use assets	Others	Constructions in progress	Total
Balance at December 31, 2021	45,408	40,357	26,463	43,206	13,024	8,579	13,864	43,094	233,995
Additions (i)	-	-	-	-	-	221	-	18,751	18,972
Disposals (ii)	(95)	(49)	(25)	(1)	(38)	-	(9)	(315)	(532)
Asset retirement obligation (note 23b)	-	-	-	(5,467)	-	-	-	-	(5,467)
Depreciation, depletion and amortization	(1,568)	(1,848)	(2,694)	(1,639)	(617)	(706)	(1,146)	-	(10,218)
Impairment reversal, net (note 14)	295	177	339	203	-	-	107	-	1,121
Transfer to asset held for sale - Midwestern System (note 14)	(295)	(177)	(339)	(203)	-	-	(107)	-	(1,121)
Translation adjustment	(1,012)	(732)	(762)	(3,249)	(20)	(256)	(533)	(2,051)	(8,615)
Transfers	1,682	2,304	2,440	2,010	623	-	1,546	(10,605)	-
Balance at September 30, 2022	44,415	40,032	25,422	34,860	12,972	7,838	13,722	48,874	228,135
Cost	81,585	65,088	59,938	83,502	21,273	11,128	30,530	48,874	401,918
Accumulated depreciation	(37,170)	(25,056)	(34,516)	(48,642)	(8,301)	(3,290)	(16,808)	-	(173,783)
Balance at September 30, 2022	44,415	40,032	25,422	34,860	12,972	7,838	13,722	48,874	228,135

	Consolidated								
	Building and land	Facilities	Equipment	Mineral properties	Railway equipment	Right of use assets	Others	Constructions in progress	Total
Balance at December 31, 2020	44,646	39,448	25,637	41,853	13,108	8,121	12,968	28,055	213,836
Additions (i)	-	-	-	-	-	292	-	18,624	18,916
Disposals (ii)	(18)	(138)	(315)	-	(25)	-	(5)	(239)	(740)
Asset retirement obligation	-	-	-	(2,508)	-	-	-	-	(2,508)
Depreciation, depletion and amortization	(1,774)	(1,923)	(2,632)	(1,713)	(687)	(700)	(1,053)	-	(10,482)
Acquisition of NLC (note 14)	1,185	663	515	-	1,640	167	10	460	4,640
Impairment (iii)	(1,220)	(604)	(451)	-	(1,653)	(172)	(10)	(1,240)	(5,350)
Translation adjustment	717	432	849	1,635	52	297	265	991	5,238
Transfers	1,194	1,959	2,750	1,144	447	-	1,133	(8,627)	-
Transfer to net assets held for sale	(16)	(12)	(17)	(8)	-	-	(5)	-	(58)
Balance at September 30, 2021	44,714	39,825	26,336	40,403	12,882	8,005	13,303	38,024	223,492
Cost	82,728	65,479	59,271	90,692	20,379	10,593	29,717	38,024	396,883
Accumulated depreciation	(38,014)	(25,654)	(32,935)	(50,289)	(7,497)	(2,588)	(16,414)	-	(173,391)
Balance at September 30, 2021	44,714	39,825	26,336	40,403	12,882	8,005	13,303	38,024	223,492

(i) Includes capitalized interest.

(ii) The net result from the disposal of assets recorded as "Impairment reversal (impairment and disposals) of non-current assets, net" was R\$859 (US\$174 million) (2021: R\$500 (US\$95 million)).

(iii) The Company recognized an impairment loss of R\$4,655 (US\$882 million) related to NLC assets for the nine-month period ended September 30, 2021.

### Right-of-use assets (leases)

	December 31, 2021	Additions and contract modifications	Depreciation	Translation adjustment	September 30, 2022
Ports	3,797	4	(201)	(106)	3,494
Vessels	2,744	(2)	(165)	(104)	2,473
Pelletizing plants	1,203	78	(181)	-	1,100
Properties	468	80	(104)	(3)	441
Energy plants	271	-	(26)	(27)	218
Mining equipment	96	61	(29)	(16)	112
<b>Total</b>	<b>8,579</b>	<b>221</b>	<b>(706)</b>	<b>(256)</b>	<b>7,838</b>

Lease liabilities are presented in note 20.

## 17. Financial and capital risk management

### a) Effects of derivatives on the balance sheet

	Consolidated			
	September 30, 2022		December 31, 2021	
	Current	Non-current	Current	Non-current
<b>Foreign exchange and interest rate risk</b>				
CDI & TJLP vs. US\$ fixed and floating rate swap	5	28	-	-
IPCA swap	-	-	228	-
Pre-dollar swap and forward transactions	333	628	112	46
Libor swap	31	26	6	62
	<b>369</b>	<b>682</b>	<b>346</b>	<b>108</b>
<b>Commodities price risk</b>				
Base metals products	364	103	156	2
Gasoil, Brent and freight	88	39	47	-
	<b>452</b>	<b>142</b>	<b>203</b>	<b>2</b>
Other	-	-	70	-
	-	-	<b>70</b>	-
<b>Total</b>	<b>821</b>	<b>824</b>	<b>619</b>	<b>110</b>

	Consolidated			
	September 30, 2022		December 31, 2021	
	Current	Non-current	Current	Non-current
<b>Foreign exchange and interest rate risk</b>				
CDI & TJLP vs. US\$ fixed and floating rate swap	252	937	842	2,453
IPCA swap	31	381	26	629
Pre-dollar swap and forward transactions	55	40	321	213
Libor swap	-	-	-	6
	<b>338</b>	<b>1,358</b>	<b>1,189</b>	<b>3,301</b>
<b>Commodities price risk</b>				
Base metals products	71	-	149	-
Gasoil, Brent and freight	132	48	14	-
	<b>203</b>	<b>48</b>	<b>163</b>	-
Other	17	61	3	-
<b>Total</b>	<b>558</b>	<b>1,467</b>	<b>1,355</b>	<b>3,301</b>

The balance of derivatives is presented in the balance sheet as “Other financial assets and liabilities” (note 12).

### b) Net exposure

	Consolidated	
	September 30, 2022	December 31, 2021
<b>Foreign exchange and interest rate risk</b>		
CDI & TJLP vs. US\$ fixed and floating rate swap	(1,156)	(3,295)
IPCA swap	(412)	(427)
Pre-dollar swap and forward transactions	866	(376)
Libor swap (i)	57	62
	<b>(645)</b>	<b>(4,036)</b>
<b>Commodities price risk</b>		
Base metals products	396	9
Gasoil, Brent and freight	(53)	33
	<b>343</b>	<b>42</b>
Other	(78)	67
	<b>(78)</b>	<b>67</b>
<b>Total</b>	<b>(380)</b>	<b>(3,927)</b>

(i) In March 2021, the UK Financial Conduct Authority (“FCA”), the financial regulator in the United Kingdom, announced the discontinuation of the LIBOR rate for all terms in pounds, euros, Swiss francs, yen and for terms of one week and two months in dollars at the end of December 2021 and the other terms at the end of June 2023. The Company has adopted market practices in its new agreements and is monitoring the transition of the agreements that are still subject to LIBOR exposure.

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### c) Effects of derivatives on the income statement

	Consolidated			
	Gain (loss) recognized in the income statement			
	Three-month period ended September 30,		Nine-month period ended September 30,	
	2022	2021	2022	2021
<b>Foreign exchange and interest rate risk</b>				
CDI & TJLP vs. US\$ fixed and floating rate swap	236	(1,024)	1,641	(781)
IPCA swap	(16)	(219)	320	148
Eurobonds swap	-	-	-	(154)
Pre-dollar swap and forward operations	987	(1,245)	2,014	(192)
Libor swap	11	8	221	47
	<b>1,218</b>	<b>(2,480)</b>	<b>4,196</b>	<b>(932)</b>
<b>Commodities price risk</b>				
Base metals products	(2)	10	40	(3)
Gasoil, Brent and freight	(161)	62	(34)	627
	<b>(163)</b>	<b>72</b>	<b>6</b>	<b>624</b>
Other	(52)	15	(138)	45
	<b>(52)</b>	<b>15</b>	<b>(138)</b>	<b>45</b>
<b>Total</b>	<b>1,003</b>	<b>(2,393)</b>	<b>4,064</b>	<b>(263)</b>

### d) Effects of derivatives on the cash flows

	Consolidated			
	Financial settlement inflows (outflows)			
	Three-month period ended September 30,		Nine-month period ended September 30,	
	2022	2021	2022	2021
<b>Foreign exchange and interest rate risk</b>				
CDI & TJLP vs. US\$ fixed and floating rate swap	(243)	(56)	(468)	(584)
IPCA swap	250	-	304	(97)
Eurobonds swap	-	-	-	(162)
Pre-dollar swap and forward operations	358	15	814	(435)
Libor and treasury swap	229	(1)	185	(5)
	<b>594</b>	<b>(42)</b>	<b>835</b>	<b>(1,283)</b>
<b>Commodities price risk</b>				
Base metals products	(87)	(78)	(964)	(117)
Gasoil, Brent and freight	8	322	55	814
Thermal and coking coal	-	(88)	-	(88)
	<b>(79)</b>	<b>156</b>	<b>(909)</b>	<b>609</b>
Other	(4)	-	(4)	-
<b>Total</b>	<b>511</b>	<b>114</b>	<b>(78)</b>	<b>(674)</b>

### e) Hedge accounting

	Consolidated			
	Gain (loss) recognized in the other comprehensive income			
	Three-month period ended September 30,		Nine-month period ended September 30,	
	2022	2021	2022	2021
Net investment hedge	(246)	(662)	162	(441)
Cash flow hedge (Thermal coal)	-	(63)	-	(87)
Cash flow hedge (Nickel and Palladium)	206	113	203	31

### Cash flow hedge (Nickel)

							Financial settlement			
							Inflows	Value at		
							(Outflows)	Risk	Fair value by year	
	September	December	Bought /	Average	September	December	September	September		
	30, 2022	31, 2021	Sold	strike	30, 2022	31, 2021	30, 2022	30, 2022	2022	2023
Nickel Revenue Hedge Program										
Forward	18,900	39,575	S	25,113	377	(143)	(1,057)	119	(63)	440
Total					377	(143)	(1,057)	119	(63)	440

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In 2022, the Company renewed its hedge nickel program due to the high volatility of nickel prices linked to future cash flows forecast for the period. In this program, hedging operations were executed, through forward contracts, to protect a portion of the projected volume of sales at floating, highly probable realization prices, guaranteeing prices above the average unit cost of nickel production for the protected volumes. The contracts are traded on the London Metal Exchange or over-the-counter market and the hedged item's P&L is offset by the hedged item's P&L due to Nickel price variation.

