



Interim Financial Statements

June 30, 2020

BRGAAP in R\$ (English)

**Vale S.A. 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 interim financial information accompanying consolidated and parent company interim accounting information of Vale S.A. ("Company"), included in the Quarterly Information Form - ITR for the quarter ended June 30, 2020, which comprises the parent company and consolidated statements of financial position as of June 30, 2020 and the respective parent company and consolidated income statements and the statements of comprehensive income for the three and six-month periods then ended, the statement of changes in equity for the six-month period then ended, the parent company statement of cash flows for the six-month period then ended and the consolidated statements of cash flows for the three and six-month periods then ended, and a summary of significant accounting policies and other explanatory information.

Management is responsible for the preparation of the consolidated and parent company 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.

Conclusion on the interim information

Based on our review, nothing has come to our attention that causes us to believe that the accompanying consolidated and parent company interim accounting information included in the quarterly information referred to above has not been prepared, in all material respects, in accordance with CPC 21 and IAS 34 applicable to the preparation of the Quarterly Information, and presented in accordance with the standards issued by the CVM.

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(A free translation of the original in Portuguese)

Vale S.A.

Emphasis of matter

Brumadinho's dam failure

We draw attention to Note 3 to the consolidated and parent company interim accounting information that describes the actions taken by the Company and the impacts on the interim accounting information as a consequence of the Brumadinho's Dam failure. As disclosed by Management, the Company has incurred costs and recorded provisions based on its best estimates and assumptions. Given the nature and uncertainties inherent in this type of event, the amounts recognized and/or disclosed will be reassessed by the Company and may be adjusted significantly in future periods, as new facts and circumstances become known. Our conclusion is not qualified in relation to this matter.

Other matters

Value added statements

The quarterly information referred to above includes the parent company and consolidated statements of value added for the six-month period ended June 30, 2020. 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, July 29, 2020

PricewaterhouseCoopers
Auditores Independentes
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 | | Six-month period ended | |
| | | June 30, | | June 30, | |
| | | 2020 | 2019 | 2020 | 2019 |
| Net operating revenue | 4(c) | 40,434 | 36,005 | 71,685 | 66,957 |
| Cost of goods sold and services rendered | 5(a) | (22,667) | (20,282) | (41,882) | (38,032) |
| Gross profit | | 17,767 | 15,723 | 29,803 | 28,925 |
| Operating expenses | | | | | |
| Selling and administrative expenses | 5(b) | (664) | (427) | (1,180) | (845) |
| Research and evaluation expenses | | (484) | (350) | (913) | (619) |
| Pre-operating and operational stoppage | | (1,277) | (1,313) | (2,469) | (2,128) |
| Brumadinho event | 3 | (693) | (5,921) | (1,401) | (23,236) |
| Other operating expenses, net | 5(c) | (1,282) | (153) | (1,549) | (471) |
| | | (4,400) | (8,164) | (7,512) | (27,299) |
| Impairment and disposals of non-current assets | 3 and 12 | (2,260) | (422) | (2,396) | (1,203) |
| Operating income | | 11,107 | 7,137 | 19,895 | 423 |
| Financial income | 6 | 714 | 479 | 1,206 | 843 |
| Financial expenses | 6 | (3,132) | (2,930) | (5,422) | (5,891) |
| Other financial items, net | 6 | (173) | (383) | (8,861) | (376) |
| Equity results and other results in associates and joint ventures | 12 and 16 | (2,785) | (2,862) | (3,552) | (2,548) |
| Income (loss) before income taxes | | 5,731 | 1,441 | 3,266 | (7,549) |
| Income taxes | 7 | | | | |
| Current tax | | (1,741) | (1,427) | (3,334) | (2,388) |
| Deferred tax | | 887 | (432) | 5,582 | 2,973 |
| | | (854) | (1,859) | 2,248 | 585 |
| Net income (loss) | | 4,877 | (418) | 5,514 | (6,964) |
| Loss attributable to noncontrolling interests | | (412) | (34) | (759) | (158) |
| Net income (loss) attributable to Vale's stockholders | | 5,289 | (384) | 6,273 | (6,806) |
| Earnings (loss) per share attributable to Vale's stockholders: | | | | | |
| Basic and diluted earnings (loss) per share: | 8 | | | | |
| Common share (R\$) | | 1.03 | (0.07) | 1.22 | (1.31) |

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 | | Six-month period ended | |
| | June 30, | | June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Net operating revenue | 24,855 | 19,763 | 43,648 | 36,548 |
| Cost of goods sold and services rendered | (9,942) | (9,097) | (18,559) | (18,298) |
| Gross profit | 14,913 | 10,666 | 25,089 | 18,250 |
| Operating revenues (expenses) | | | | |
| Selling and administrative expenses | (340) | (204) | (600) | (405) |
| Research and evaluation expenses | (202) | (176) | (380) | (335) |
| Pre-operating and operational stoppage | (1,001) | (1,269) | (2,161) | (2,045) |
| Equity results from subsidiaries | 1,682 | 2,921 | (5) | 6,996 |
| Brumadinho event | (693) | (5,921) | (1,401) | (23,236) |
| Other operating expenses, net | (1,257) | 658 | (1,843) | 345 |
| | (1,811) | (3,991) | (6,390) | (18,680) |
| Impairment and disposals of non-current assets | (180) | (431) | (138) | (1,062) |
| Operating income (loss) | 12,922 | 6,244 | 18,561 | (1,492) |
| Financial income | 379 | 58 | 552 | 168 |
| Financial expenses | (3,086) | (2,597) | (5,413) | (5,745) |
| Other financial items, net | (982) | (303) | (6,814) | (148) |
| Equity results and other results in associates and joint ventures | (2,785) | (2,862) | (3,552) | (2,548) |
| Income (loss) before income taxes | 6,448 | 540 | 3,334 | (9,765) |
| Income taxes | | | | |
| Current tax | (1,350) | (1,056) | (2,415) | (1,548) |
| Deferred tax | 191 | 132 | 5,354 | 4,507 |
| | (1,159) | (924) | 2,939 | 2,959 |
| Net income (loss) attributable to Vale's stockholders | 5,289 | (384) | 6,273 | (6,806) |
| Earnings (loss) per share attributable to Vale's stockholders: | | | | |
| Basic and diluted earnings (loss) per share: | | | | |
| Common share (R\$) | 1.03 | (0.07) | 1.22 | (1.31) |

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 | | Six-month period ended | |
| | June 30, | | June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Net income (loss) | 4,877 | (418) | 5,514 | (6,964) |
| Other comprehensive income (loss): | | | | |
| Items that will not be subsequently reclassified to income statement | | | | |
| Retirement benefit obligations | (1,093) | (584) | (1,046) | (549) |
| Fair value adjustment to investment in equity securities | 220 | (215) | (989) | (362) |
| Total items that will not be subsequently reclassified to income statement, net of tax | (873) | (799) | (2,035) | (911) |
| Items that may be subsequently reclassified to income statement | | | | |
| Translation adjustments | 4,395 | (902) | 22,700 | 277 |
| Net investments hedge (note 19c) | (632) | 128 | (3,026) | 84 |
| Cash flow hedge | (269) | - | 8 | - |
| Total of items that may be subsequently reclassified to income statement, net of tax | 3,494 | (774) | 19,682 | 361 |
| Total comprehensive income (loss) | 7,498 | (1,991) | 23,161 | (7,514) |
| Comprehensive income (loss) attributable to noncontrolling interests | (607) | (39) | (2,250) | (167) |
| Comprehensive income (loss) attributable to Vale's stockholders | 8,105 | (1,952) | 25,411 | (7,347) |

| | Parent company | | | |
|---|--------------------------|----------------|------------------------|----------------|
| | Three-month period ended | | Six-month period ended | |
| | June 30, | | June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Net income (loss) | 5,289 | (384) | 6,273 | (6,806) |
| Other comprehensive income (loss): | | | | |
| Items that will not be subsequently reclassified to income statement | | | | |
| Retirement benefit obligations | (10) | (20) | (19) | (34) |
| Fair value adjustment to investment in equity securities | 180 | (174) | (822) | (288) |
| Equity results | (1,043) | (605) | (1,194) | (589) |
| Total items that will not be subsequently reclassified to income statement, net of tax | (873) | (799) | (2,035) | (911) |
| Items that may be subsequently reclassified to income statement | | | | |
| Translation adjustments | 4,590 | (897) | 24,191 | 286 |
| Net investments hedge (note 19c) | (632) | 128 | (3,026) | 84 |
| Equity results | (269) | - | 8 | - |
| Total of items that may be subsequently reclassified to income statement, net of tax | 3,689 | (769) | 21,173 | 370 |
| Total comprehensive income (loss) | 8,105 | (1,952) | 25,411 | (7,347) |