### Cash flow hedge (Palladium)

	Notional (t oz)				Fair value		Financial settlement Inflows (Outflows)	Value at Risk	Fair value by year
	September 30, 2022	December 31, 2021	Bought / Sold	Average strike (US\$/t oz)	September 30, 2022	December 31, 2021	September 30, 2022	September 30, 2022	2022
<b>Palladium Revenue Hedge Program</b>									
Call Options	11,057	44,228	S	3,368	-	(5)	-	-	-
Put Options	11,057	44,228	B	2,436	16	146	50	8	16
<b>Total</b>					<b>16</b>	<b>141</b>	<b>50</b>	<b>8</b>	<b>16</b>

### f) Protection programs for the R\$ denominated debt instruments and other liabilities

	Notional				Fair value		Financial Settlement Inflows (Outflows)	Value at Risk	Fair value by year		
	September 30, 2022	December 31, 2021	Index	Average rate	September 30, 2022	December 31, 2021	September 30, 2022	September 30, 2022	2022	2023	2024+
<b>CDI vs. US\$ fixed rate swap</b>											
Receivable	R\$ 6,636	R\$ 8,142	CDI	101.93%	(843)	(2,572)	(285)	150	(41)	(194)	(608)
Payable	US\$ 1,540	US\$ 1,906	Fix	2.52%							
<b>TJLP vs. US\$ fixed rate swap</b>											
Receivable	R\$ 879	R\$ 1,192	TJLP +	1.05%	(313)	(723)	(174)	22	(19)	(43)	(251)
Payable	US\$ 221	US\$ 320	Fix	3.41%							
<b>R\$ fixed rate vs. US\$ fixed rate swap</b>											
Receivable	R\$ 20,957	R\$ 5,730	Fix	5.22%	665	(354)	183	382	2	276	387
Payable	US\$ 3,968	US\$ 1,084	Fix	-1.35%							
<b>IPCA vs. US\$ fixed rate swap</b>											
Receivable	R\$ 1,348	R\$ 1,508	IPCA +	4.54%	(412)	(656)	42	33	(9)	(33)	(370)
Payable	US\$ 333	US\$ 373	Fix	3.88%							
<b>IPCA vs. CDI swap</b>											
Receivable	-	R\$ 769	IPCA +	-	-	228	262	-	-	-	-
Payable	-	R\$ 1,350	CDI	-							
<b>Forward</b>	<b>R\$ 4,395</b>	<b>R\$ 6,013</b>	<b>B</b>	<b>5.39</b>	<b>201</b>	<b>(22)</b>	<b>631</b>	<b>70</b>	<b>3</b>	<b>169</b>	<b>29</b>

### g) Protection program for Libor floating interest rate US\$ denominated debt

	Notional				Fair value		Financial Settlement Inflows (Outflows)	Value at Risk	Fair value by year		
	September 30, 2022	December 31, 2021	Index	Average rate	September 30, 2022	December 31, 2021	September 30, 2022	September 30, 2022	2022	2023	2024+
<b>Libor vs. US\$ fixed rate swap</b>											
Receivable	US\$ 150	US\$ 950	Libor	0.85%	57	62	226	7	11	38	8
Payable	US\$ 150	US\$ 950	Fix	0.85%							

In August 2022, swap operations to convert interest rates indexed to the Libor to fixed rates were liquidated due to the settlement of a portion of the debt. The Company kept its swap strategy for remaining amount of US\$150 of debt indexed to the Libor.



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### h) Protection for treasury volatility related to tender offer transaction

	Notional		Index	Average rate	Fair value		Financial Settlement Inflows (Outflows)	Value at Risk	Fair value by year
	September 30, 2022	December 31, 2021			September 30, 2022	December 31, 2021	September 30, 2022	September 30, 2022	2022
Forwards	-	-	-	-	-	-	(41)	-	-

To reduce the volatility of the premium to be paid to investors for the tender offer transaction issued on June 9, 2022, treasury lock transactions were implemented and already settled.

### i) Protection program for product prices and input costs

	Notional				Fair value		Financial settlement Inflows (Outflows)	Value at Risk	Fair value by year	
	September 30, 2022	December 31, 2021	Bought / Sold	Average strike (US\$/bbl)	September 30, 2022	December 31, 2021	September 30, 2022	September 30, 2022	2022	2023+
Brent crude oil (bbl)										
Call options	10,268,250	762,000	B	106	126	39	64	25	11	115
Put options	10,268,250	762,000	S	69	(152)	(14)	-	30	(42)	(110)
Forward Freight Agreement (days)										
Freight forwards	1,350	330	B	17,447	(28)	8	(10)	5	(18)	(10)

In 2022, the Company renewed its Brent crude oil hedge through options contracts on Brent Crude Oil, for different portions of the exposure, in order to reduce the impact of fluctuations in fuel oil prices on the hiring and availability of maritime freight and, consequently, to reduce the Company's cash flow volatility. The derivative transactions were negotiated over-the-counter and the protected item is part of the costs linked to the price of fuel oil used on ships. The financial settlement inflows or outflows are offset by the protected items' losses or gains.

### j) Other derivatives, including embedded derivatives in contracts

	Notional				Fair value		Financial settlement Inflows (Outflows)	Value at Risk	Fair value	Valor justo
	September 30, 2022	December 31, 2021	Bought / Sold	Average strike (US\$/bbl)	September 30, 2022	December 31, 2021	September 30, 2022	September 30, 2022	2022	2023+
Option related to a Special Purpose Entity (i)										
Call option	-	137,751,623	B	-	-	70	-	-	-	-
Embedded derivative in natural gas purchase agreement										
Call options	746,667	729,571	S	233	(78)	(3)	(4)	(47)	(78)	-
Fixed price sales protection										
Nickel forwards	792	342	B	20,630	2	8	9	5	1	2
Hedge program for products acquisition for resale										
Nickel forwards	84	1,206	S	22,523	1	(6)	35	1	1	-

(i) In January 2019, the Company acquired a call option related to shares of certain special purpose entities, which are part of a wind farm located in state of Bahia, Brazil, which expired in July 2022 without exercising the option.

**k) Sensitivity analysis of derivative financial instruments**

The following tables present the potential value of the instruments given hypothetical stress scenarios for the main market risk factors that impact the derivatives positions. The scenarios were defined as follows:

- Probable: the probable scenario was defined as the fair value of the derivative instruments as of September 30, 2022.
- Scenario I: fair value estimated considering a 25% deterioration in the associated risk variables.
- Scenario II: fair value estimated considering a 50% deterioration in the associated risk variables.

Instrument	Instrument's main risk events	Probable	Scenario I	Scenario II
<b>CDI vs. US\$ fixed rate swap</b>				
	R\$ depreciation	(843)	(2,815)	(4,787)
	US\$ interest rate inside Brazil decrease	(843)	(1,115)	(1,414)
	Brazilian interest rate increase	(843)	(1,042)	(1,242)
Protected item: R\$ denominated liabilities	R\$ depreciation	n.a.	-	-
<b>TJLP vs. US\$ fixed rate swap</b>				
	R\$ depreciation	(313)	(602)	(892)
	US\$ interest rate inside Brazil decrease	(313)	(342)	(373)
	Brazilian interest rate increase	(313)	(363)	(408)
	TJLP interest rate decrease	(313)	(347)	(382)
Protected item: R\$ denominated debt	R\$ depreciation	n.a.	-	-
<b>R\$ fixed rate vs. US\$ fixed rate swap</b>				
	R\$ depreciation	665	(4,190)	(9,045)
	US\$ interest rate inside Brazil decrease	665	200	(292)
	Brazilian interest rate increase	665	(295)	(1,180)
Protected item: R\$ denominated debt	R\$ depreciation	n.a.	-	-
<b>IPCA swap vs. US\$ fixed rate swap</b>				
	R\$ depreciation	(412)	(850)	(1,287)
	US\$ interest rate inside Brazil decrease	(412)	(470)	(533)
	Brazilian interest rate increase	(412)	(497)	(581)
	IPCA index decrease	(412)	(455)	(498)
Protected item: R\$ denominated debt	R\$ depreciation	n.a.	-	-
<b>US\$ floating rate vs. US\$ fixed rate swap</b>				
	US\$ Libor decrease	57	28	(1)
Protected item: Libor US\$ indexed debt	US\$ Libor decrease	n.a.	(28)	1
<b>NDF BRL/USD</b>				
	R\$ depreciation	201	(719)	(1,638)
	US\$ interest rate inside Brazil decrease	201	150	97
	Brazilian interest rate increase	201	90	(15)
Protected item: R\$ denominated liabilities	R\$ depreciation	n.a.	-	-
Instrument	Instrument's main risk events	Probable	Scenario I	Scenario II
<b>Fuel oil protection</b>				
Options	Price input decrease	(25)	(608)	(1,565)
Protected item: Part of costs linked to fuel oil prices	Price input decrease	n.a.	608	1,565
<b>Forward Freight Agreement</b>				
Forwards	Freight price decrease	(28)	(48)	(72)
Protected item: Part of costs linked to maritime freight prices	Freight price decrease	n.a.	48	72
<b>Nickel sales fixed price protection</b>				
Forwards	Nickel price decrease	2	(20)	(42)
Protected item: Part of nickel revenues with fixed prices	Nickel price decrease	n.a.	20	42
<b>Hedge program for products acquisition for resale (tons)</b>				
Forwards	Nickel price increase	1	-	(2)
Protected item: Part of revenues from products for resale	Nickel price increase	n.a.	-	2
<b>Nickel Revenue Hedging Program</b>				
Options	Nickel price increase	377	(158)	(693)
Protected item: Part of nickel revenues with fixed sales prices	Nickel price increase	n.a.	158	693
<b>Palladium Revenue Hedging Program</b>				
Options	Palladium price increase	16	1	(10)
Protected item: Part of palladium future revenues	Palladium price increase	n.a.	(1)	10
Instrument	Main risks	Probable	Scenario I	Scenario II
Embedded derivatives - Gas purchase	Pellet price increase	(78)	(160)	(253)

## I) Financial counterparties' ratings

The transactions of derivative instruments, cash and cash equivalents as well as short-term investments are held with financial institutions whose exposure limits are periodically reviewed and approved by the delegated authority. The financial institutions credit risk is performed through a methodology that considers, among other information, ratings provided by international rating agencies.

The table below presents the ratings in foreign currency as published by Moody's regarding the main financial institutions used by the Company to contract derivative instruments, cash and cash equivalents transaction.

	September 30, 2022		Consolidated December 31, 2021	
	Cash and cash equivalents and investment	Derivatives	Cash and cash equivalents and investment	Derivatives
Aa1	121	-	712	-
Aa2	1,880	10	1,592	81
Aa3	1,223	-	2,761	187
A1	10,650	671	6,387	19
A2	3,151	357	19,408	220
A3	4,853	134	8,471	111
Baa1	1	-	500	-
Baa2	616	-	59	-
Ba2 (i)	3,083	414	15,420	28
Ba3 (i)	2,662	93	11,096	-
Other	-	(34)	31	83
	<b>28,240</b>	<b>1,645</b>	<b>66,437</b>	<b>729</b>

(i) A substantial part of the balances is held with financial institutions in Brazil and, in local currency, they are deemed investment grade.

## 18. Financial assets and liabilities

The Company classifies its financial instruments in accordance with the purpose for which they were acquired, and determines the classification and initial recognition according to the following categories:

	September 30, 2022				Consolidated December 31, 2021			
	Amortized cost	At fair value through OCI	At fair value through profit or loss	Total	Amortized cost	At fair value through OCI	At fair value through profit or loss	Total
<b>Financial assets</b>								
<b>Current</b>								
Cash and cash equivalents (note 20)	28,015	-	-	28,015	65,409	-	-	65,409
Short-term investments (note 20)	-	-	225	225	-	-	1,028	1,028
Derivative financial instruments (note 17a)	-	-	821	821	-	-	619	619
Accounts receivable (note 9)	3,449	-	8,175	11,624	3,921	-	17,919	21,840
	<b>31,464</b>	<b>-</b>	<b>9,221</b>	<b>40,685</b>	<b>69,330</b>	<b>-</b>	<b>19,566</b>	<b>88,896</b>
<b>Non-current</b>								
Judicial deposits (note 25c)	6,968	-	-	6,968	6,808	-	-	6,808
Restricted cash (note 12)	420	-	-	420	653	-	-	653
Derivative financial instruments (note 17a)	-	-	824	824	-	-	110	110
Investments in equity securities (note 12)	-	32	-	32	-	33	-	33
	<b>7,388</b>	<b>32</b>	<b>824</b>	<b>8,244</b>	<b>7,461</b>	<b>33</b>	<b>110</b>	<b>7,604</b>
<b>Total of financial assets</b>	<b>38,852</b>	<b>32</b>	<b>10,045</b>	<b>48,929</b>	<b>76,791</b>	<b>33</b>	<b>19,676</b>	<b>96,500</b>
<b>Financial liabilities</b>								
<b>Current</b>								
Suppliers and contractors (note 11)	25,600	-	-	25,600	19,393	-	-	19,393
Derivative financial instruments (note 17a)	-	-	558	558	-	-	1,355	1,355
Loans, borrowings and leases (note 20)	2,412	-	-	2,412	6,720	-	-	6,720
Liabilities related to the concession grant (note 12a)	3,749	-	-	3,749	4,241	-	-	4,241
Other financial liabilities - Related parties (note 28)	734	-	-	734	2,192	-	-	2,192
Contract liability	2,695	-	-	2,695	3,158	-	-	3,158
	<b>35,190</b>	<b>-</b>	<b>558</b>	<b>35,748</b>	<b>35,704</b>	<b>-</b>	<b>1,355</b>	<b>37,059</b>
<b>Non-current</b>								
Derivative financial instruments (note 17a)	-	-	1,467	1,467	-	-	3,301	3,301
Loans, borrowings and leases (note 20)	63,565	-	-	63,565	70,189	-	-	70,189
Participative stockholders' debentures (note 19)	-	-	14,379	14,379	-	-	19,078	19,078
Liabilities related to the concession grant (note 12a)	8,520	-	-	8,520	8,017	-	-	8,017
Financial guarantees (note 6a)	-	-	546	546	-	-	3,026	3,026
	<b>72,085</b>	<b>-</b>	<b>16,392</b>	<b>88,477</b>	<b>78,206</b>	<b>-</b>	<b>25,405</b>	<b>103,611</b>
<b>Total of financial liabilities</b>	<b>107,275</b>	<b>-</b>	<b>16,950</b>	<b>124,225</b>	<b>113,910</b>	<b>-</b>	<b>26,760</b>	<b>140,670</b>

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### a) Hierarchy of fair value

	September 30, 2022				Consolidated December 31, 2021			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
<b>Financial assets</b>								
Short-term investments (note 20)	225	-	-	225	1,028	-	-	1,028
Derivative financial instruments (note 17a)	-	1,645	-	1,645	-	659	70	729
Accounts receivable (note 9)	-	8,175	-	8,175	-	17,919	-	17,919
Investments in equity securities (note 12)	32	-	-	32	33	-	-	33
	<b>257</b>	<b>9,820</b>	<b>-</b>	<b>10,077</b>	<b>1,061</b>	<b>18,578</b>	<b>70</b>	<b>19,709</b>
<b>Financial liabilities</b>								
Derivative financial instruments (note 17a)	-	2,025	-	2,025	-	4,656	-	4,656
Participative stockholders' debentures (note 19)	-	14,379	-	14,379	-	19,078	-	19,078
Financial guarantees (note 6)	-	546	-	546	-	3,026	-	3,026
	<b>-</b>	<b>16,950</b>	<b>-</b>	<b>16,950</b>	<b>-</b>	<b>26,760</b>	<b>-</b>	<b>26,760</b>

There were no transfers between levels 1, 2 and 3 of the fair value hierarchy during the periods presented.

#### a.i) Changes in Level 3 assets and liabilities during the period

	Consolidated	
	Derivative financial instruments	
	Financial assets	Financial liabilities
<b>Balance at December 31, 2021</b>	<b>70</b>	<b>-</b>
Losses recognized in the income statement	(70)	-
<b>Balance at September 30, 2022</b>	<b>-</b>	<b>-</b>

### b) Fair value of loans and borrowings

	September 30, 2022		Consolidated December 31, 2021	
	Current liabilities	Fair value	Non-current liabilities	Fair value
<b>Quoted in the secondary market:</b>				
Bonds	33,294	30,887	41,564	51,068
Debentures	1,270	1,254	2,160	2,160
<b>Debt contracts in Brazil in:</b>				
R\$, indexed to TJLP, TR, IPCA, IGP-M and CDI	1,502	1,505	1,975	2,508
R\$, with fixed interest	10	11	73	-
Basket of currencies and bonds in US\$ indexed to LIBOR	-	-	61	61
<b>Debt contracts in the international market in:</b>				
US\$, with variable and fixed interest	20,339	19,294	20,173	18,030
Other currencies, with variable interest	49	49	486	299
Other currencies, with fixed interest	475	469	597	654
<b>Total</b>	<b>56,939</b>	<b>53,469</b>	<b>67,089</b>	<b>74,780</b>

## 19. Participative stockholders' debentures

At the time of its privatization in 1997, the Company issued a total of 388,559,056 debentures to then-existing stockholders, including the Brazilian Government. The debentures' terms were set to ensure that pre-privatization stockholders would participate in potential future benefits that might be obtained from exploration of mineral resources. This obligation related to the debentures will cease when all the relevant mineral resources are exhausted, sold or otherwise disposed of by the Company.

Holders of participative stockholders' debentures have the right to receive semi-annual payments equal to an agreed percentage of revenues less value-added tax, transport fee and insurance expenses related to the trading of the products, derived from these mineral resources. On October 3, 2022 (subsequent event), the Company made available for withdrawal as remuneration the amount of R\$715 (US\$137 million) for the first semester of 2022, as disclosed on the "Shareholders' debentures report" made available on the Company's website.

To calculate the fair value of the liability, the Company uses the weighted average price of trades in the secondary market for the last month of the quarter. The average price decreased from R\$49.10 per debenture for the year ended December 31, 2021 to R\$37.00 per debenture for the period ended September 30, 2022, resulting in a gain of R\$3,800 (US\$758 million) recorded in the income statement for the nine-month period ended September 30, 2022 (an expense of R\$5,886 (US\$1,107 million) for the nine-month period ended September 30, 2021), respectively. As of September 30, 2022 the liability was R\$14,379 (US\$2,659 million) (R\$19,078 (US\$3,419 million) as at December 31, 2021).

The average price decreased from R\$43.39 per debenture for the period ended June 30, 2022 (R\$60.34 for the period ended June 30, 2021) to R\$37.00 per debenture for the period ended September 30, 2022 (R\$57.78 for the period ended September 30, 2021), resulting in a gain of R\$2,478 (US\$470 million) recorded in the income statement for the three-month period ended September 30, 2022 (a gain of R\$825 (US\$152 million) for the three-month period ended September 30, 2021).

## 20. Loans, borrowings, leases, cash and cash equivalents and short-term investments

### a) Net debt

The Company evaluates the net debt with the objective of ensuring the continuity of its business in the long term.

	Consolidated	
	September 30, 2022	December 31, 2021
Debt contracts	57,663	67,967
Leases	8,314	8,942
<b>Total of loans, borrowings and leases</b>	<b>65,977</b>	<b>76,909</b>
(-) Cash and cash equivalents	28,015	65,409
(-) Short-term investments	225	1,028
<b>Net debt</b>	<b>37,737</b>	<b>10,472</b>

### b) Cash and cash equivalents

Cash and cash equivalents include cash, immediately redeemable deposits, and short-term investments with an insignificant risk of change in value and readily convertible to cash, being R\$10,137 (US\$1,875 million) (R\$37,468 (US\$6,714 million) as of December 31, 2021) denominated in R\$, indexed to the CDI, R\$13,944 (US\$2,579 million) (R\$26,613 (US\$4,769 million) as of December 31, 2021) denominated in US\$ and R\$3,934 (US\$728 million) (R\$1,328 (US\$238 million) as of December 31, 2021) denominated in other currencies as of September 30, 2022.

### c) Short-term investments

As of September 30, 2022, the balance of R\$225 (US\$42 million) (R\$1,028 (US\$184 million) as of December 31, 2021) substantially comprises investments in exclusive investment fund immediately liquidity, whose portfolio is composed of committed transactions and Financial Treasury Bills ("LFTs"), which are floating-rate securities issued by the Brazilian government.

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### d) Loans, borrowings, and leases

#### i) Total debt

					Consolidated
	Average interest rate (i)	Current liabilities		Non-current liabilities	
		September 30, 2022	December 31, 2021	September 30, 2022	December 31, 2021
Quoted in the secondary market:					
US\$ Bonds	6.00%	-	-	33,294	41,564
R\$ Debentures (ii)	9.96%	243	1,038	1,027	1,122
Debt contracts in Brazil in (iii):					
R\$, indexed to TJLP, TR, IPCA, IGP-M and CDI	10.83%	237	530	1,265	1,445
R\$, with fixed interest	3.04%	10	67	-	6
Basket of currencies and bonds in US\$ indexed to LIBOR		-	61	-	-
Debt contracts in the international market in:					
US\$, with variable and fixed interest	4.20%	292	2,673	20,047	17,500
Other currencies, with variable interest	4.09%	-	430	49	56
Other currencies, with fixed interest	3.59%	59	67	416	530
Accrued charges		724	878	-	-
Total		1,565	5,744	56,098	62,223

(i) In order to determine the average interest rate for debt contracts with floating rates, the Company used the rate applicable as of September 30, 2022.

(ii) The Company has debentures in Brazil that were raised with BNDES for infrastructure investment projects.

(iii) The Company contracted derivatives to mitigate the exposure to changes in cash flows of debt contracted in Brazil, resulting in an average cost of 3.59% per year in US\$.

### Future flows of debt payments, principal and interest

	Consolidated	
	Principal	Estimated future interest payments (i)
2022	419	748
2023	550	3,342
2024	3,283	3,205
2025	800	3,086
Between 2026 and 2030	19,870	10,099
2031 onwards	32,017	12,993
<b>Total</b>	<b>56,939</b>	<b>33,473</b>

(i) Based on interest rate curves and foreign exchange rates applicable as of September 30, 2022 and considering that the payments of principal will be made on their contracted payments dates. The amount includes the estimated interest not yet accrued and the interest already recognized in the financial statements.

### Covenants

Some of the Company's debt agreements with lenders contain covenants. The primary financial covenants in those agreements require maintaining certain ratios, such as debt to EBITDA, which is defined in note 4, and interest coverage. The Company did not identify any instances of noncompliance as of September 30, 2022.

### Reconciliation of debt to cash flows arising from financing activities

	Consolidated			
	Quoted in the secondary market	Debt contracts in Brazil	Debt contracts on the international market	Total
<b>December 31, 2021</b>	<b>44,501</b>	<b>2,120</b>	<b>21,346</b>	<b>67,967</b>
Additions	-	-	4,133	4,133
Payments	(7,276)	(1,089)	(3,272)	(11,637)
Interest paid (i)	(2,943)	(239)	(174)	(3,356)
<b>Cash flow from financing activities</b>	<b>(10,219)</b>	<b>(1,328)</b>	<b>687</b>	<b>(10,860)</b>
Effect of exchange rate	(1,579)	(15)	(790)	(2,384)
Interest accretion	2,058	607	275	2,940
<b>Non-cash changes</b>	<b>479</b>	<b>592</b>	<b>(515)</b>	<b>556</b>
<b>September 30, 2022</b>	<b>34,761</b>	<b>1,384</b>	<b>21,518</b>	<b>57,663</b>

(i) Classified as cash flow due to operational activities.

## Notes to the Interim Financial Statements

Expressed in millions of Brazilian reais, unless otherwise stated



### Funding and payments

- In January 2022, the Company contracted two lines of credit indexed to Libor, in the amount of R\$2,361 (US\$425 million) with maturity in 2027 with the Bank of Nova Scotia, and prepaid R\$993 (US\$200 million) of a line of credit maturing in 2023 with the same bank.
- In May 2022, the Company contracted the credit line of R\$967 (US\$200 million) with MUFG Bank indexed to Secured Overnight Financing Rate ("SOFR") and maturing in 2027.
- In June 2022, the Company repurchased R\$6,520 (US\$1,291 million) of its bonds and paid a premium of R\$568 (US\$113 million), which has been recorded and is presented as "Bond premium repurchase" under the financial results for the nine-month period ended September 30, 2022.
- In July 2022, the Company contracted the credit line of R\$805 (US\$150 million) with SMBC Bank indexed to Secured Overnight Financing Rate ("SOFR") and maturing in 2027.
- In August 2022, the Company settle its infrastructure debentures of the 2nd series, by a payment of R\$865 (US\$170 million).
- In January 2021, the Company contracted the credit line of R\$1,633 (US\$300 million) with The New Development Bank maturing in 2035 and indexed to Libor + 2.49% per year.
- In March 2021, the Company redeemed all of its 3.750% bonds due January 2023, in the total amount of R\$4,946 (EUR750 million) and paid a premium of R\$354 (US\$63 million), which was recorded and is presented as "Bond premium repurchase" under the financial results for the nine-month period ended September 30, 2021.