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 June 30, | | Six-month period ended June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Cash flow from operations (a) | 11,182 | 14,275 | 20,188 | 25,741 |
| Interest on loans and borrowings paid (note 15) | (932) | (942) | (2,009) | (1,869) |
| Derivatives received (paid), net | (598) | (15) | 734 | (455) |
| Interest on participative stockholders' debentures paid | (469) | (351) | (469) | (351) |
| Income taxes (including settlement program) | (2,153) | (1,403) | (3,680) | (3,241) |
| Net cash provided by operating activities | 7,030 | 11,564 | 14,764 | 19,825 |
| Cash flow from investing activities: | | | | |
| Investment fund applications | (500) | - | (500) | - |
| Capital expenditures | (5,201) | (2,866) | (10,200) | (5,171) |
| Additions to investments | (1) | (1) | (365) | (2) |
| Acquisition of subsidiary, net of cash (note 12) | - | - | - | (1,884) |
| Proceeds from disposal of assets and investments | 14 | 46 | 17 | 393 |
| Dividends received from associates and joint ventures | 409 | 761 | 409 | 761 |
| Judicial deposits and restricted cash related to Brumadinho event (note 3) | (100) | 471 | (100) | (12,571) |
| Short-term investment (LFTs) | 2,434 | (39) | 3,318 | (50) |
| Other investments activities, net | (675) | (712) | (922) | (603) |
| Net cash used in investing activities | (3,620) | (2,340) | (8,343) | (19,127) |
| Cash flow from financing activities: | | | | |
| Loans and borrowings from third-parties (note 15) | - | 1,169 | 24,419 | 8,102 |
| Payments of loans and borrowings from third-parties (note 15) | (628) | (6,411) | (2,306) | (7,200) |
| Payments of leasing | (264) | (13) | (482) | (301) |
| Dividends and interest on capital paid to noncontrolling interest | (29) | (51) | (41) | (288) |
| Net cash provided by (used in) financing activities | (921) | (5,306) | 21,590 | 313 |
| Increase in cash and cash equivalents | 2,489 | 3,918 | 28,011 | 1,011 |
| Cash and cash equivalents in the beginning of the period | 61,284 | 19,513 | 29,627 | 22,413 |
| Effect of exchange rate changes on cash and cash equivalents | 2,560 | (255) | 8,695 | (248) |
| Cash and cash equivalents at end of the period | 66,333 | 23,176 | 66,333 | 23,176 |
| Non-cash transactions: | | | | |
| Additions to property, plant and equipment - capitalized loans and borrowing costs | 69 | 155 | 207 | 296 |
| Cash flow from operating activities: | | | | |
| Income (loss) before income taxes | 5,731 | 1,441 | 3,266 | (7,549) |
| Adjusted for: | | | | |
| Provisions related to Brumadinho event (note 3) | 108 | 5,672 | 108 | 22,126 |
| Equity results and other results in associates and joint ventures | 2,785 | 2,862 | 3,552 | 2,548 |
| Impairment and disposal of non-current assets | 2,260 | 422 | 2,396 | 1,203 |
| Depreciation, amortization and depletion | 4,336 | 3,786 | 8,012 | 6,815 |
| Financial results, net | 2,591 | 2,834 | 13,077 | 5,424 |
| Changes in assets and liabilities: | | | | |
| Accounts receivable | (5,071) | (2,186) | (2,518) | (141) |
| Inventories | (666) | 901 | (1,531) | (805) |
| Suppliers and contractors (i) | 522 | 1,925 | (2,324) | 1,563 |
| Provision - Payroll, related charges and other remunerations | 631 | 647 | (254) | (1,111) |
| Payments related to Brumadinho event (note 3) (ii) | (829) | (1,242) | (1,799) | (1,242) |
| Other assets and liabilities, net | (1,216) | (2,787) | (1,797) | (3,090) |
| Cash flow from operations (a) | 11,182 | 14,275 | 20,188 | 25,741 |

(i) Includes variable lease payments.

(ii) Additionally, the Company incurred in expenses in the amount of R\$585 and R\$1,293 for the three and six-month periods ended June 30, 2020, respectively, and R\$621 and R\$1,013 for the three and six-month periods ended June 30, 2019, respectively, which did not qualify for provision and, as such were recognized in the income statement.

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

Statement of Cash Flows

In millions of Brazilian reais

| | Parent company | |
|--|---------------------------------|-----------------|
| | Six-month period ended June 30, | |
| | 2020 | 2019 |
| Cash flow from operations (a) | 16,006 | 20,878 |
| Interest on loans and borrowings paid | (2,733) | (2,408) |
| Derivatives received (paid), net | (287) | (335) |
| Interest on participative stockholders' debentures paid | (469) | (351) |
| Income taxes (including settlement program) | (3,220) | (2,133) |
| Net cash provided by operating activities | 9,297 | 15,651 |
| Cash flow from investing activities: | | |
| Capital expenditures | (5,316) | (2,725) |
| Additions to investments | (865) | (2,334) |
| Investment fund applications | (500) | - |
| Proceeds from disposal of assets and investments | 119 | 16 |
| Dividends received | 412 | 1,081 |
| Judicial deposits and restricted cash related to Brumadinho event | (100) | (12,571) |
| Short-term investment (LFTs) | 3,263 | (166) |
| Other investments activities, net (i) | (4,301) | (1,298) |
| Net cash used in investing activities | (7,288) | (17,997) |
| Cash flow from financing activities: | | |
| Loans and borrowings from third-parties | - | 2,894 |
| Payments of loans and borrowings from third-parties | (1,780) | (3,686) |
| Payments of leasing | (67) | (53) |
| Net cash used in financing activities | (1,847) | (845) |
| Increase (decrease) in cash and cash equivalents | 162 | (3,191) |
| Cash and cash equivalents in the beginning of the period | 9,597 | 4,835 |
| Effects of disposals of subsidiaries and merger, net of cash and cash equivalents | 188 | - |
| Cash and cash equivalents at end of the period | 9,947 | 1,644 |
| Non-cash transactions: | | |
| Additions to property, plant and equipment - capitalized loans and borrowing costs | 207 | 295 |
| Cash flow from operating activities: | | |
| Income (loss) before income taxes | 3,334 | (9,765) |
| Adjusted for: | | |
| Provisions related to Brumadinho event | 108 | 22,126 |
| Equity results from subsidiaries | 5 | (6,996) |
| Equity results and other results in associates and joint ventures | 3,552 | 2,548 |
| Impairment and disposal of non-current assets | 138 | 1,062 |
| Depreciation, amortization and depletion | 3,988 | 3,705 |
| Financial results, net | 11,675 | 5,725 |
| Changes in assets and liabilities: | | |
| Accounts receivable | (4,319) | 4,882 |
| Inventories | (676) | (497) |
| Suppliers and contractors | (1,616) | 2,028 |
| Provision - Payroll, related charges and other remunerations | (101) | (578) |
| Payments related to Brumadinho event (note 3) | (1,799) | (1,242) |
| Other assets and liabilities, net | 1,717 | (2,120) |
| Cash flow from operations (a) | 16,006 | 20,878 |

(i) Includes loans and advances from/to related parties.

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

Statement of Financial Position

In millions of Brazilian reais

| | | Consolidated | | Parent company | |
|--|-------|----------------|-------------------|----------------|-------------------|
| | Notes | June 30, 2020 | December 31, 2019 | June 30, 2020 | December 31, 2019 |
| Assets | | | | | |
| Current assets | | | | | |
| Cash and cash equivalents | | 66,333 | 29,627 | 9,947 | 9,597 |
| Short-term investments | 15 | 507 | 3,329 | 507 | 3,309 |
| Accounts receivable | 9 | 14,219 | 10,195 | 25,263 | 16,599 |
| Other financial assets | 11 | 3,031 | 3,062 | 565 | 1,140 |
| Inventories | 10 | 22,221 | 17,228 | 6,040 | 5,310 |
| Prepaid income taxes | | 794 | 1,492 | 585 | 648 |
| Recoverable taxes | | 2,165 | 2,227 | 991 | 929 |
| Others | | 1,925 | 1,538 | 1,965 | 1,569 |
| | | 111,195 | 68,698 | 45,863 | 39,101 |
| Non-current assets | | | | | |
| Judicial deposits | 21(c) | 11,333 | 12,629 | 10,994 | 12,242 |
| Other financial assets | 11 | 12,590 | 11,074 | 3,176 | 3,972 |
| Prepaid income taxes | | 3,191 | 2,407 | - | - |
| Recoverable taxes | | 2,827 | 2,446 | 1,736 | 1,471 |
| Deferred income taxes | 7(a) | 53,689 | 37,151 | 42,340 | 28,770 |
| Others | | 3,164 | 1,998 | 977 | 937 |
| | | 86,794 | 67,705 | 59,223 | 47,392 |
| Investments | 12 | 11,343 | 11,278 | 178,547 | 144,594 |
| Intangibles | 13 | 36,724 | 34,257 | 16,176 | 16,271 |
| Property, plant and equipment | 14 | 209,248 | 187,733 | 108,244 | 105,875 |
| | | 344,109 | 300,973 | 362,190 | 314,132 |
| Total assets | | 455,304 | 369,671 | 408,053 | 353,233 |
| Liabilities | | | | | |
| Current liabilities | | | | | |
| Suppliers and contractors | | 16,068 | 16,556 | 9,205 | 10,765 |
| Loans and borrowings | 15 | 5,407 | 4,895 | 4,321 | 3,986 |
| Leases | 14 | 1,206 | 910 | 413 | 337 |
| Other financial liabilities | 11 | 6,955 | 4,328 | 12,411 | 6,672 |
| Taxes payable | | 2,165 | 2,065 | 1,466 | 1,062 |
| Settlement program ("REFIS") | 7(c) | 1,758 | 1,737 | 1,722 | 1,702 |
| Liabilities related to associates and joint ventures | 16 | 3,880 | 2,079 | 3,880 | 2,079 |
| Provisions | 20 | 4,656 | 4,956 | 2,850 | 3,210 |
| Liabilities related to Brumadinho | 3 | 5,547 | 6,319 | 5,547 | 6,319 |
| De-characterization of dams | 3 | 1,709 | 1,247 | 1,709 | 1,247 |
| Interest on capital | | 6,348 | 6,333 | 6,333 | 6,333 |
| Others | | 5,373 | 4,381 | 4,665 | 3,187 |
| | | 61,072 | 55,806 | 54,522 | 46,899 |
| Non-current liabilities | | | | | |
| Loans and borrowings | 15 | 87,151 | 47,730 | 21,061 | 18,713 |
| Leases | 14 | 7,843 | 6,308 | 1,877 | 1,833 |
| Other financial liabilities | 11 | 24,230 | 17,622 | 97,905 | 76,365 |
| Settlement program ("REFIS") | 7(c) | 13,295 | 14,012 | 13,031 | 13,733 |
| Deferred income taxes | 7(a) | 8,933 | 7,585 | - | - |
| Provisions | 20 | 42,755 | 34,233 | 11,391 | 11,368 |
| Liabilities related to Brumadinho | 3 | 3,887 | 5,703 | 3,887 | 5,703 |
| De-characterization of dams | 3 | 7,522 | 8,787 | 7,522 | 8,787 |
| Liabilities related to associates and joint ventures | 16 | 5,258 | 4,774 | 5,258 | 4,774 |
| Streaming transactions | | 11,122 | 8,313 | - | - |
| Others | | 1,861 | 1,649 | 4,640 | 3,578 |
| | | 213,857 | 156,716 | 166,572 | 144,854 |
| Total liabilities | | 274,929 | 212,522 | 221,094 | 191,753 |
| Stockholders' equity | | | | | |
| | 23 | | | | |
| Equity attributable to Vale's stockholders | | 186,959 | 161,480 | 186,959 | 161,480 |
| Equity attributable to noncontrolling interests | | (6,584) | (4,331) | - | - |
| Total stockholders' equity | | 180,375 | 157,149 | 186,959 | 161,480 |
| Total liabilities and stockholders' equity | | 455,304 | 369,671 | 408,053 | 353,233 |