### Lease liabilities

	Consolidated						
	December 31, 2021	Additions and contract modifications	Payments (i)	Interest	Sale of Midwestern System (note 14)	Translation adjustment	September 30, 2022
Ports	3,982	4	(274)	100	(79)	(109)	3,624
Vessels	2,731	(2)	(244)	68	-	(103)	2,450
Pelletizing plants	1,253	78	(47)	39	-	-	1,323
Properties	577	80	(139)	10	-	2	530
Energy plants	328	-	(21)	12	-	(35)	284
Mining equipment	71	61	(19)	9	-	(19)	103
<b>Total</b>	<b>8,942</b>	<b>221</b>	<b>(744)</b>	<b>238</b>	<b>(79)</b>	<b>(264)</b>	<b>8,314</b>
Current liabilities	976	-	-	-	-	-	847
Non-current liabilities	7,966	-	-	-	-	-	7,467
<b>Total</b>	<b>8,942</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8,314</b>

(i) The total amount of the variable lease payments not included in the measurement of the lease liabilities for the nine-month period ended September 30, 2022 was R\$1,386 (US\$270 million) (2021: R\$1.457 (US\$277 million)).

### Annual minimum payments and remaining lease term

The following table presents the undiscounted lease obligation by maturity date. The lease liability recognized in the balance sheet is measured at the present value of such obligations.

	2022	2023	2024	2025	2026 onwards	Total	Remaining contractual term (years)	Discount rate
Ports	88	336	333	330	3,941	5,028	1 to 21	3% to 5%
Vessels	85	333	325	317	1,869	2,929	3 to 11	3% to 4%
Pelletizing plants	223	262	217	217	606	1,525	1 to 11	2% to 5%
Properties	59	132	116	70	229	606	1 to 8	2% to 6%
Energy plants	9	32	28	28	269	366	1 to 8	5% to 6%
Mining equipment	10	33	23	20	15	101	1 to 6	2% to 6%
<b>Total</b>	<b>474</b>	<b>1,128</b>	<b>1,042</b>	<b>982</b>	<b>6,929</b>	<b>10,555</b>		

## 21. Brumadinho dam failure

On January 25, 2019, a tailings dam (“Dam I”) failed at the Córrego do Feijão mine, in the city of Brumadinho, state of Minas Gerais. The failure released a flow of tailings debris, destroying some of Vale’s facilities, affecting local communities and disturbing the environment. The tailings released have caused an impact of around 315 km in extension, reaching the nearby Paraopeba River. The dam failure in Brumadinho (“event”) resulted in 270 fatalities or presumed fatalities, including 4 victims still missing, and caused extensive property and environmental damage in the region.

As a result, on February 4, 2021, the Company entered into a Judicial Settlement for Integral Reparation (“Global Settlement”), which was under negotiations since 2019, with 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, to repair the environmental and social damage resulting from the Dam I rupture.

### Changes on the provisions in the period

	December 31, 2021	Operating expense	Present value adjustment	Disbursements	Consolidated September 30, 2022
<b>Global Settlement for Brumadinho</b>					
Payment obligations	7,964	-	205	(2,881)	5,288
Provision for socio-economic reparation and others	4,757	-	67	(337)	4,487
Provision for social and environmental reparation	3,933	-	220	(158)	3,995
	<b>16,654</b>	<b>-</b>	<b>492</b>	<b>(3,376)</b>	<b>13,770</b>
<b>Commitments</b>					
Tailings containment and geotechnical safety	1,772	1,215	(15)	(290)	2,682
Individual indemnification	640	-	(1)	(309)	330
Other commitments	671	162	(29)	(118)	686
	<b>3,083</b>	<b>1,377</b>	<b>(45)</b>	<b>(717)</b>	<b>3,698</b>
	<b>19,737</b>	<b>1,377</b>	<b>447</b>	<b>(4,093)</b>	<b>17,468</b>
Current liabilities	6,449				7,127
Non-current liabilities	13,288				10,341
<b>Liabilities</b>	<b>19,737</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>17,468</b>
Discount rate in nominal terms	<b>8.08%</b>				<b>8.75%</b>

The Company has incurred expenses, which have been recognized straight to the income statement, in relation to tailings management, humanitarian assistance, payroll, legal services, water supply, among others. In the three and nine-month periods ended September 30, 2022, the Company incurred expenses in the amounts of R\$836 (US\$160 million) and R\$2,236 (US\$437 million), respectively (R\$847 (US\$161 million) and R\$2,437 (US\$461 million), in the three and nine-month periods ended September 30, 2021).

### a) Global Settlement for Brumadinho

The Global Agreement includes: (i) payment obligations, of which the funds will be used directly by the State of Minas Gerais and Institutions of Justice for socio-economic and socio-environmental compensation projects; (ii) socioeconomic projects in Brumadinho and other municipalities; and (iii) compensation of the environmental damage caused by the dam rupture. These obligations are projected for an average period of 5 years.

For the measures (i) and (ii), the agreement specifies an amount for each project and changes in the original budget and deadlines may have an impact in the provision. In addition, despite the amount set by Global Settlement to carry out the environmental recovery actions, it has no cap due to the Company's legal obligation to fully repair the environmental damage caused by the dam rupture. The expenses related to these obligations are deducted from the income tax calculation, in accordance with the Brazilian tax regulation, which is subject to periodic inspection by the competent authorities. Therefore, despite the fact Vale is monitoring this provision, the amount recorded could materially change depending on several factors that are not under the Company's control.



## b) Contingencies and other legal matters

### (b.i) Public civil actions brought by the State of Minas Gerais and state public prosecutors for damages resulting from the rupture of Dam I

The Company is party to public civil actions brought by the State of Minas Gerais and justice institutions, claiming compensation for socioeconomic and socio-environmental damages resulting from the dam failure and seeking a broad range of preliminary injunctions ordering Vale to take specific remediation and reparation actions. As a result of the Global Settlement, settled in February 2021, the requests for the reparation of socio-environmental and socioeconomic damages caused by the dam rupture were substantially resolved. Indemnifications for individual damages was excluded from the Global Settlement, and the Term of Commitment signed with the Public Defendants of the State of Minas Gerais was ratified, whose parameters are utilized as a basis for the settlement of individual agreements. In the same year of 2021, it was initiated, by Vale and the State of Minas Gerais and justice institutions, the fulfilment of the Global Settlement.

### (b.ii) Collective Labor Civil Actions

In 2021, public civil actions were filed in the Betim Labor Court in the State of Minas Gerais, by a workers' unions claiming the payment of compensation for death damages to own and outsourced employees, who died as a result of the rupture of Dam I. Initial sentences were published condemning Vale to pay from R\$1 (US\$185 thousand) per fatal victim. Vale is defending itself on the lawsuits and understands that the likelihood of loss is possible.

### (b.iii) U.S. Securities class action suit

Vale is defending itself in a class action brought before a Federal Court in New York and filed by holders of securities - American Depositary Receipts ("ADRs") - issued by Vale. Following the decision of the Court, in May 2020, that denied the Motion to Dismiss presented by the Company, the Discovery phase has started and is expected to be concluded in 2023.

On November 24, 2021, a new Complaint was filed before the same Court by eight Plaintiffs, all investment funds, as an "opt-out" litigation from the class action already pending in the Eastern District of New York court, asserting virtually the same claims against the same defendants as those in the class case.

The likelihood of loss of these proceedings is classified as possible. However, considering the initial stage of this class action, it is not possible to reliably estimate the amount of a potential loss at this time. The Plaintiff did not specify the amounts alleged in this demand.

### (b.iv) Arbitration proceedings in Brazil filed by minority stockholders and a class association

In Brazil, Vale is a defendant in (i) one arbitration filed by 385 minority stockholders, (ii) two arbitrations filed by a class association allegedly representing all Vale's minority stockholders, and (iii) three arbitrations filed by foreign investment funds.

In the six proceedings, the Claimants argue Vale was aware of the risks associated with the dam and failed to disclose it to the stockholders. Based on such argument, they claim compensation for losses caused by the decrease of the value of the shares.

The expectation of loss is classified as possible for the six procedures and, considering the initial phase, it is not possible at this time to reliably estimate the amount of a possible loss.

In one of the proceedings filed by foreign funds, the Claimants initially estimated the amount of the alleged losses would be approximately R\$1,800 (US\$333 million). In another proceeding filed by foreign funds, the Claimants initially estimated the amount of the alleged losses would be approximately US\$721 (R\$3,900 million). The Company disagrees with the ongoing proceedings and understands that, in this case and at the current stage of the proceedings, the probability of loss in the amount claimed by the foreign funds is remote.

### (b.v) Lawsuit filed by the Securities and Exchange Commission ("SEC") and Investigations conducted by CVM

On April 28, 2022, SEC filed a suit against Vale alleging violations of U.S. securities laws arising from Vale's disclosures about its dam safety management, including the dam in Brumadinho. The SEC is seeking the imposition of civil monetary penalties, disgorgement and other relief within the SEC's authority in a lawsuit filed in a federal court. Vale believes that its disclosures did not violate U.S. law and is contesting such allegations. On September 29, 2022, Vale served the SEC with its motion to dismiss the complaint. The SEC's deadline to serve Vale with its Opposition to the motion to dismiss is currently ongoing. The likelihood of loss of this proceeding is classified as possible and it is not yet possible to reliably estimate the amount of a potential loss to the Company due to the initial phase of the lawsuit.

CVM is also conducting investigations relating to Vale's disclosure of relevant information to shareholders, investors and the market in general, especially regarding the conditions and management of Vale's dams. The likelihood of loss of this proceeding is classified as possible and it is not yet possible to reliably estimate the amount of a potential loss to the Company.

*(b.vi) Criminal proceedings and investigations*

In January 2020, the State Prosecutors of Minas Gerais ("MPMG") filed criminal charges against 16 individuals (including former executive officers of Vale and former employees) for a number of potential crimes, including homicide, and against Vale S.A. for alleged environmental crimes. In November 2021, the Brazilian Federal Police concluded an investigation on potential criminal liability for the Brumadinho dam rupture. The investigation has been sent to the Federal Public Prosecutors ("MPF"), which has not brought criminal charges against Vale. The MPF and the Brazilian Federal Police conducted a separate investigation into the causes of the dam rupture in Brumadinho, which may result in new criminal proceedings. Vale is defending itself against the criminal claims and is not possible to estimate when a decision will be issued.

*(b.vii) Decision of Brazilian Office of the Comptroller General ("CGU")*

In October 2020, the Company was informed that the CGU initiated an administrative proceeding based on the same allegations under the Brazilian Law 12,846/2013 in connection with inspection and monitoring activities relating to the Brumadinho dam. In August 2022, the CGU has concluded that Vale has failed to present reliable information to the Brazilian National Mining Agency ("ANM") and that it was issued a positive stability condition ("DCE") statement for the Dam I of Brumadinho, when, in the understanding of the CGU, it should be negative. Thus, even recognizing the non-existence of corruption acts, the CGU issued a fine of R\$86 (US\$16 million), the minimum baseline established by law, recognizing the non-involvement or tolerance of the top management. Vale has submitted a request for reconsideration, but it believes the likelihood of loss this amount is possible.

## c) Insurance

The Company is negotiating with insurers the payment of indemnification under its civil liability and Directors and Officers Liability Insurance. However, these negotiations are still in progress, therefore any payment of insurance proceeds will depend on the coverage definitions under these policies and assessment of the amount of loss. Due to uncertainties, no indemnification related to these insurers was recognized in these financial statements.

## 22. Liabilities related to associates and joint ventures

### a) Provision related to the rupture of Samarco dam

In November 2015, the Fundão tailings dam owned by Samarco Mineração S.A. (Samarco) failed, releasing tailings downstream, flooding certain communities and causing impacts on communities and the environment along the Doce river. The rupture resulted in 19 fatalities and caused property and environmental damage to the affected areas. Samarco is a joint venture equally owned by Vale S.A. and BHP Billiton Brasil Ltda. ("BHPB").

In 2016, Vale, Samarco and BHPB, entered into a Framework Agreement with the Federal Government of Brazil, the states of Espírito Santo and Minas Gerais and certain other public authorities to establish that is developing and executing environmental and socio-economic programs to remediate and provide compensation for damage caused by the Samarco dam failure.

In June 2018, Samarco, Vale and BHPB entered into a comprehensive agreement with the offices of the federal and state (Minas Gerais and Espírito Santo) prosecutors, public defenders and attorney general, among other parties ("TacGov Agreement"), improving the governance mechanism of Renova Foundation and establishing, among other things, a process for potential revisions to the remediation programs under the Framework Agreement.

Under the Framework Agreement, Samarco has primary responsibility for funding Fundação Renova's annual calendar year budget for the duration of the Framework Agreement. However, to the extent that Samarco does not meet its funding obligations, each of Vale and BHPB have secondary funding obligations under the Framework Agreement in proportion to its 50 per cent shareholding in Samarco.

Samarco began to gradually recommence operations in December 2020, however, there remains significant uncertainty regarding Samarco's long-term cash flow generation. In light of these uncertainties and based on currently available information, Vale has a provision for its obligations under the Framework Agreement programs in the amount of R\$15,963 (US\$2,953 million) at September 30, 2022 (December 31, 2021: R\$16,245 (US\$2,910 million)).

## b) Germano Dam

In addition to the Fundão tailings dam, Samarco owns the Germano dam, which was also built under the upstream method and has been inactive since the Fundão dam rupture. Due to the safety requirements set by the Brazilian National Mining Agency ("ANM"), Samarco prepared a project for the de-characterization of this dam, resulting in a provision for the de-characterization of the Germano tailings dam. As of September 30, 2022, Vale has a provision for de-characterization of Germano tailings dam in the amount of R\$1,033 (US\$191 million) (December 31, 2021: R\$1,126 (US\$202 million)).

## c) Changes on the provisions in the period

	Consolidated	
	2022	2021
Balance at January 1,	17,371	10,782
Additional provision	450	2,820
Disbursements	(598)	(743)
Present value adjustment	(227)	(537)
Balance at September 30,	16,996	12,322
	September 30, 2022	December 31, 2021
Current liabilities	10,959	9,964
Non-current liabilities	6,037	7,407
Liabilities	16,996	17,371

## d) Samarco's working capital

In addition to the provision, Vale S.A. made available R\$113 (US\$21 million) during the nine-month period ended September 30, 2021, which was fully used to fund Samarco's working capital. This amount was recognized in Vale's income statement as an expense in "Equity results and other results in associates and joint ventures". In 2022, Vale was not required to fund Samarco's working capital.

## e) Judicial recovery of Samarco

In April 2021, Samarco announced the request for Judicial Reorganization ("RJ") that was filed with the Minas Gerais Court to renegotiate its debt, which is held by bondholders abroad. The purpose of RJ is to restructure Samarco's debts and establish an independent and sustainable financial position, allowing Samarco to keep working to resume its operations safely and to fulfill its obligations related to the Renova Foundation.

In addition, the ongoing discussions in the context of the RJ may lead to the loss of deductibility of part of the expenses incurred with the Renova Foundation and of the deferred taxes over the total provision, depending on the method determined for restructuring Samarco's debts. As of September 30, 2022, the exposure is R\$7,951 (US\$1,471 million), of which R\$2,376 (US\$439 million) are expenses already incurred and considered as part of the Company's uncertain tax positions.

The Company is working in the perspective that the mechanisms resulting from the RJ will continue allowing the deductibility of these expenses. However, future decisions resulting from the negotiations regarding Samarco's capital structure, which are not under Vale's control, could materially change the deferred tax recognized by the Company.

## f) Contingencies related to Samarco accident

These proceedings include public civil actions brought by Brazilian authorities and multiple proceedings involving claims for significant amounts of damages and remediation measures. The Framework Agreements represents a model for the settlement of the public civil action brought by the MPF and other related proceedings. There are also putative securities class actions in the United States against Vale and some of its current and former officers and a criminal proceeding in Brazil. The main updates regarding the lawsuits in the period were as follows:

### (f.i) Public civil action brought by federal prosecutors and framework agreements

Vale is a defendant in several legal proceedings brought by governmental authorities and civil associations claiming socioenvironmental and socioeconomic damages and a number of specific remediation measures as a result of the rupture of Samarco's Fundão dam, including a claim brought by the Federal Public Prosecution Office in 2016 seeking R\$155 billion (US\$29 billion) (full amount of the claim, the effect for Vale would be 50% of this amount), which has been suspended from the date of ratification of the TacGov Agreement.

However, pre-requisites established in the TacGov Agreement, for renegotiation of the Framework Agreement were not implemented during the two-year period and on September 30, 2020, and Brazilian Federal and State prosecutors and public defenders filed a request for the immediate resumption of the R\$155 billion (US\$29 billion) claim.

Therefore, Vale, Samarco, BHPB and Federal and State prosecutors have been engaging in negotiations to seek a definitive settlement of the obligations under the Framework Agreement and the R\$155 billion (US\$29 billion) Federal Public Prosecution Office claim. The goal with a potential agreement is to provide a stable framework for the execution of reparation and compensation programs.

The potential agreement is still uncertain as it is subject to conclusion of the negotiations and approval by the Company, relevant authorities and Intervenant parties.

The estimate of the economic impact of a potential agreement will depend mainly on (i) a detailed assessment of the estimates of the amounts to be spent on the reparation and compensation projects being discussed, (ii) an analysis of the detailed scope of such projects to determine their overlap with the initiatives and amounts already provisioned; and (iii) the timing of the execution of projects and disbursements, which will impact the present value of the obligations.

Therefore, until any revisions to the Programs are agreed, Fundação Renova will continue to implement the Programs in accordance with the terms of the Framework Agreement and the TacGov Agreement, for which the expected costs are reflected in the Company's provision.

#### (f.ii) Criminal proceeding

In September 2019, the federal court of Ponte Nova dismissed all criminal charges against Vale representatives relating to the first group of charges, which concerns to the results of the Fundão dam failure, remaining only the legal entity in the passive pole. The second group of charges against Vale S.A. and one of the Company's former employee, which concerns the accusation of alleged crimes committed against the Environmental Public Administration, remained unchanged. The Company is defending itself and cannot estimate when a final decision on the case will be issued.

#### **g) Insurance**

Since the Fundão dam rupture, the Company negotiated with insurers the indemnification payments based on its general liability policies. In the nine-month period ended September 30, 2021, the Company received R\$181 (US\$33 million), which was recorded as a gain in the income statement as "Equity results and other results in associates and joint ventures". The Company did not receive any further insurance in 2022 and does not expect to receive any material amounts in the future.

### **23. Provision for de-characterization of dam structures and asset retirement obligations**

The Company is subject to laws and regulations that requires the decommissioning of the assets and mines sites at the end of the operation and, therefore, decommissioning expenditures are incurred predominantly when the Company ceases the operating activities. Depending on the geotechnical characteristics of the structures, the Company is required to de-characterize the structures, as described below.

#### **a) De-characterization of upstream and centerline geotechnical structures**

As a result of the Brumadinho dam rupture (note 21), the Company has decided to speed up the plan to "de-characterize" all of its tailings dams built under the upstream method, certain "centerline structures" and dikes, located in Brazil. The Company also operates tailings dams in Canada, including upstream compacted dams. However, the Company has decided that these dams will be decommissioned using other methods, and so, the provision to execute decommissioning of dams in Canada is recognized as "Asset retirement obligations and environmental obligations", presented in item (b) below.

In September 2020, the federal government enacted Law no. 14,066, which modified the National Dam Safety Policy (Law no. 12,334/2020), reinforcing the prohibition of constructing and raising upstream dams in Brazil. The statute also requires companies to de-characterize the structures built using the upstream method by 2022, or by a later date if it is proven that the de-characterization is not technically feasible by 2022. A substantial part of the Company's de-characterization projects will be completed in 15 years, which exceeds the date established in the regulation due to the characteristics and safety levels of the Company's geotechnical structures.

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Thus, in February 2022, the Company filed with the relevant bodies a request for an extension to perform the projects and, as a result, signed a Term of Commitment establishing legal and technical certainty for the process of de-characterization of the upstream dams, considering that the deadline defined was technically unfeasible, especially due to the necessary actions to increase safety during the works. With the signing of the agreement, the Company recorded an additional provision of R\$192 (US\$37 million) to make investments in social and environmental projects over a period of 8 years.

### Changes on the provisions in the period

	Consolidated	
	2022	2021
Balance at January 1,	19,666	11,897
Additional provision	375	-
Disbursements	(1,271)	(1,356)
Present value adjustment	(98)	(442)
Balance at September 30,	18,672	10,099

  

	September 30, 2022	December 31, 2021
Current liabilities	2,550	2,518
Non-current liabilities	16,122	17,148
Liabilities	18,672	19,666

In addition, due to the de-characterization projects, the Company has suspended some operations due to judicial decisions or technical analysis performed by Vale on its upstream dam structures located in Brazil. The Company has been recording losses in relation to the operational stoppage and idle capacity of the ferrous mineral segment in the amounts of R\$1,039 (US\$202 million) for the nine-month period ended on September 30, 2022 (R\$1,376 (US\$256 million) for the nine-month period ended on September 30, 2021). The Company is working on legal and technical measures to resume all operations at full capacity.

### b) Asset retirement obligations and environmental obligations

	Consolidated				
	Liability		Discount rate		
	September 30, 2022	December 31, 2021	September 30, 2022	December 31, 2021	Cash flow duration
Liability by geographical area					
Brazil	7,207	7,786	5.74%	5.48%	2119
Canada	7,909	15,221	1.39%	0.00%	2150
Oman	663	684	4.86%	3.03%	2035
Indonesia	376	432	4.49%	4.20%	2061
Other	1,000	1,432	0.02 - 2.55%	0.00 - 7.79%	-
	17,155	25,555			

### Changes on the provisions in the period

	Consolidated					
	2022			2021		
	Asset retirement obligations	Environmental obligations	Total	Asset retirement obligations	Environmental obligations	Total
Balance at January 1,	23,906	1,649	25,555	21,929	1,571	23,500
Present value adjustment (i)	(5,851)	(23)	(5,874)	(2,452)	(41)	(2,493)
Disbursements	(375)	(212)	(587)	(317)	(166)	(483)
Revisions on projected cash flows	200	5	205	-	-	-
Translation adjustment	(1,886)	(18)	(1,904)	811	8	819
Transfer to assets held for sale (note 14)	(231)	(9)	(240)	-	-	-
Balance at September 30,	15,763	1,392	17,155	19,971	1,372	21,343

  

	September 30, 2022			December 31, 2021		
	Asset retirement obligations	Environmental obligations	Total	Asset retirement obligations	Environmental obligations	Total
Current	711	526	1,237	400	550	950
Non-current	15,052	866	15,918	23,506	1,099	24,605
Liability	15,763	1,392	17,155	23,906	1,649	25,555

(i) Mainly refers to the increase in the discount rate of the asset retirement obligation in Canada, which increased from 0.00% to 1.39% in the nine-month period ended September 30, 2022. The adjustment in provision was recorded as the property, plant and equipment (note 16).

### c) Financial guarantees

The Company has issued letters of credit and surety bonds of R\$3,063 (US\$566 million) as of September 30, 2022 (R\$3,373 (US\$605 million) as of December 31, 2021), in connection with the asset retirement obligations for its Base Metals operations.

## 24. Provisions

	Consolidated			
	Current liabilities		Non-current liabilities	
	September 30, 2022	December 31, 2021	September 30, 2022	December 31, 2021
Provisions for litigation (note 25)	543	516	5,886	5,647
Employee post-retirement obligations (note 26)	565	553	6,811	8,556
Payroll, related charges and other remunerations	3,917	4,553	-	-
Onerous contracts (note 14)	-	208	-	4,879
	<b>5,025</b>	<b>5,830</b>	<b>12,697</b>	<b>19,082</b>

## 25. Litigations

The Company is defendant in numerous legal actions in the ordinary course of business, including civil, tax, environmental and labor proceedings.

The Company makes use of estimates to recognize the amounts and the probability of outflow of resources, based on reports and technical assessments and on management's assessment. Provisions are recognized for probable losses of which a reliable estimate can be made.

Arbitral, legal and administrative decisions against the Company, new jurisprudence and changes of existing evidence can result in changes regarding the probability of outflow of resources and on the estimated amounts, according to the assessment of the legal basis.

### a) Provision for legal proceedings

The Company has considered all information available to assess the likelihood of an outflow of resources and in the preparation on the estimate of the costs that may be required to settle the obligations.