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 |
|--|---------------|-----------------|-----------------|-----------------|----------------|------------------------------------|-------------------|--|---|----------------------------|
| Balance at December 31, 2019 | 77,300 | 3,634 | 28,577 | (6,520) | (5,673) | 64,162 | - | 161,480 | (4,331) | 157,149 |
| Net income (loss) | - | - | - | - | - | - | 6,273 | 6,273 | (759) | 5,514 |
| Other comprehensive income | - | - | - | - | (2,035) | 21,173 | - | 19,138 | (1,491) | 17,647 |
| Dividends of noncontrolling interest | - | - | - | - | - | - | - | - | (28) | (28) |
| Capitalization of noncontrolling interest advances | - | - | - | - | - | - | - | - | 25 | 25 |
| Assignment and transfer of shares (note 23) | - | - | - | 68 | - | - | - | 68 | - | 68 |
| Balance at June 30, 2020 | 77,300 | 3,634 | 28,577 | (6,452) | (7,708) | 85,335 | 6,273 | 186,959 | (6,584) | 180,375 |

| | 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 |
|--|---------------|-----------------|-----------------|-----------------|----------------|------------------------------------|-------------------|--|---|----------------------------|
| Balance at December 31, 2018 | 77,300 | 3,634 | 42,502 | (6,604) | (5,912) | 59,483 | - | 170,403 | 3,280 | 173,683 |
| Loss | - | - | - | - | - | - | (6,806) | (6,806) | (158) | (6,964) |
| Other comprehensive income | - | - | - | - | (922) | 381 | - | (541) | (9) | (550) |
| Dividends of noncontrolling interest | - | - | - | - | - | - | - | - | (326) | (326) |
| Capitalization of noncontrolling interest advances | - | - | - | - | - | - | - | - | 56 | 56 |
| Assignment and transfer of shares (note 23) | - | - | - | 84 | - | - | - | 84 | - | 84 |
| Balance at June 30, 2019 | 77,300 | 3,634 | 42,502 | (6,520) | (6,834) | 59,864 | (6,806) | 163,140 | 2,843 | 165,983 |

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

Value Added Statement

In millions of Brazilian Reals

| | Consolidated | | Parent company | |
|---|---------------|---------------|---------------------------------|----------------|
| | | | Six-month period ended June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Generation of value added | | | | |
| Gross revenue | | | | |
| Revenue from products and services | 72,329 | 67,715 | 44,217 | 37,208 |
| Revenue from the construction of own assets | 2,594 | 3,645 | 1,096 | 2,041 |
| Other revenues | 574 | 333 | 309 | 218 |
| Less: | | | | |
| Cost of products, goods and services sold | (11,702) | (10,638) | (5,727) | (4,961) |
| Material, energy, third-party services and other | (16,728) | (16,268) | (5,156) | (5,608) |
| Impairment of non-current assets and others results | (2,396) | (1,203) | (138) | (1,062) |
| Brumadinho event | (1,401) | (23,236) | (1,401) | (23,236) |
| Other costs and expenses | (7,683) | (4,639) | (4,907) | (2,909) |
| Gross value added | 35,587 | 15,709 | 28,293 | 1,691 |
| Depreciation, amortization and depletion | (8,012) | (6,815) | (3,988) | (3,705) |
| Net value added | 27,575 | 8,894 | 24,305 | (2,014) |
| Received from third parties | | | | |
| Equity results from entities | (3,552) | (2,548) | (3,557) | 4,448 |
| Financial income | 7,421 | 794 | 6,338 | 318 |
| Total value added to be distributed | 31,444 | 7,140 | 27,086 | 2,752 |
| Direct compensation | 3,880 | 3,953 | 1,910 | 1,702 |
| Benefits | 87 | 49 | 49 | 42 |
| F.G.T.S. | 14 | 10 | 12 | 10 |
| Federal taxes | 1,195 | 2,448 | 226 | (129) |
| State taxes | 140 | 267 | (9) | 41 |
| Municipal taxes | 7 | 11 | 4 | 3 |
| Interest (net derivatives and monetary and exchange rate variation) | 20,268 | 6,108 | 17,813 | 5,965 |
| Other remunerations of third party funds | 339 | 1,258 | 808 | 1,924 |
| Reinvested net income (absorbed loss) | 6,273 | (6,806) | 6,273 | (6,806) |
| Loss attributable to noncontrolling interest | (759) | (158) | - | - |
| Distributed value added | 31,444 | 7,140 | 27,086 | 2,752 |

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

1. Corporate information

Vale S.A. and its direct and indirect subsidiaries ("Vale" or the "Company") are global producers of iron ore and iron ore pellets, key raw materials for steelmaking, and producers of nickel, which is used to produce stainless steel and metal alloys employed in the production of several products. The Company also produces copper, metallurgical and thermal coal, manganese ore, ferroalloys, platinum group metals, gold, silver and cobalt. The information by segment is presented in note 4.

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).

2. Basis of preparation of the interim financial statements

a) Statement of compliance

The condensed 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 implemented in Brazil by the Brazilian Accounting Pronouncements Committee ("CPC"), approved by the Brazilian Securities and Exchange Commission ("CVM") and by the Brazilian Federal Accounting Council ("CFC"). All relevant information from its own interim financial statements, and only this information, are being presented and correspond to those used by the Company's Management.

The selected notes of the Parent Company are presented in a summarized form in note 25.

b) Basis of presentation

The interim financial statements have been prepared to update users about relevant events and transactions that occurred in the period and should be read in conjunction with the financial statements for the year ended December 31, 2019. The accounting policies, accounting estimates and judgements, risk management and measurement methods are the same as those applied when preparing the last annual financial statements.

These interim financial statements were authorized for issue on July 29, 2020.

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"), which in the case of the Parent Company is the Brazilian real ("R\$").

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

| | Closing rate | | Average rate | |
|-------------------------|---------------|-------------------|---|---|
| | June 30, 2020 | December 31, 2019 | Three-month period ended June 30, 2020 | Six-month period ended June 30, 2019 |
| US Dollar ("US\$") | 5.4760 | 4.0307 | 5.3854 | 3.9221 |
| Canadian dollar ("CAD") | 4.0226 | 3.1034 | 3.8882 | 2.9312 |
| Euro ("EUR" or "€") | 6.1539 | 4.5305 | 5.9279 | 4.4068 |
| | | | 5.4211 | 4.3440 |

c) Coronavirus outbreak

The coronavirus outbreak has developed rapidly in 2020, with reports of multiple fatalities from the COVID-19, including locations where the Company has its main operations. Measures taken by various governments to contain the virus have affected economic activity of several locations. The Company has taken several measures to monitor and prevent the effects of the COVID-19 virus such as safety and health measures for its employees (like social distancing and working from home) and securing the supply of materials that are essential to the Company's production process.

The Company continues to support the communities near its operating locations, with special focus on Brazil communities that have been more adversely affected by the pandemic. Vale has pledged more than R\$469 to support COVID-19 relief efforts in the communities where it operates through its humanitarian aid program, which are being used to provide needed support such as medical supplies and equipment. This amount was recognized as "Other operating expenses" in the income statement for the three and six-months periods ended June 30, 2020.

A significant portion of the Company's revenue is originated from sales made to customers in Asia and Europe, and Vale as well relies on an extensive logistics and supply chain, including several ports, distribution centers and suppliers that have operations in affected regions. The Company is closely evaluating the impact of the COVID-19 on its business. To date, COVID-19 has not had a significant operational or financial impact on the Company, other than those already disclosed on these interim financial statements.