**Tax litigations** - Mainly refers to the lawsuit filed in 2011 by Valepar (merged by Vale) seeking the right to exclude the amount of dividends received in the form of interest on capital ("JCP") from the PIS and COFINS tax base. The amount reserved for this proceeding as of September 30, 2022 is R\$2,345 (US\$434 million) (2021: R\$2,243 (US\$402 million)). This proceeding is guaranteed by a judicial deposit in the amount of R\$2,714 (US\$502 as of September 30, 2022) (2021: R\$2,586 (US\$463 million)).

**Civil litigations** - Refers to lawsuits for: (i) indemnities for losses, payments and contractual fines due to contractual imbalance or non-compliance that are alleged by suppliers, and (ii) land claims referring to real estate Vale's operational activities.

**Labor litigations** - Refers to lawsuits for individual claims by in-house employees and service providers, primarily involving demands for additional compensation for overtime work, moral damages or health and safety conditions.

**Environmental litigations** - Refers mainly to proceedings for environmental damages and issues related to environmental licensing.

	Consolidated			
	Tax litigation	Civil litigation	Labor litigation	Environmental litigation
<b>Balance at December 31, 2021</b>	<b>2,542</b>	<b>1,579</b>	<b>2,000</b>	<b>42</b>
Additions and reversals, net (note 5)	16	198	251	29
Payments	(5)	(266)	(221)	(3)
Indexation and interest	111	140	66	1
Transfer to held for sale (note 14)	(4)	(39)	(8)	-
<b>Balance at September 30, 2022</b>	<b>2,660</b>	<b>1,612</b>	<b>2,088</b>	<b>69</b>
Current liabilities	81	121	330	11
Non-current liabilities	2,579	1,491	1,758	58
	<b>2,660</b>	<b>1,612</b>	<b>2,088</b>	<b>69</b>

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					Consolidated
	Tax litigation	Civil litigation	Labor litigation	Environmental litigation	Total of litigation provision
<b>Balance at December 31, 2020</b>	<b>2,520</b>	<b>1,354</b>	<b>1,741</b>	<b>56</b>	<b>5,671</b>
Additions and reversals, net (note 5)	(5)	23	333	5	356
Payments	(25)	(112)	(216)	(21)	(374)
Acquisition of NLC (note 14)	-	11	38	-	49
Indexation and interest	30	115	147	1	293
Translation adjustment	-	1	3	-	4
<b>Balance at September 30, 2021</b>	<b>2,520</b>	<b>1,392</b>	<b>2,046</b>	<b>41</b>	<b>5,999</b>
Current liabilities	38	84	311	1	434
Non-current liabilities	2,482	1,308	1,735	40	5,565
	<b>2,520</b>	<b>1,392</b>	<b>2,046</b>	<b>41</b>	<b>5,999</b>

### b) Contingent liabilities

	Consolidated	
	September 30, 2022	December 31, 2021
Tax litigations	33,985	28,891
Civil litigations	6,465	8,384
Labor litigations	2,969	2,882
Environmental litigations	5,570	5,322
<b>Total</b>	<b>48,989</b>	<b>45,479</b>

In addition, as reported in the financial statements for the year ended December 31, 2021, the Company is a counterparty in several actions and the main updates on contingent liabilities since then, are discussed as follows:

#### (b.i) Tax proceedings - PIS/COFINS

The Company is a party to several collections related to the alleged improper use of PIS and COFINS credits (federal taxes levied on the companies' gross revenue). Brazilian tax legislation authorizes taxpayers to use PIS and COFINS tax credits, such as those referring to the acquisition of inputs for the production process and other items. The tax authorities mainly claim that (i) some credits were not related to the production process, and (ii) the right to use the tax credits was not adequately proven. During 2022 the Company received new proceedings in the amount of R\$2.862 (US\$529 million), for which the likelihood of loss is deemed possible.

#### (b.ii) Tax proceedings - Value added tax on services and circulation of goods ("ICMS")

Vale is engaged in several administrative and court proceedings relating to additional charges of ICMS by the tax authorities of different Brazilian states. In each of these proceedings, the tax authorities claim that (i) use of undue tax credit; (ii) failing to comply with certain accessory obligations; (iii) the Company is required to pay the ICMS on acquisition of electricity (iv) operations related to the collection of tax rate differential ("DIFAL") and (v) incidence of ICMS on its own transportation. During 2022, the Company received new proceedings in the amount of R\$453 (US\$84 million), for which the likelihood of loss is deemed possible.

### c) Judicial deposits

	Consolidated	
	September 30, 2022	December 31, 2021
Tax litigations	5,452	5,341
Civil litigations	742	559
Labor litigations	709	783
Environmental litigations	65	125
<b>Total</b>	<b>6,968</b>	<b>6,808</b>

### d) Guarantees contracted for legal proceedings

In addition to the above-mentioned tax, civil, labor and environmental judicial deposits, the Company contracted R\$11,792 (US\$2,181 million) in guarantees for its lawsuits, as an alternative to judicial deposits.



## 26. Employee post-retirement obligations

### a) Long-term incentive programs

The Company has long-term reward mechanisms that include the Matching program and the Performance Shares Units ("PSU") for eligible executives to retain and stimulate their performance.

On March 30, 2022, a new cycle of the Matching program started and the fair value was calculated on the Company's share price and their respective ADRs at the grant date, which was R\$95.87 and US\$20.03 per share. The Company will grant 1,437,588 shares for the new cycle (2021: 1,046,255 shares).

During the third quarter of 2022, a new cycle of the PSU program has started and the Company will grant 1,709,955 shares (2021: 1,474,723 shares). The fair value was calculated based on the performance factor using Monte Carlo simulations for the Return to Shareholders Indicator and health and safety and sustainability indicators. The assumptions used for the Monte Carlo simulations are shown in the table below, as well as the result used to calculate the expected value of the total performance factor.

PSU	2022
Granted shares	1,709,955
Date shares were granted	1/3/2022
VALE (BRL)	78.00
VALE ON (USD)	13.81
Expected volatility	39.00%p.y.
Expected term (in years)	3
Expected shareholder return indicator	51.20%
Expected performance factor	53.08%

The fair value of the program will be recognized on a straight-line basis over the required three-year period of service, net of estimated losses.

### b) Reconciliation of assets and liabilities recognized in the balance sheet

	September 30, 2022			Consolidated December 31, 2021		
	Overfunded pension plans	Underfunded pension plans	Other benefits	Overfunded pension plans	Underfunded pension plans	Other benefits
<b>Balance at beginning of the period</b>	<b>5,135</b>	-	-	<b>4,488</b>	-	-
Interest income	266	-	-	313	-	-
Changes on asset ceiling	1,305	-	-	326	-	-
Translation adjustment	32	-	-	8	-	-
<b>Balance at end of the period</b>	<b>6,738</b>	-	-	<b>5,135</b>	-	-
<b>Amount recognized in the balance sheet</b>						
Present value of actuarial liabilities	(26,717)	(3,203)	(5,886)	(15,808)	(22,228)	(7,967)
Fair value of assets	33,455	1,713	-	20,943	21,086	-
Effect of the asset ceiling	(6,738)	-	-	(5,135)	-	-
<b>Liabilities</b>	<b>-</b>	<b>(1,490)</b>	<b>(5,886)</b>	<b>-</b>	<b>(1,142)</b>	<b>(7,967)</b>
Current liabilities	-	(220)	(345)	-	(266)	(287)
Non-current liabilities	-	(1,270)	(5,541)	-	(876)	(7,680)
<b>Liabilities</b>	<b>-</b>	<b>(1,490)</b>	<b>(5,886)</b>	<b>-</b>	<b>(1,142)</b>	<b>(7,967)</b>



## 27. Stockholders' equity

### a) Share capital

As of September 30, 2022, the share capital was R\$77.300 (US\$61,614 million) corresponding to 4.778.889.263 shares issued and fully paid without par value.

	September 30, 2022		
	Common shares	Golden shares	Total
<b>Shareholders with more than 5% of total capital</b>	<b>1,317,200,871</b>	-	<b>1,317,200,871</b>
Previ	408,743,556	-	408,743,556
Capital World Investors	319,508,101	-	319,508,101
Blackrock, Inc	302,602,159	-	302,602,159
Mitsui&co	286,347,055	-	286,347,055
Free floating	3,225,390,427	-	3,225,390,427
<b>Golden shares</b>	-	<b>12</b>	<b>12</b>
<b>Total outstanding (without shares in treasury)</b>	<b>4,542,591,298</b>	<b>12</b>	<b>4,542,591,310</b>
Shares in treasury	236,297,953	-	236,297,953
<b>Total capital</b>	<b>4,778,889,251</b>	<b>12</b>	<b>4,778,889,263</b>

The information presented above is based on communications sent by stockholders pursuant to Instruction 358 issued by the Brazilian Securities Exchange Commission ("CVM").

### b) Cancellation of treasury shares

- On February 24, 2022, the Board of Directors approved the cancellation of 133,418,347 common shares issued by the Company and held in treasury, without reducing the value of its share capital. The effect of R\$14,589 (US\$2,830 million) was recorded in shareholders' equity as "Treasury shares used and cancelled".
- On July 28, 2022, the Board of Directors approved the cancellation of 220,150,800 common shares issued by the Company and held in treasury, without reducing the value of its share capital. The effect of R\$19,466 (US\$3,786 million) was recorded in shareholders' equity as "Treasury shares used and cancelled".
- On September 16, 2021, the Board of Directors approved the cancellation of 152,016,372 common shares of the Company acquired in previous buyback programs and held in treasury, without reducing its capital stock. The effect of R\$6,347 (US\$2,401 million) was recorded in shareholders' equity as "Treasury shares used and cancelled".

### c) Remuneration approved

- On February 24, 2022, the Board of Directors approved the remuneration to shareholders in the amount of R\$17,849 (US\$3,500 million), which was fully paid on March 16, 2022.
- On July 28, 2022, the Board of Directors approved the remuneration to shareholders in the amount of R\$16,243 (US\$3,000 million) which was fully paid on September 1, 2022.
- On February 25, 2021, the Board of Directors approved the remuneration to shareholders in the amount of R\$21,866 (US\$3,972 million), which was fully paid on March 15, 2021.
- On June 17, 2021, the Board of Directors approved an additional remuneration to shareholders in the amount of R\$11,046 (US\$2,200 million), which was fully paid on June 30, 2021.
- On September 16, 2021, the Board of Directors approved the stockholder's remuneration in the total amount of R\$40,200 (US\$7,391 million), which was fully paid on September 30, 2021.

### d) Share buyback

- On May 16, 2022, the Company reached the approved limit for the buyback program of up to 470,000,000 shares. Of this amount, 178,815,500 common shares and their respective ADRs were repurchased in 2022, corresponding R\$16,225 (US\$3,251 million), of which R\$8,758 (US\$1,750 million) were acquired through wholly owned subsidiaries and R\$7,467 (US\$1,501 million) by the Parent Company.

- On May 16, 2022, the Company started a new share buyback program to repurchase 500,000,000 common shares and their respective ADRs over the next 18 months. During the nine-month period ended September 30, 2022, the Company repurchased 119,114,479 common shares and their respective ADRs, corresponding to R\$9,339 (US\$1,819 million), of which R\$4,957 (US\$964 million) were acquired through wholly owned subsidiaries and R\$4,382 (US\$855 million) by the Parent Company.
- As of September 30, 2022, the Company hold 236,297,953 shares, being 125,456,849 through its wholly owned subsidiaries and 110,841,104 directly by the Parent Company, of which R\$10,610 (US\$2,127 million) through its wholly owned subsidiaries and R\$9,991 (US\$1,887 million) million by the Parent Company.
- During the nine-month period ended September 30, 2021, the Company repurchased 238,860,947 common shares at an average cost of US\$20.28 per share (R\$105.76 per share), being 99,842,600 through wholly owned subsidiaries and 139,018,347 directly by the parent company. The amount acquired was R\$25,261 (US\$4,845 million), being R\$9,687 (US\$1,837 million) through wholly owned subsidiaries and R\$15,574 (US\$3,008 million) by the Parent Company.

## 28. Related parties

The Company's related parties are subsidiaries, joint ventures, associates, stockholders and its related entities and key management personnel of the Company.

Related party transactions were made by the Company on terms equivalent to those that prevail in arm's-length transactions, with respect to price and market conditions that are no less favorable to the Company than those arranged with third parties.

Net operating revenue relates to sale of iron ore to the steelmakers and right to use capacity on railroads. Cost and operating expenses mostly relates to the variable lease payments of the pelletizing plants.

Purchases, accounts receivable and other assets, and accounts payable and other liabilities relate largely to amounts charged by joint ventures and associates related to the pelletizing plants operational lease and railway transportation services.

### a) Transactions with related parties

	Consolidated					
	2022			Three-month period ended September 30, 2021		
	Net operating revenue	Cost and operating expenses	Financial results	Net operating revenue	Cost and operating expenses	Financial results
<b>Joint ventures</b>	<b>543</b>	<b>(1,433)</b>	<b>(33)</b>	<b>927</b>	<b>(1,466)</b>	<b>(5)</b>
Companhia Siderúrgica do Pecém	482	-	7	927	-	17
Aliança Geração de Energia S.A.	-	(181)	-	-	(153)	-
Pelletizing companies (i)	-	(429)	(39)	-	(672)	(20)
MRS Logística S.A.	2	(616)	-	-	(449)	-
Norte Energia S.A.	-	(195)	-	-	(176)	-
Other	59	(12)	(1)	-	(16)	(2)
<b>Associates</b>	<b>384</b>	<b>(45)</b>	<b>(11)</b>	<b>359</b>	<b>(30)</b>	<b>(3)</b>
VLI	381	(43)	(3)	358	(30)	(3)
Other	3	(2)	(8)	1	-	-
<b>Major stockholders</b>	<b>355</b>	<b>-</b>	<b>461</b>	<b>271</b>	<b>-</b>	<b>(592)</b>
Bradesco	-	-	459	-	-	(597)
Mitsui	355	-	-	271	-	-
Banco do Brasil	-	-	2	-	-	5
<b>Total of continuing operations</b>	<b>1,282</b>	<b>(1,478)</b>	<b>417</b>	<b>1,557</b>	<b>(1,496)</b>	<b>(600)</b>
Discontinued operation - Coal (note 14)	-	-	-	-	-	1
<b>Total</b>	<b>1,282</b>	<b>(1,478)</b>	<b>417</b>	<b>1,557</b>	<b>(1,496)</b>	<b>(599)</b>

(i) Aggregated entities: Companhia Coreano-Brasileira de Pelotização, Companhia Hispano-Brasileira de Pelotização, Companhia Ítalo-Brasileira de Pelotização and Companhia Nipo-Brasileira de Pelotização.

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	Consolidated					
	2022			Nine-month period ended September 30, 2021		
	Net operating revenue	Cost and operating expenses	Financial results	Net operating revenue	Cost and operating expenses	Financial results
<b>Joint ventures</b>	<b>1,934</b>	<b>(3,770)</b>	<b>(148)</b>	<b>2,750</b>	<b>(3,221)</b>	<b>(48)</b>
Companhia Siderúrgica do Pecém	1,771	-	(6)	2,750	-	9
Aliança Geração de Energia S.A.	-	(449)	-	-	(425)	-
Pelletizing companies (i)	-	(1,272)	(141)	-	(1,148)	(55)
MRS Logística S.A.	5	(1,508)	-	-	(1,142)	-
Norte Energia S.A.	-	(512)	-	-	(467)	-
Other	158	(29)	(1)	-	(39)	(2)
<b>Associates</b>	<b>1,122</b>	<b>(108)</b>	<b>(17)</b>	<b>1,042</b>	<b>(80)</b>	<b>(10)</b>
VLI	1,116	(106)	(9)	1,038	(80)	(10)
Other	6	(2)	(8)	4	-	-
<b>Major stockholders</b>	<b>1,143</b>	<b>-</b>	<b>1,449</b>	<b>882</b>	<b>-</b>	<b>(145)</b>
Bradesco	-	-	1,444	-	-	(160)
Mitsui	1,143	-	-	882	-	-
Banco do Brasil	-	-	5	-	-	15
<b>Total of continuing operations</b>	<b>4,199</b>	<b>(3,878)</b>	<b>1,284</b>	<b>4,674</b>	<b>(3,301)</b>	<b>(203)</b>
Discontinued operation - Coal (note 14)	-	-	-	-	(518)	82
<b>Total</b>	<b>4,199</b>	<b>(3,878)</b>	<b>1,284</b>	<b>4,674</b>	<b>(3,819)</b>	<b>(121)</b>

(i) Aggregated entities: Companhia Coreano-Brasileira de Pelotização, Companhia Hispano-Brasileira de Pelotização, Companhia Ítalo-Brasileira de Pelotização and Companhia Nipo-Brasileira de Pelotização.

### b) Outstanding balances with related parties

	Consolidated					
	September 30, 2022			December 31, 2021		
	Cash and cash equivalents	Accounts receivable	Dividends receivable, financial instruments and other assets	Cash and cash equivalents	Accounts receivable	Dividends receivable, financial instruments and other assets
<b>Joint ventures</b>	<b>-</b>	<b>522</b>	<b>194</b>	<b>-</b>	<b>419</b>	<b>536</b>
Companhia Siderúrgica do Pecém	-	498	92	-	414	219
Pelletizing companies (i)	-	-	-	-	-	208
MRS Logística S.A.	-	-	102	-	-	105
Other	-	24	-	-	5	4
<b>Associates</b>	<b>-</b>	<b>115</b>	<b>95</b>	<b>-</b>	<b>102</b>	<b>17</b>
VLI	-	95	-	-	87	-
Other	-	20	95	-	15	17
<b>Major stockholders</b>	<b>2,601</b>	<b>13</b>	<b>378</b>	<b>10,184</b>	<b>23</b>	<b>28</b>
Bradesco	2,406	-	378	9,744	-	28
Mitsui	-	13	-	-	23	-
Banco do Brasil	195	-	-	440	-	-
<b>Pension plan</b>	<b>-</b>	<b>78</b>	<b>-</b>	<b>-</b>	<b>64</b>	<b>-</b>
<b>Total</b>	<b>2,601</b>	<b>728</b>	<b>667</b>	<b>10,184</b>	<b>608</b>	<b>581</b>

(i) Aggregated entities: Companhia Coreano-Brasileira de Pelotização, Companhia Hispano-Brasileira de Pelotização, Companhia Ítalo-Brasileira de Pelotização and Companhia Nipo-Brasileira de Pelotização.

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	Consolidated			
	September 30, 2022		December 31, 2021	
	Supplier and contractors	Financial instruments and other liabilities	Supplier and contractors	Financial instruments and other liabilities
<b>Joint ventures</b>	<b>1,837</b>	<b>734</b>	<b>388</b>	<b>2,192</b>
Pelletizing companies (i)	1,444	734	73	2,192
MRS Logística S.A.	220	-	228	-
Other	173	-	87	-
<b>Associates</b>	<b>43</b>	<b>475</b>	<b>57</b>	<b>262</b>
VLI	31	475	32	262
Other	12	-	25	-
<b>Major stockholders</b>	<b>7</b>	<b>627</b>	<b>9</b>	<b>1,479</b>
Bradesco	-	627	-	1,479
Mitsui	7	-	9	-
<b>Pension plan</b>	<b>46</b>	<b>-</b>	<b>54</b>	<b>-</b>
<b>Total</b>	<b>1,933</b>	<b>1,836</b>	<b>508</b>	<b>3,933</b>

(i) Aggregated entities: Companhia Coreano-Brasileira de Pelotização, Companhia Hispano-Brasileira de Pelotização, Companhia Ítalo-Brasileira de Pelotização and Companhia Nipo-Brasileira de Pelotização.

## 29. Parent Company information (individual interim information)

### a) Income tax reconciliation

	Parent Company	
	Nine-month period ended September 30, 2022	2021
<b>Income before income taxes</b>	<b>92,669</b>	<b>114,258</b>
<b>Income taxes at statutory rate – 34%</b>	<b>(31,507)</b>	<b>(38,848)</b>
<b>Adjustments that affect the basis of taxes:</b>		
Tax incentives	7,418	13,005
Equity results	10,555	(467)
Others	(2,770)	2,914
<b>Income taxes</b>	<b>(16,304)</b>	<b>(23,396)</b>

### b) Accounts receivable

	Parent Company	
	September 30, 2022	December 31, 2021
<b>Receivables from customer contracts</b>		
Related parties	50,225	46,044
Third parties		
Ferrous minerals	1,085	1,897
Base metals	7	9
Others	39	23
<b>Accounts receivable</b>	<b>51,356</b>	<b>47,973</b>
Expected credit loss	(57)	(61)
<b>Accounts receivable, net</b>	<b>51,299</b>	<b>47,912</b>

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### c) Other financial assets and liabilities

	Current		Parent Company Non-Current	
	September 30, 2022	December 31, 2021	September 30, 2022	December 31, 2021
<b>Other financial assets</b>				
Restricted cash	-	-	24	358
Derivative financial instruments	336	410	656	46
Investments in equity securities	-	-	32	33
Related parties - Loans	-	-	48	43
	<b>336</b>	<b>410</b>	<b>760</b>	<b>480</b>
<b>Other financial liabilities</b>				
Derivative financial instruments	282	879	1,243	3,042
Related parties - Loans	21,885	4,574	55,356	81,551
Related parties - Other financial liabilities	2,720	2,235	-	-
Financial guarantees	-	-	546	3,026
Liabilities related to the concession grant	3,749	4,241	8,520	8,017
Contract liability	24	25	-	-
	<b>28,660</b>	<b>11,954</b>	<b>65,665</b>	<b>95,636</b>

### d) Investments

	Parent Company	
	2022	2021
<b>Balance at January 1st,</b>	<b>143,640</b>	<b>181,319</b>
Additions	939	598
Capitalizations	-	2,194
Disposals	(210)	-
Sale of Midwestern System (note 14)	(1,399)	-
Translation adjustment	(32,168)	(3,477)
Equity results in income statement	28,662	(2,944)
Equity results and other results in associates and joint ventures	2,381	1,574
Equity results in statement of comprehensive income	1,054	2,500
Equity results in statement of noncontrolling	-	(1,600)
Dividends declared	(10,165)	(1,453)
Share buyback by subsidiaries	(13,716)	(9,687)
Impairment of investments	(553)	(338)
Mergers (i)	(2,002)	(3,546)
Share-based payment	17	2
Others	(1,498)	(1,067)
<b>Balance at September 30,</b>	<b>114,982</b>	<b>164,075</b>

(i) On April 29, 2022, the General Meeting approved the merger of New Steel into Vale S.A. The merger did not result in the issuance of new shares or changed Vale's share capital, and the respective net assets were incorporated. On April 30, 2021, the Company approved the merger of the spin-off net assets of Minerações Brasileiras Reunidas S.A. and the full merger of Companhia Paulista de Ferroligas and Valesul Alumínio S.A. The merger did not result in the issuance of new shares or changed Vale's share capital, and the respective net assets were incorporated.