Impairment and onerous contracts – The Company assessed whether there were any triggering events suggesting that an impairment test for its non-financial assets and concluded there have been no changes in the circumstances that would indicate an impairment loss. As the pandemic is still progressing in some locations, the total financial impact arising from the COVID-19 on the Company's cash generating units ("CGU"), if any, cannot be reliably estimated at this time. Therefore, the major long-term assumptions applied on the preparation of the cash flows models, such as commodities prices and production levels, remain unchanged for the impairment trigger assessment.

Itabira mining complex, Iron Ore - From June 5, 2020 to June 17, 2020, the activities at the Itabira mining complex were suspended by a ruling of the Regional Labor Court of Appeals ("Tribunal Regional do Trabalho – TRT") of the 3rd Region based on an alleged increase of COVID-19 infections. On June 17, 2020, the federal labor inspectors revoked their initial suspension order and the Company resumed this operation. Therefore, impairment losses were not identified in relation to this asset.

Teluk Rubiah Maritime Terminal ("TRMT"), Iron Ore - On March 24, 2020, the Company temporarily halted its operations in the TRMT in Malaysia, as the Company was temporarily unable to secure the minimum resources to safely operate the terminal. On May 16, 2020, the Company resumed the loading operations at TRMT and no impairment losses were recorded in relation to this asset.

Voisey's Bay, Nickel - On March 16, 2020, the Company ramped down the Voisey's Bay mining operation and placed it on care and maintenance, as a precaution to avoid exposure when travelling to the remote site and to help to protect the health and well-being of Nunatsiavut and Innu indigenous communities in Labrador in face of the COVID-19 pandemic. On July 3, 2020, the Company resumed this operation, which should reach its full capacity by August 2020. Therefore, impairment losses were not identified in relation to this asset.

Mozambique, Coal – In 2019, the Company fully impaired the assets related to this CGU because the expected yield of metallurgical coal and thermal coal will not be achieved, mostly due to technical issues on the project and operation of the assets related to this CGU. As a result, the Company has decided to implement a new mining plan and a new plant strategy to achieve the ramp-up of this asset, which includes shortening the life of mine and completing a plant overhaul. However, due to travel and equipment transportation restrictions resulting from the COVID-19 outbreak, the Company is revisiting plans for the Mozambique coal processing plant stoppage. The halting of the processing plants' operations was previously expected to start in the second quarter of 2020 and a new date is under evaluation. Other than this, the plan for this CGU has not changed and, therefore, no further impact was recognized in the period ended June 30, 2020.

Other assets - The Company did not identify any changes in the circumstances that would indicate an impairment trigger of other assets due to the coronavirus outbreak. However, due to the decision to sell the investment held in Vale Nouvelle-Calédonie, the Company recognized an impairment loss as disclosed in note 12. At this time, the outbreak has not caused a significant impact to the Company's operations, but if it continues for an extended period of time, the Company's financial conditions or results of operations in 2020 may be adversely impacted.

Liquidity – On March 24, 2020, as a precautionary measure to increase its cash position and preserve financial flexibility considering the uncertainties in the global markets resulting from the COVID-19 outbreak, the Company drew down R\$25,994 (US\$5 billion) under its revolving credit lines agreements, maturing in June 2022 R\$10,397 (US\$2 billion) and in December 2024 R\$15,597 (US\$3 billion). Also, in March 2020, the Company discontinued its nickel hedge accounting program, by selling the contract options for a total cash consideration of R\$1,123.

Deferred taxes – On March 31, 2020, the Indonesian Government issued Government Regulation ("PERPPU-1") to manage the economic impact of the COVID-19 global pandemic, which impacts the Indonesian tax policies. The enacted income tax rate of 25% has been decreased to 22% for fiscal years 2020 and 2021 and there will be a further decrease to 20%, starting from fiscal year 2022. Therefore, the Company has remeasured its deferred taxes arising from PT Vale Indonesia Tbk ("PTVI") operations, considering the substantive enactment of the new tax rate. As a result, the Company recognized an income tax gain of R\$400 for the six-month period ended June 30, 2020.

Fair value of other assets and liabilities - At this time, the outbreak has not caused any significant impact on the fair value of the Company's assets and liabilities. However, abnormally large changes have occurred in the valuation of financial assets across many markets since the outbreak. The outbreak continues to be uncertain, making it impossible to forecast the final impact it could have on the economy, and in turn, on the Company's business, liquidity, and financial position meaning that the fair values of the Company's assets and liabilities may change in later periods.

3. 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.

Vale has been taking the necessary actions to support the victims and to mitigate and recover the social and environmental damages resulting from the event, which includes indemnification and donations to those affected by the dam rupture. In addition, the Company has informed the market and Brazilian authorities its decision to speed up the plan to "de-characterize" its tailings dams built under the upstream method (same method as Brumadinho's dam), certain "centerline structures" and dikes, located in Brazil. Therefore, the Company has a total provision to comply with these assumed obligations in the amount of R\$18,665 as at June 30, 2020 (R\$22,056 as at December 31, 2019).

a) De-characterization of the dams

The changes in the provision to carry out the de-characterization of the upstream structures, certain centerline structures and dikes for the six-month periods ended June 30, 2020 and 2019 are as follows:

| | Consolidated | |
|------------------------------|----------------------|--------------------------|
| | 2020 | 2019 |
| Balance at January 1, | 10,034 | - |
| Provision recognized | - | 7,515 |
| Payments | (536) | (62) |
| Present value valuation | (267) | 280 |
| Balance at June 30, | 9,231 | 7,733 |
| | June 30, 2020 | December 31, 2019 |
| Current liabilities | 1,709 | 1,247 |
| Non-current liabilities | 7,522 | 8,787 |
| Liabilities | 9,231 | 10,034 |

b) Framework Agreements and donations

The Company has been working together with the authorities and society to remediate the environmental and social impacts of the event. Therefore, the Company has started negotiations and entered into agreements with the relevant authorities and affected people. Vale has also developed studies and projects to ensure geotechnical safety of the remaining structures at the Córrego do Feijão mine, in Brumadinho, and the removal and proper disposal of the tailings, especially alongside the Paraopeba river.

On April 1, 2020, the judge of the 2nd Public Finance Court of Belo Horizonte released R\$500 from the judicial deposits of the Company. On May 15, 2020, the judge released an additional amount of R\$1,000. Both amounts were released to the State of Minas Gerais to be used by the State Government on actions against COVID-19 outbreak and were considered part of the obligation assumed by the Company for social and economic compensation due to the Brumadinho dam rupture.

The changes in the provision for the six-month periods ended June 30, 2020 and 2019 are as follows:

| | Consolidated | |
|--|----------------------|--------------------------|
| | 2020 | 2019 |
| Balance at January 1, | 12,022 | - |
| Provision for social and economic compensation | 108 | 14,239 |
| Payments (i) | (2,763) | (810) |
| Present value valuation | 67 | 91 |
| Balance at June 30, | 9,434 | 13,520 |
| | June 30, 2020 | December 31, 2019 |
| Current liabilities | 5,547 | 6,319 |
| Non-current liabilities | 3,887 | 5,703 |
| Liabilities | 9,434 | 12,022 |

(i) Includes cash outflows of R\$1,263 and the realization of judicial deposits of R\$1,500.

In addition, the Company is under negotiations with the Government of the State of Minas Gerais ("GEMG") and other relevant authorities for an additional agreement for collective damages indemnification and further compensation for the society and environment. The goal of Vale with a potential agreement would be to provide a stable legal framework for the execution of reparation and compensation, with the suspension of the existing civil lawsuits.

The potential agreement is still very uncertain as it is subject to conclusion of the ongoing negotiations and approval by the Company, the Government of the State of Minas Gerais, Public Prosecutors and other Authorities and Intervient parties.

Therefore, the provisions recorded in these interim financial statements do not include the potential outcome of the current negotiation as it is not yet possible to reliably estimate an amount or whether the current negotiations will be successful.

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

Based on the current terms under discussion, and preliminary estimates subject to the uncertainties listed above, such possible agreement might result in an additional provision ranging from R\$4 billion to R\$8 billion. All accounting impacts, if any, will be recorded in the period an agreement is reached.

c) Incurred expenses

The Company has incurred expenses, which do not qualify for provision and have been recognized in the income statement, in the amount of R\$585 and R\$1,293 for the three and six-month periods ended June 30, 2020, respectively and R\$621 and R\$1,013 for the three and six-month periods ended June 30, 2019, respectively. These expenses include communication services, accommodation and humanitarian assistance, equipment, legal services, water, food aid, taxes, among others.

d) Operation stoppages

The Company has suspended some operations due to judicial decisions or technical analysis performed by Vale on its upstream dam structures. The Company recorded a loss in relation to the operational stoppage and idle capacity of the ferrous mineral segment in the amounts of R\$557 and R\$1,279 for the three and six-month periods ended June 30, 2020, respectively, and R\$939 and R\$1,544 for the three and six-month periods ended June 30, 2019, respectively. The Company is working on legal and technical measures to resume all operations at full capacity.

e) Assets write-off

Following the event and the decision to speed up the de-characterization of the upstream dams, the Company recognized a loss of R\$251 and R\$836 as "Impairment and disposal of non-current assets" for the three and six-month periods ended June 30, 2019 in relation to the assets written-off of the Córrego do Feijão mine and those related to the other upstream dams in Brazil. In 2020, the Company did not write-off any asset related to the Brumadinho event.

f) Contingencies and other legal matters

Vale is subject to significant contingencies due to the Brumadinho dam failure. Vale has already been named on several judicial and administrative proceedings brought by authorities and affected people and is currently under investigation. Vale is evaluating these contingencies and would recognize a provision based on the updates on the stage of these claims.