### e) Intangible

	Parent Company		
	Concessions	Software	Research and development project and patents
<b>Balance at December 31, 2021</b>	<b>29,149</b>	<b>291</b>	<b>-</b>
Additions	2,294	99	-
Disposals	(62)	-	-
Amortization	(896)	(88)	-
Merger of New Steel	-	-	2,754
<b>Balance at September 30, 2022</b>	<b>30,485</b>	<b>302</b>	<b>2,754</b>
Cost	37,412	1,570	2,754
Accumulated amortization	(6,927)	(1,268)	-
<b>Balance at September 30, 2022</b>	<b>30,485</b>	<b>302</b>	<b>2,754</b>

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	Parent Company			
			Research and development project and patents	Total
<b>Balance at December 31, 2020</b>	<b>Concessions</b>	<b>Software</b>		
	28,015	228	-	28,243
Additions	555	79	-	634
Disposals	(41)	-	-	(41)
Amortization	(868)	(60)	-	(928)
<b>Balance at September 30, 2021</b>	<b>27,661</b>	<b>247</b>	<b>-</b>	<b>27,908</b>
Cost	33,602	2,703	-	36,305
Accumulated amortization	(5,941)	(2,456)	-	(8,397)
<b>Balance at September 30, 2021</b>	<b>27,661</b>	<b>247</b>	<b>-</b>	<b>27,908</b>

### f) Property, plant and equipment

	Parent Company							
	Building and land	Facilities	Equipment	Mineral properties	Railway equipment	Right of use assets	Others	Constructions in progress
<b>Balance at December 31, 2021</b>	<b>29,235</b>	<b>31,458</b>	<b>11,188</b>	<b>9,236</b>	<b>12,653</b>	<b>1,659</b>	<b>7,543</b>	<b>20,987</b>
Additions (i)	-	-	-	-	-	177	-	12,503
Disposals	(83)	(42)	(8)	-	(38)	(9)	(7)	(251)
Assets retirement obligation	-	-	-	23	-	-	-	-
Depreciation, amortization and depletion	(899)	(1,276)	(1,222)	(493)	(586)	(281)	(924)	-
Merger of New Steel	11	2	11	-	-	-	7	17
Transfers	1,418	2,037	1,516	(27)	608	(3)	1,411	(6,960)
<b>Balance at September 30, 2022</b>	<b>29,682</b>	<b>32,179</b>	<b>11,485</b>	<b>8,739</b>	<b>12,637</b>	<b>1,543</b>	<b>8,030</b>	<b>26,296</b>
Cost	42,891	47,202	24,144	13,314	20,471	2,689	18,039	26,296
Accumulated depreciation	(13,209)	(15,023)	(12,659)	(4,575)	(7,834)	(1,146)	(10,009)	-
<b>Balance at September 30, 2022</b>	<b>29,682</b>	<b>32,179</b>	<b>11,485</b>	<b>8,739</b>	<b>12,637</b>	<b>1,543</b>	<b>8,030</b>	<b>26,296</b>

	Parent Company							
	Building and land	Facilities	Equipment	Mineral properties	Railway equipment	Right of use assets	Others	Constructions in progress
<b>Balance at December 31, 2020</b>	<b>28,299</b>	<b>30,567</b>	<b>10,232</b>	<b>9,016</b>	<b>12,713</b>	<b>2,115</b>	<b>7,065</b>	<b>11,331</b>
Additions (i)	-	-	-	-	-	201	-	11,255
Disposals	(1)	(20)	(33)	-	(29)	(1,010)	(2)	(265)
Assets retirement obligation	-	-	-	(683)	-	-	-	-
Depreciation, amortization and depletion	(1,030)	(1,238)	(1,157)	(524)	(599)	(116)	(814)	-
Merger of MBR	434	293	277	641	25	-	104	1,226
Transfers	981	1,393	1,943	474	408	-	1,033	(6,232)
<b>Balance at September 30, 2021</b>	<b>28,683</b>	<b>30,995</b>	<b>11,262</b>	<b>8,924</b>	<b>12,518</b>	<b>1,190</b>	<b>7,386</b>	<b>17,315</b>
Cost	40,649	44,309	22,545	12,834	19,583	1,964	16,773	17,315
Accumulated depreciation	(11,966)	(13,314)	(11,283)	(3,910)	(7,065)	(774)	(9,387)	-
<b>Balance at Setembro 30, 2021</b>	<b>28,683</b>	<b>30,995</b>	<b>11,262</b>	<b>8,924</b>	<b>12,518</b>	<b>1,190</b>	<b>7,386</b>	<b>17,315</b>

(i) Includes capitalized borrowing costs.

### g) Loans and borrowings

	Parent Company			
	Current liabilities		Non-current liabilities	
	Average interest rate	September 30, 2022	December 31, 2021	September 30, 2022
<b>Quoted in the secondary market:</b>				
Bonds	6.00%	-	-	2,656
R\$, Debentures	9.96%	243	1,037	1,027
<b>Debt contracts in Brazil in:</b>				
R\$, indexed to TJLP, TR, IPCA, IGP-M and CDI	10.83%	237	532	1,265
R\$, with fixed interest	3.04%	10	63	-
Basket of currencies and bonds in US\$ indexed to LIBOR	-	-	62	-
<b>Debt contracts in the international market in:</b>				
US\$, with variable interest	4.20%	-	698	9,303
Other, with variable interest	4.09%	-	432	49
<b>Accrued charges</b>		<b>107</b>	<b>191</b>	<b>-</b>
<b>Total</b>		<b>597</b>	<b>3,015</b>	<b>14,300</b>

## Notes to the Interim Financial Statements

Expressed in millions of Brazilian reais, unless otherwise stated



The future flows of debt payments (principal) are as follows:

	Parent Company
	Debt principal
2022	126
2023	489
2024	3,215
2025	732
Between 2026 and 2030	5,198
2031 onwards	5,030
	<b>14,790</b>

### h) Transactions with related parties

	Parent Company					
	2022			Three-month period ended September 30, 2021		
	Net operating revenue	Cost and operating expenses	Financial results	Net operating revenue	Cost and operating expenses	Financial results
<b>Subsidiaries</b>	<b>34,249</b>	<b>(180)</b>	<b>104</b>	<b>64,714</b>	<b>(422)</b>	<b>619</b>
Vale International	34,194	-	160	64,672	-	633
Others	55	(180)	(56)	42	(422)	(14)
<b>Joint ventures</b>	<b>546</b>	<b>(1,435)</b>	<b>(6)</b>	<b>918</b>	<b>(1,465)</b>	<b>6</b>
Companhia Siderúrgica do Pecém	482	-	7	918	-	17
Aliança Geração de Energia S.A.	-	(181)	-	-	(153)	-
Pelletizing companies (i)	-	(430)	(13)	-	(672)	(9)
MRS Logística S.A.	5	(616)	-	-	(449)	-
Norte Energia S.A.	-	(195)	-	-	(176)	-
Others	59	(13)	-	-	(15)	(2)
<b>Associates</b>	<b>382</b>	<b>(43)</b>	<b>(12)</b>	<b>359</b>	<b>(30)</b>	<b>(3)</b>
VLI	381	(43)	(3)	358	(30)	(3)
Others	1	-	(9)	1	-	-
<b>Major stockholders</b>	<b>-</b>	<b>-</b>	<b>442</b>	<b>-</b>	<b>-</b>	<b>(613)</b>
Bradesco	-	-	441	-	-	(613)
Banco do Brasil	-	-	1	-	-	-
<b>Total</b>	<b>35,177</b>	<b>(1,658)</b>	<b>528</b>	<b>65,991</b>	<b>(1,917)</b>	<b>9</b>

(i) Aggregated entities: Companhia Coreano-Brasileira de Pelotização, Companhia Hispano-Brasileira de Pelotização, Companhia Ítalo-Brasileira de Pelotização and Companhia Nipo-Brasileira de Pelotização.

	Parent Company					
	2022			Nine-month period ended September 30, 2021		
	Net operating revenue	Cost and operating expenses	Financial results	Net operating revenue	Cost and operating expenses	Financial results
<b>Subsidiaries</b>	<b>94,573</b>	<b>(614)</b>	<b>(3,357)</b>	<b>156,608</b>	<b>(2,212)</b>	<b>(1,183)</b>
Vale International	94,405	-	(3,291)	156,473	-	(1,147)
Others	168	(614)	(66)	135	(2,212)	(36)
<b>Joint ventures</b>	<b>1,922</b>	<b>(3,770)</b>	<b>(40)</b>	<b>2,733</b>	<b>(3,221)</b>	<b>(22)</b>
Companhia Siderúrgica do Pecém	1,759	-	(6)	2,733	-	9
Aliança Geração de Energia S.A.	-	(449)	-	-	(425)	-
Pelletizing companies (i)	-	(1,272)	(33)	-	(1,148)	(29)
MRS Logística S.A.	5	(1,508)	-	-	(1,142)	-
Norte Energia S.A.	-	(512)	-	-	(467)	-
Others	158	(29)	(1)	-	(39)	(2)
<b>Associates</b>	<b>1,119</b>	<b>(106)</b>	<b>(17)</b>	<b>1,041</b>	<b>(80)</b>	<b>(10)</b>
VLI	1,116	(106)	(9)	1,038	(80)	(10)
Others	3	-	(8)	3	-	-
<b>Major stockholders</b>	<b>-</b>	<b>-</b>	<b>1,392</b>	<b>-</b>	<b>-</b>	<b>(209)</b>
Bradesco	-	-	1,389	-	-	(213)
Banco do Brasil	-	-	3	-	-	4
<b>Total</b>	<b>97,614</b>	<b>(4,490)</b>	<b>(2,022)</b>	<b>160,382</b>	<b>(5,513)</b>	<b>(1,424)</b>

(i) Aggregated entities: Companhia Coreano-Brasileira de Pelotização, Companhia Hispano-Brasileira de Pelotização, Companhia Ítalo-Brasileira de Pelotização and Companhia Nipo-Brasileira de Pelotização.

## Notes to the Interim Financial Statements

Expressed in millions of Brazilian reais, unless otherwise stated



### i) Outstanding balances with related parties

	Parent Company					
	September 30, 2022			December 31, 2021		
	Assets			Assets		
	Cash and cash equivalents	Accounts receivable	Dividends receivable, financial instruments and other assets	Cash and cash equivalents	Accounts receivable	Dividends receivable, financial instruments and other assets
<b>Subsidiaries</b>	-	49,513	3,028	-	45,475	1,036
Vale International S.A.	-	49,474	-	-	45,430	-
Minerações Brasileiras Reunidas S.A.	-	-	8	-	-	213
Salobo Metais	-	-	2,842	-	34	711
Other	-	39	178	-	11	112
<b>Joint ventures</b>	-	522	110	-	403	449
Companhia Siderúrgica do Pecém	-	498	92	-	401	219
Pelletizing companies (i)	-	-	-	-	-	208
MRS Logística S.A.	-	-	18	-	-	18
Other	-	24	-	-	2	4
<b>Associates</b>	-	112	95	-	102	17
VLI	-	95	-	-	87	-
Other	-	17	95	-	15	17
<b>Major stockholders</b>	292	-	378	8,355	-	28
Bradesco	281	-	378	7,970	-	28
Banco do Brasil	11	-	-	385	-	-
<b>Pension Plan</b>	-	78	-	-	64	-
<b>Total</b>	<b>292</b>	<b>50,225</b>	<b>3,611</b>	<b>8,355</b>	<b>46,044</b>	<b>1,530</b>

(i) Aggregated entities: Companhia Coreano-Brasileira de Pelotização, Companhia Hispano-Brasileira de Pelotização, Companhia Ítalo-Brasileira de Pelotização and Companhia Nipo-Brasileira de Pelotização.

	Parent Company					
	September 30, 2022			December 31, 2021		
	Liabilities			Liabilities		
	Supplier and contractors	Loans	Financial instruments and other liabilities	Supplier and contractors	Loans	Financial instruments and other liabilities
<b>Subsidiaries</b>	114	77,241	8,031	135	86,125	7,704
Vale International S.A.	-	77,241	5,209	-	86,125	5,367
Others	114	-	2,822	135	-	2,337
<b>Joint ventures</b>	1,837	-	-	387	-	-
Pelletizing companies (i)	1,444	-	-	73	-	-
MRS Logística S.A.	220	-	-	228	-	-
Others	173	-	-	86	-	-
<b>Associates</b>	34	-	475	42	-	262
VLI	31	-	475	32	-	262
Others	3	-	-	10	-	-
<b>Major stockholders</b>	7	-	627	-	-	1,479
Bradesco	-	-	627	-	-	1,479
Mitsui	7	-	-	-	-	-
<b>Pension plan</b>	46	-	-	54	-	-
<b>Total</b>	<b>2,038</b>	<b>77,241</b>	<b>9,133</b>	<b>618</b>	<b>86,125</b>	<b>9,445</b>

(i) Aggregated entities: Companhia Coreano-Brasileira de Pelotização, Companhia Hispano-Brasileira de Pelotização, Companhia Ítalo-Brasileira de Pelotização and Companhia Nipo-Brasileira de Pelotização.