On April 14, 2020, the judge of the 1st Civil Court of Ouro Preto ordered to restrict the Company's resources in the amount of R\$50, to guarantee the reimbursement of any losses resulting from the compulsory removal of residents, in the event of a possible breach of the Dourador Dam.

Following these contingencies, approximately R\$5,160 of the Company's assets are restricted as at June 30, 2020, of which approximately R\$507 of the Company's bank accounts are restricted and R\$4,653 were converted into judicial deposits.

For the Brumadinho event, the Company has additional guarantees in the amounts of R\$5,677 and R\$5,714 for the three and six-month periods ended June 30, 2020, respectively. The expenses related to these additional guarantees in the amounts of R\$10 and R\$20 were recorded as financial expense in the Company's income statement for the three and six-month periods ended June 30, 2020, respectively.

On May 26, 2020, the Public Prosecutor's Office of Minas Gerais ("MPMG") obtained a preliminary injunction determining the provision of a bank guarantee and/or insurance guarantee in the amount of R\$7,932 to guarantee the application of an eventual fine and potential loss of assets, rights and values. After Vale's appeal, the Minas Gerais Court of Justice ("TJMG"), on July 17, 2020 (subsequent event), upheld the decision that suspended the period prescribed for the Company to provide the required guarantee, based on the understanding there is no evidence of non-compliance risk in the future of a subsequent decision on this lawsuit.

(f.i) Administrative sanctions

In 2019, the Company was notified of the imposition of administrative fines by the Brazilian Institute of the Environment and Renewable Natural Resources ("IBAMA"), in the amount of R\$250.

On July 6, 2020 (subsequent event), the Company signed an agreement with IBAMA, of which R\$150 will be used in environmental projects in 7 parks in the state of Minas Gerais, covering an area of approximately 794 thousand hectares, and R\$100 will be used in basic sanitation programs in the state of Minas Gerais. The total amount will be deposited in court to, after ratification of justice, be used in these environmental projects.

Furthermore, in 2019, the Secretary for Environment – SEMA Brumadinho imposed administrative fines, in the total amount of R\$109.

As at June 30, 2020, both administrative sanctions are recorded as "Liabilities related to Brumadinho".

(f.ii) U.S. Securities class action suits

Vale and certain of its officers and former officers have been named defendants in civil putative class action suits, under U.S. federal securities laws, brought before federal courts in New York by holders of our securities. These complaints were consolidated through an amended complaint brought by the Lead Plaintiff on October 25, 2019 before the United States District Court for the Eastern District of New York.

The Lead Plaintiff alleges that we made false and misleading statements or omitted to make disclosures concerning the risks of the operations of Dam I in the Córrego do Feijão mine and the adequacy of the related programs and procedures. The Lead Plaintiff has not specified an amount of alleged damages in these actions. On December 13, 2019, the Company made a motion to dismiss the amended complaint. In January 2020, the lead plaintiff filed an opposition to this motion to dismiss. On February 21, 2020, Vale filed a reply to the opposition. On May 20, 2020, Vale's motion to dismiss was denied by the Court, although, in the same decision, the Court also dismissed several of the alleged misstatements initially claimed in the amended complaint. On June 3, 2020, Vale filed a motion for reconsideration of the Judge's decision on Vale's motion to dismiss. On June 17, 2020, the Lead Plaintiff filed an opposition to Vale's motion for reconsideration. The judge has not issued a decision on Vale's motion for reconsideration to date.

Vale intends to continue to defend itself against this action and will vigorously contest these claims. Based on the assessment of the Company's legal consultants and given its preliminary status, the expectation of loss of this proceeding is classified as possible. However, given the preliminary status of the action, it is not possible at this time to determine a reliable estimate of the potential exposure.

g) Insurance

The Company is negotiating with insurers the payment of indemnification under its operational risk and civil liability. However, these negotiations are still at a preliminary stage, 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 to the Company was recognized in these interim financial statements.

Critical accounting estimates and judgments

The measurement of the provision requires the use of significant judgments, estimates and assumptions. The provision reflects the estimated costs to comply with Vale's obligation in relation to the event.

The main critical assumptions and estimates applied in measuring the provision for de-characterization of the dams considers, among others: (i) volume of the waste to be removed based on historical data available and interpretation of the enacted laws and regulations; (ii) location availability for the tailings disposal; (iii) acceptance by the authorities of the proposed engineering methods and solution; and (iv) updates in the discount rate.

The provision for Framework Agreements and donations may be affected by factors including, but not limited to: (i) changes in laws and regulations; (ii) changes in the current estimated market price of the direct and indirect cost related to products and services, (iii) changes in timing for cash outflows, (iv) changes in the technology considered in measuring the provision, (v) number of individuals entitled to the indemnification payments, (vi) resolution of existing and potential legal claims, (vii) demographic assumptions, (viii) actuarial assumptions, and (ix) updates in the discount rate.

Therefore, future expenditures may differ from the amounts currently provided because the realized assumptions and various other factors are not always under the Company's control. These changes to key assumptions could result in a material impact to the amount of the provision in future reporting periods. At each reporting period, the Company will reassess the key assumptions used in the preparation of the projected cash flows and will adjust the provision, if required.

4. Information by business segment and by geographic area

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

In 2019, the Company created the Special Recovery and Development Board, which is in-charge of social, humanitarian, environmental and structural recovery measures in the affected areas due to the Brumadinho dam rupture. This Board reports to the CEO and is responsible to assess the costs related to the Brumadinho event. These costs are not directly related to the Company's operating activities and, therefore, were not allocated to any operating segment.

The Company allocates to "Others" the revenues and cost of other products, services, research and development, investments in joint ventures and associates of other business and unallocated corporate expenses.

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 and disposal of non-current assets.

| | | | | | | | Consolidated |
|-------------------------------------|-----------------------|--|--|-------------------------|--|--|--|
| | | | | | | | Three-month period ended June 30, 2020 |
| | Net operating revenue | Cost of goods sold and services rendered | Sales, administrative and other operating expenses | Research and evaluation | Pre operating and operational stoppage | Dividends received and interest from associates and joint ventures | Adjusted LAJIDA (EBITDA) |
| Ferrous minerals | | | | | | | |
| Iron ore | 26,069 | (9,343) | (320) | (130) | (656) | - | 15,620 |
| Iron ore pellets | 4,858 | (2,030) | 10 | (5) | (90) | 283 | 3,026 |
| Ferroalloys and manganese | 366 | (226) | - | (5) | (51) | - | 84 |
| Other ferrous products and services | 403 | (298) | 3 | (2) | - | - | 106 |
| | 31,696 | (11,897) | (307) | (142) | (797) | 283 | 18,836 |
| Base metals | | | | | | | |
| Nickel and other products | 5,108 | (3,491) | (87) | (61) | (155) | - | 1,314 |
| Copper | 2,809 | (999) | (14) | (79) | - | - | 1,717 |
| | 7,917 | (4,490) | (101) | (140) | (155) | - | 3,031 |
| Coal | 510 | (1,959) | 16 | (32) | - | - | (1,465) |
| Brumadinho event | - | - | (693) | - | - | - | (693) |
| COVID-19 | - | - | (469) | - | - | - | (469) |
| Others | 311 | (373) | (1,014) | (169) | (9) | 126 | (1,128) |
| Total | 40,434 | (18,719) | (2,568) | (483) | (961) | 409 | 18,112 |

Selected Notes to the Interim Financial Statements

Expressed in millions of Brazilian reais, unless otherwise stated



| Consolidated | | | | | | | |
|--|-----------------------|--|--|-------------------------|--|--|--------------------------|
| Three-month period ended June 30, 2019 | | | | | | | |
| | Net operating revenue | Cost of goods sold and services rendered | Sales, administrative and other operating expenses | Research and evaluation | Pre operating and operational stoppage | Dividends received and interest from associates and joint ventures | Adjusted LAJIDA (EBITDA) |
| Ferrous minerals | | | | | | | |
| Iron ore | 22,936 | (8,209) | (572) | (95) | (923) | - | 13,137 |
| Iron ore pellets | 5,093 | (2,254) | (14) | (22) | (51) | 567 | 3,319 |
| Ferroalloys and manganese | 270 | (218) | (6) | (1) | - | - | 45 |
| Other ferrous products and services | 382 | (323) | 7 | (3) | - | - | 63 |
| | 28,681 | (11,004) | (585) | (121) | (974) | 567 | 16,564 |
| Base metals | | | | | | | |
| Nickel and other products | 4,207 | (3,108) | (87) | (30) | (16) | - | 966 |
| Copper | 1,804 | (921) | (11) | (27) | - | - | 845 |
| | 6,011 | (4,029) | (98) | (57) | (16) | - | 1,811 |
| Coal | 1,009 | (1,517) | 7 | (24) | - | 111 | (414) |
| Brumadinho event | - | - | (5,921) | - | - | - | (5,921) |
| Others | 304 | (316) | 153 | (148) | (10) | 194 | 177 |
| Total | 36,005 | (16,866) | (6,444) | (350) | (1,000) | 872 | 12,217 |

| Consolidated | | | | | | | |
|--------------------------------------|-----------------------|--|--|-------------------------|--|--|--------------------------|
| Six-month period ended June 30, 2020 | | | | | | | |
| | Net operating revenue | Cost of goods sold and services rendered | Sales, administrative and other operating expenses | Research and evaluation | Pre operating and operational stoppage | Dividends received and interest from associates and joint ventures | Adjusted LAJIDA (EBITDA) |
| Ferrous minerals | | | | | | | |
| Iron ore | 45,444 | (16,891) | (407) | (238) | (1,405) | - | 26,503 |
| Iron ore pellets | 8,682 | (3,878) | 58 | (9) | (202) | 283 | 4,934 |
| Ferroalloys and manganese | 577 | (449) | - | (5) | (56) | - | 67 |
| Other ferrous products and services | 786 | (615) | 8 | (5) | - | - | 174 |
| | 55,489 | (21,833) | (341) | (257) | (1,663) | 283 | 31,678 |
| Base metals | | | | | | | |
| Nickel and other products | 9,761 | (6,472) | (173) | (122) | (155) | - | 2,839 |
| Copper | 4,518 | (1,923) | (10) | (156) | - | - | 2,429 |
| | 14,279 | (8,395) | (183) | (278) | (155) | - | 5,268 |
| Coal | 1,183 | (3,643) | 22 | (72) | - | 324 | (2,186) |
| Brumadinho event | - | - | (1,401) | - | - | - | (1,401) |
| COVID-19 | - | - | (469) | - | - | - | (469) |
| Others | 734 | (778) | (1,605) | (305) | (26) | 126 | (1,854) |
| Total | 71,685 | (34,649) | (3,977) | (912) | (1,844) | 733 | 31,036 |

Selected Notes to the Interim Financial Statements

Expressed in millions of Brazilian reais, unless otherwise stated



| | Consolidated | | | | | | |
|-------------------------------------|--------------------------------------|--|--|-------------------------|--|--|--------------------------|
| | Six-month period ended June 30, 2019 | | | | | | |
| | Net operating revenue | Cost of goods sold and services rendered | Sales, administrative and other operating expenses | Research and evaluation | Pre operating and operational stoppage | Dividends received and interest from associates and joint ventures | Adjusted LAJIDA (EBITDA) |
| Ferrous minerals | | | | | | | |
| Iron ore | 39,824 | (14,413) | (621) | (166) | (1,524) | - | 23,100 |
| Iron ore pellets | 11,413 | (5,099) | (28) | (39) | (88) | 567 | 6,726 |
| Ferroalloys and manganese | 594 | (436) | (9) | (2) | - | - | 147 |
| Other ferrous products and services | 783 | (610) | 4 | (3) | - | - | 174 |
| | 52,614 | (20,558) | (654) | (210) | (1,612) | 567 | 30,147 |
| Base metals | | | | | | | |
| Nickel and other products | 7,908 | (5,707) | (133) | (56) | (46) | - | 1,966 |
| Copper | 3,580 | (1,774) | (12) | (47) | - | - | 1,747 |
| | 11,488 | (7,481) | (145) | (103) | (46) | - | 3,713 |
| Coal | 2,267 | (3,118) | 3 | (46) | - | 217 | (677) |
| Brumadinho event | - | - | (23,236) | - | - | - | (23,236) |
| Others | 588 | (634) | (406) | (260) | (10) | 194 | (528) |
| Total | 66,957 | (31,791) | (24,438) | (619) | (1,668) | 978 | 9,419 |

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

| | Consolidated | | | |
|--|-----------------------------------|---------------|---------------------------------|----------------|
| | Three-month period ended June 30, | | Six-month period ended June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Net income (loss) attributable to Vale's stockholders | 5,289 | (384) | 6,273 | (6,806) |
| Loss attributable to noncontrolling interests | (412) | (34) | (759) | (158) |
| Net income (loss) | 4,877 | (418) | 5,514 | (6,964) |
| Depreciation, depletion and amortization | 4,336 | 3,786 | 8,012 | 6,815 |
| Income taxes | 854 | 1,859 | (2,248) | (585) |
| Financial results | 2,591 | 2,834 | 13,077 | 5,424 |
| LAJIDA (EBITDA) | 12,658 | 8,061 | 24,355 | 4,690 |
| Items to reconciled adjusted LAJIDA (EBITDA) | | | | |
| Equity results and other results in associates and joint ventures | 2,785 | 2,862 | 3,552 | 2,548 |
| Dividends received and interest from associates and joint ventures (i) | 409 | 872 | 733 | 978 |
| Impairment and disposal of non-current assets | 2,260 | 422 | 2,396 | 1,203 |
| Adjusted LAJIDA (EBITDA) | 18,112 | 12,217 | 31,036 | 9,419 |

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

b) Assets by segment

| | June 30, 2020 | | | Consolidated December 31, 2019 | | |
|------------------|-------------------|--|---|-----------------------------------|--|---|
| | Product inventory | Investments in associates and joint ventures | Property, plant and equipment and intangibles (i) | Product inventory | Investments in associates and joint ventures | Property, plant and equipment and intangibles (i) |
| Ferrous minerals | 10,178 | 6,756 | 139,315 | 7,880 | 6,970 | 135,143 |
| Base metals | 7,717 | 90 | 99,652 | 5,457 | 56 | 80,181 |
| Coal | 210 | - | - | 243 | - | - |
| Others | 54 | 4,497 | 7,005 | 7 | 4,252 | 6,666 |
| Total | 18,159 | 11,343 | 245,972 | 13,587 | 11,278 | 221,990 |

| | 2020 | | | Consolidated Three-month period ended June 30, 2019 | | |
|------------------|---------------------------|-------------------|--|--|-------------------|--|
| | Capital expenditures (ii) | | | Capital expenditures (ii) | | |
| | Sustaining capital | Project execution | Depreciation, depletion and amortization | Sustaining capital | Project execution | Depreciation, depletion and amortization |
| Ferrous minerals | 2,595 | 315 | 2,568 | 1,226 | 341 | 2,085 |
| Base metals | 1,770 | 338 | 1,705 | 1,013 | 164 | 1,396 |
| Coal | 168 | - | - | 105 | - | 235 |
| Others | 4 | 11 | 63 | 12 | 5 | 70 |
| Total | 4,537 | 664 | 4,336 | 2,356 | 510 | 3,786 |

| | 2020 | | | Consolidated Six-month period ended June 30, 2019 | | |
|------------------|---------------------------|-------------------|--|--|-------------------|--|
| | Capital expenditures (ii) | | | Capital expenditures (ii) | | |
| | Sustaining capital | Project execution | Depreciation, depletion and amortization | Sustaining capital | Project execution | Depreciation, depletion and amortization |
| Ferrous minerals | 4,976 | 721 | 4,460 | 2,278 | 665 | 3,701 |
| Base metals | 3,385 | 573 | 3,338 | 1,701 | 205 | 2,554 |
| Coal | 513 | - | 83 | 295 | - | 420 |
| Others | 10 | 22 | 131 | 14 | 13 | 140 |
| Total | 8,884 | 1,316 | 8,012 | 4,288 | 883 | 6,815 |

i) Goodwill is allocated mainly to ferrous minerals and base metals segments in the amount of R\$7,133 and R\$9,926 in June 30, 2020 and R\$7,133 and R\$7,495 in December 31, 2019, respectively.

(ii) Cash outflows.

c) Net operating revenue by geographic area

| Consolidated | | | | | |
|---|------------------|--------------|------------|------------|---------------|
| Three-month period ended June 30, 2020 | | | | | |
| | Ferrous minerals | Base metals | Coal | Others | Total |
| Americas, except United States and Brazil | 71 | 269 | - | - | 340 |
| United States of America | 156 | 802 | - | - | 958 |
| Germany | 359 | 1,508 | - | - | 1,867 |
| Europe, except Germany | 1,205 | 2,287 | 178 | - | 3,670 |
| Middle East, Africa and Oceania | 1,518 | 26 | 117 | - | 1,661 |
| Japan | 1,556 | 576 | 1 | - | 2,133 |
| China | 22,342 | 889 | - | - | 23,231 |
| Asia, except Japan and China | 2,221 | 1,323 | 191 | - | 3,735 |
| Brazil | 2,268 | 237 | 23 | 311 | 2,839 |
| Net operating revenue | 31,696 | 7,917 | 510 | 311 | 40,434 |

| Consolidated | | | | | |
|---|------------------|--------------|--------------|------------|---------------|
| Three-month period ended June 30, 2019 | | | | | |
| | Ferrous minerals | Base metals | Coal | Others | Total |
| Americas, except United States and Brazil | 569 | 647 | - | - | 1,216 |
| United States of America | 483 | 956 | - | - | 1,439 |
| Germany | 1,208 | 575 | - | - | 1,783 |
| Europe, except Germany | 1,836 | 1,644 | 168 | - | 3,648 |
| Middle East, Africa and Oceania | 1,927 | 19 | 36 | - | 1,982 |
| Japan | 1,845 | 341 | 116 | - | 2,302 |
| China | 15,744 | 712 | - | - | 16,456 |
| Asia, except Japan and China | 2,012 | 913 | 566 | - | 3,491 |
| Brazil | 3,057 | 204 | 123 | 304 | 3,688 |
| Net operating revenue | 28,681 | 6,011 | 1,009 | 304 | 36,005 |

| Consolidated | | | | | |
|---|------------------|---------------|--------------|------------|---------------|
| Six-month period ended June 30, 2020 | | | | | |
| | Ferrous minerals | Base metals | Coal | Others | Total |
| Americas, except United States and Brazil | 529 | 1,147 | - | - | 1,676 |
| United States of America | 357 | 1,894 | - | - | 2,251 |
| Germany | 1,185 | 2,373 | - | - | 3,558 |
| Europe, except Germany | 2,481 | 3,976 | 397 | - | 6,854 |
| Middle East, Africa and Oceania | 2,593 | 62 | 243 | - | 2,898 |
| Japan | 3,248 | 1,000 | 56 | - | 4,304 |
| China | 36,131 | 1,394 | 75 | - | 37,600 |
| Asia, except Japan and China | 4,071 | 2,030 | 389 | - | 6,490 |
| Brazil | 4,894 | 403 | 23 | 734 | 6,054 |
| Net operating revenue | 55,489 | 14,279 | 1,183 | 734 | 71,685 |

| Consolidated | | | | | |
|---|------------------|---------------|--------------|------------|---------------|
| Six-month period ended June 30, 2019 | | | | | |
| | Ferrous minerals | Base metals | Coal | Others | Total |
| Americas, except United States and Brazil | 1,177 | 1,481 | - | - | 2,658 |
| United States of America | 853 | 1,743 | - | - | 2,596 |
| Germany | 2,195 | 1,014 | - | - | 3,209 |
| Europe, except Germany | 3,390 | 3,141 | 568 | - | 7,099 |
| Middle East, Africa and Oceania | 4,300 | 41 | 138 | - | 4,479 |
| Japan | 3,647 | 674 | 362 | - | 4,683 |
| China | 27,987 | 1,251 | - | - | 29,238 |
| Asia, except Japan and China | 3,648 | 1,758 | 1,017 | - | 6,423 |
| Brazil | 5,417 | 385 | 182 | 588 | 6,572 |
| Net operating revenue | 52,614 | 11,488 | 2,267 | 588 | 66,957 |

Provisionally priced commodities sales – The commodity price risk arises from volatility of iron ore, nickel, copper and coal prices. The Company is mostly exposed to the fluctuations in the iron ore and copper price. The selling price of these products can be measured reliably at each period, since the price is quoted in an active market. The final price of these sales will be determined during the third quarter of 2020.

Selected Notes to the Interim Financial Statements

Expressed in millions of Brazilian reais, unless otherwise stated



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

| | | | | June 30, 2020 |
|------------------|----------------------|--------------------------------|--------|---------------------------------|
| | Thousand metric tons | Provisional price (US\$/tonne) | Change | Effect on Revenue (R\$ million) |
| Iron ore | 19,267 | 94.3 | +/-10% | 978 |
| Iron ore pellets | 1,783 | 123.5 | +/-10% | 119 |
| Copper | 81 | 7,865.0 | +/-10% | 342 |

5. Costs and expenses by nature

a) Cost of goods sold and services rendered

| | Consolidated | | | |
|----------------------------|-----------------------------------|---------------|---------------------------------|---------------|
| | Three-month period ended June 30, | | Six-month period ended June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Personnel | 1,950 | 2,077 | 3,804 | 3,816 |
| Materials and services | 4,040 | 3,812 | 7,671 | 7,413 |
| Fuel oil and gas | 1,107 | 1,319 | 2,364 | 2,633 |
| Maintenance | 3,315 | 2,797 | 6,318 | 5,169 |
| Energy | 793 | 789 | 1,636 | 1,586 |
| Acquisition of products | 1,069 | 538 | 1,335 | 940 |
| Depreciation and depletion | 3,948 | 3,416 | 7,233 | 6,241 |
| Freight | 3,706 | 3,309 | 6,824 | 6,183 |
| Others | 2,739 | 2,225 | 4,697 | 4,051 |
| Total | 22,667 | 20,282 | 41,882 | 38,032 |
| Cost of goods sold | 21,993 | 19,610 | 40,492 | 36,752 |
| Cost of services rendered | 674 | 672 | 1,390 | 1,280 |
| Total | 22,667 | 20,282 | 41,882 | 38,032 |

b) Selling and administrative expenses

| | Consolidated | | | |
|-------------------------------|-----------------------------------|------------|---------------------------------|------------|
| | Three-month period ended June 30, | | Six-month period ended June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Selling | 112 | 96 | 183 | 175 |
| Personnel | 213 | 163 | 424 | 337 |
| Services | 175 | 51 | 254 | 104 |
| Depreciation and amortization | 71 | 58 | 153 | 114 |
| Others | 93 | 59 | 166 | 115 |
| Total | 664 | 427 | 1,180 | 845 |

c) Other operating expenses (income), net

| | Consolidated | | | |
|-------------------------------|-----------------------------------|------------|---------------------------------|------------|
| | Three-month period ended June 30, | | Six-month period ended June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Provision for litigations (i) | 237 | 626 | 326 | 925 |
| Profit sharing program | 68 | 65 | 218 | 197 |
| COVID-19 expenses | 469 | - | 469 | - |
| Others (ii) | 508 | (538) | 536 | (651) |
| Total | 1,282 | 153 | 1,549 | 471 |

(i) In 2019, includes the change in the expected outcome of probable loss of the lawsuit related to the accident of ship loaders, at the Praia Mole maritime terminal, in Espírito Santo.

(ii) In 2019, includes the reversal of the amount provided for the legal proceedings related to the Rede Ferroviária Federal S.A lawsuit.

6. Financial result

| | Consolidated | | | |
|--|-----------------------------------|----------------|---------------------------------|----------------|
| | Three-month period ended June 30, | | Six-month period ended June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Financial income | | | | |
| Short-term investments | 148 | 181 | 379 | 354 |
| Others (i) | 566 | 298 | 827 | 489 |
| | 714 | 479 | 1,206 | 843 |
| Financial expenses | | | | |
| Loans and borrowings gross interest | (1,037) | (1,078) | (1,991) | (2,025) |
| Capitalized loans and borrowing costs | 69 | 155 | 207 | 296 |
| Participative stockholders' debentures | (1,236) | (973) | (1,339) | (2,310) |
| Interest on REFIS | (69) | (165) | (178) | (325) |
| Interest on lease liabilities | (93) | (97) | (171) | (169) |
| Financial guarantees (note 12) | (163) | 32 | (866) | 70 |
| Others | (603) | (804) | (1,084) | (1,428) |
| | (3,132) | (2,930) | (5,422) | (5,891) |
| Other financial items, net | | | | |
| Net foreign exchange gains (losses) - Loans and borrowings | (1,046) | 218 | (5,831) | 169 |
| Derivative financial instruments (note 19) | (421) | 255 | (6,815) | 595 |
| Other foreign exchange gains (losses), net | 1,580 | (135) | 4,089 | (109) |
| Indexation losses, net | (286) | (721) | (304) | (1,031) |
| | (173) | (383) | (8,861) | (376) |
| Total | (2,591) | (2,834) | (13,077) | (5,424) |

(i) In 2020, includes amounts related to Eletrobrás' contingent assets in the amount of R\$301, see note 21e.

7. Income taxes

a) Deferred income tax assets and liabilities

Changes in deferred tax are as follows:

| | Consolidated | | |
|-------------------------------------|---------------|--------------|---------------------|
| | Assets | Liabilities | Deferred taxes, net |
| Balance at December 31, 2019 | 37,151 | 7,585 | 29,566 |
| Effect in income statement | 5,288 | (294) | 5,582 |
| Translation adjustment | 2,770 | 2,010 | 760 |
| Other comprehensive income | 8,480 | (368) | 8,448 |
| Balance at June 30, 2020 | 53,689 | 8,933 | 44,756 |

| | Consolidated | | |
|-------------------------------------|---------------|--------------|---------------------|
| | Assets | Liabilities | Deferred taxes, net |
| Balance at December 31, 2018 | 26,767 | 5,936 | 20,831 |
| Effect in income statement | 2,807 | (166) | 2,973 |
| Translation adjustment | (46) | 97 | (143) |
| Other comprehensive income | (27) | (238) | 211 |
| Balance at June 30, 2019 | 29,501 | 5,629 | 23,872 |

b) Income tax reconciliation – Income statement

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

| | Consolidated | | | |
|--|-----------------------------------|----------------|---------------------------------|----------------|
| | Three-month period ended June 30, | | Six-month period ended June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Income (loss) before income taxes | 5,731 | 1,441 | 3,266 | (7,549) |
| Income taxes at statutory rate - 34% | (1,948) | (490) | (1,110) | 2,567 |
| Adjustments that affect the basis of taxes: | | | | |
| Tax incentives | 970 | 118 | 2,349 | 239 |
| Equity results | 77 | 121 | (100) | 256 |
| Addition (reversal) of tax loss carryforward | 150 | (1,048) | 1,959 | (1,911) |
| Others | (103) | (560) | (850) | (566) |
| Income taxes | (854) | (1,859) | 2,248 | 585 |

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.

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

The balance mainly relates to the settlement program of the claims related to the collection of income tax and social contribution on equity gains of foreign subsidiaries and affiliates from 2003 to 2012. As at June 30, 2020, the balance of R\$15,053 (R\$1,758 classified as current liabilities and R\$13,295 classified as non-current liabilities) is due in 100 remaining monthly installments, bearing the SELIC interest rate (Special System for Settlement and Custody), which is the Brazilian federal funds rate. As at June 30, 2020, the SELIC rate was 2,25% per annum.

d) Uncertain tax positions

In 2004, a decision of the Federal Court of Appeals of the 2nd Region ("TRF") granted to the Company the right to deduct the social security contributions on the net income ("CSLL") from the taxable corporate income. In 2006, the Brazilian federal tax authorities commenced a rescission action (ação rescisória), seeking the reversal of the 2004 decision. In 2019, "TRF" decided in favor for the rescission action. Following this decision, the Company has filed a motion for clarification, which was not accepted in the trial in June 2020. New appeals will be filed.

Due to the developments on the proceedings, the Company has decided to not deduct the "CSLL" from the taxable income from the 2019 year-end onwards. Based on its internal and external experts, the Company has determined that it is probable that the Company's tax treatment on the uncertainties associated to the deduction of the "CSLL", in the amount of R\$783, will be accepted by the Brazilian tax authority and, therefore, this amount has not been reserved in these interim financial statements.

8. Basic and diluted earnings (loss) per share

The basic and diluted earnings (loss) per share are presented below:

| | Three-month period ended June 30, | | Six-month period ended June 30, | |
|---|-----------------------------------|-----------|---------------------------------|-----------|
| | 2020 | 2019 | 2020 | 2019 |
| Net income (loss) attributable to Vale's stockholders: | | | | |
| Net income (loss) | 5,289 | (384) | 6,273 | (6,806) |
| Thousands of shares | | | | |
| Weighted average number of shares outstanding - common shares | 5,129,911 | 5,181,771 | 5,129,254 | 5,181,092 |
| Basic and diluted earnings (loss) per share: | | | | |
| Common share (R\$) | 1.03 | (0.07) | 1.22 | (1.31) |

The Company does not have potential outstanding shares or other instruments with dilutive effect on the earnings per share computation.

9. Accounts receivable

| | Consolidated | |
|--|---------------|-------------------|
| | June 30, 2020 | December 31, 2019 |
| Accounts receivable | 14,477 | 10,448 |
| Expected credit loss | (258) | (253) |
| | 14,219 | 10,195 |
| Revenue related to the steel sector - % | 84.80% | 87.33% |

| | Consolidated | |
|--|-----------------------------------|---------------------------------|
| | Three-month period ended June 30, | Six-month period ended June 30, |
| | 2020 | 2019 |
| Impairment of accounts receivable recorded in the income statement | (14) | (12) |
| | 41 | (12) |

There is no customer that individually represents more than 10% of the Company's accounts receivable or revenues.

10. Inventories

| | Consolidated | |
|----------------------|---------------|-------------------|
| | June 30, 2020 | December 31, 2019 |
| Finished products | 14,690 | 10,505 |
| Work in progress | 3,469 | 3,082 |
| Consumable inventory | 4,062 | 3,641 |
| Total | 22,221 | 17,228 |

| | Consolidated | |
|---|-----------------------------------|---------------------------------|
| | Three-month period ended June 30, | Six-month period ended June 30, |
| | 2020 | 2019 |
| Reversal (provision) for net realizable value | 127 | (139) |
| | (213) | (206) |

Finished and work in progress products inventories by segments are presented in note 4(b).

11. Other financial assets and liabilities

| | Consolidated | | | |
|--|---------------|-------------------|---------------|-------------------|
| | Current | | Non-Current | |
| | June 30, 2020 | December 31, 2019 | June 30, 2020 | December 31, 2019 |
| Other financial assets | | | | |
| Assets held for sale (note 12) | 832 | 613 | - | - |
| Restricted cash | - | - | 830 | 609 |
| Loans | 16 | - | 355 | 350 |
| Derivative financial instruments (note 19) | 533 | 1,160 | 344 | 742 |
| Investments in equity securities | - | - | 2,341 | 2,925 |
| Related parties - Loans (note 24) | 1,650 | 1,289 | 8,720 | 6,448 |
| | 3,031 | 3,062 | 12,590 | 11,074 |
| Other financial liabilities | | | | |
| Derivative financial instruments (note 19) | 2,881 | 377 | 4,823 | 1,237 |
| Related parties - Loans (note 24) | 4,074 | 3,951 | 5,151 | 3,853 |
| Financial guarantees (note 12) | - | - | 2,971 | 2,116 |
| Participative stockholders' debentures | - | - | 11,285 | 10,416 |
| | 6,955 | 4,328 | 24,230 | 17,622 |

Participative stockholders' debentures

On April 1, 2020, the Company made available for withdrawal as remuneration the amount of R\$506.

12. Investments in associates and joint ventures

a) Changes during the period

Changes in investments in associates and joint ventures as follows:

| | Consolidated | |
|---|---------------|---------------|
| | Total | |
| | 2020 | 2019 |
| Balance at January 1, | 11,278 | 12,495 |
| Additions (i) | 365 | 2 |
| Translation adjustment | 426 | (2) |
| Equity results in income statement | (293) | 752 |
| Equity results in statement of comprehensive income | (8) | (14) |
| Fair value adjustment (ii) | - | (630) |
| Dividends declared | (488) | (701) |
| Others | 63 | 36 |
| Balance at June 30, | 11,343 | 11,938 |

(i) In 2020, refers mainly to Companhia Siderúrgica do Pecém's capital increase.

(ii) In 2019, refers to fair value adjustment of the investment in Henan Longyu Energy Resources Co., Ltd., which was transferred later to assets held for sale.

The amount of investments by segments are presented in note 4(b).

b) Assets held for sale

Vale Nouvelle-Calédonie – On May 25, 2020, the Company announced that its subsidiary, Vale Canada Limited (“VCL”), had entered into a non-binding agreement to negotiate with exclusivity the sale of its entire interest in Vale Nouvelle-Calédonie S.A.S. (“VNC”) to New Century Resources Limited (“NCZ”) for an insignificant consideration.

The closing of the transaction is expected to occur by the first quarter of 2021 and is subject to the consultation of the VNC’s works council, as required by the New Caledonian law and customary closing conditions, including regulatory approvals. The parties also plan to jointly engage with the French State to confirm its continued financing support to VNC.

The VNC’s assets and liabilities were classified as “held for sale” at the fair value less costs of disposal, resulting in the recognition of an impairment charge of R\$1,783 recorded as “Impairment and disposals of non-current assets”, in the income statement for the three and six-month periods ended June 30, 2020.

The potential sale agreement will include a financial package to support the transition and continuity of VNC operations from VCL to NCZ, including the funding for the conversion of tailings deposition from wet to dry-stacking (“Project Lucy”). When the negotiation is completed and final transaction documentation is signed, the Company will recognize a liability of approximately R\$2,738 (US\$500 million) in relation to those potential cash contributions, which will be made by Vale into an independently managed capital trust.

Henan Longyu – On December 27, 2019 the Company entered into an agreement to sell its 25% interest in Henan Longyu Energy Resources Co., Ltd, a company that operates two coal mines in the province of Henan, China, for the total consideration of R\$832 (US\$152 million). The closing is expected by the end of 2020 upon completion of conditions precedent. The investment is classified as held for sale in “other financial assets”.

c) Acquisitions and divestitures

Divestment agreement in compliance with PTVI's Contract of Work - The Company’s subsidiary, PT Vale Indonesia Tbk (“PTVI”), a public company in Indonesia, has an agreement in place with the government of the Republic of Indonesia to operate its mining licenses which includes a commitment to divest an additional 20% of PTVI’s shares to Indonesian participants.

In June 2020, the Company signed together with Sumitomo Metal Mining Co., Ltd. (“SMM”), a definitive agreement for the sale of 20% of their stake in PTVI to PT Indonesia Asahan Aluminium (“PT Inalum”), an Indonesia state-owned enterprise. The conclusion of the transaction is expected to occur in 2020, after the satisfaction of customary regulatory approvals.

After the closing of the transaction, Vale and SMM will have a stake of 44.3% and 15%, respectively, totaling a 59.3% interest in PTVI and, therefore, the Company will continue consolidating PTVI in its financial statements due to the shareholders’ agreement that will be signed by Vale and SMM at the closing of the transaction. With this divestment, the Company will receive cash consideration of approximately R\$1,588 (US\$290 million) at the closing date of the sale and the result arising from the transaction with non-controlling interests will be recorded within Stockholders’ Equity.

New Steel – On January 24, 2019 the Company acquired 100% of the share capital of New Steel Global N.V. (“New Steel”) and gained its control for the total cash consideration of R\$1,884. New Steel is a company that develops processing and beneficiating technologies for iron ore through a completely dry process. The consideration paid is mainly attributable to the research and development project for processing and beneficiating iron ore, which are presented as “Intangibles” (note 13).

d) Guarantees provided

As of June 30, 2020, the notional value of corporate financial guarantees provided by Vale (within the limit of its direct or indirect interest) for certain associates and joint ventures were R\$8,356 (December 31, 2019 R\$6,671). The fair value of these financial guarantees is shown in note 11.

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Expressed in millions of Brazilian reais, unless otherwise stated



Investments in associates and joint ventures (continued)

| Consolidated | | | | | | | | | | | |
|---|-------------|------------------|--|-------------------|--|------------|---------------------------------|------------|-----------------------------------|------------|---------------------------------|
| | | | Investments in associates and joint ventures | | Equity results in the income statement | | | | Dividends received | | |
| | | | June 30, 2020 | December 31, 2019 | Three-month period ended June 30, | | Six-month period ended June 30, | | Three-month period ended June 30, | | Six-month period ended June 30, |
| | | | | | 2020 | 2019 | 2020 | 2019 | 2020 | 2019 | |
| Associates and joint ventures | % ownership | % voting capital | | | | | | | | | |
| Ferrous minerals | | | | | | | | | | | |
| Baovale Mineração S.A. | 50.00 | 50.00 | 113 | 102 | 6 | 15 | 11 | 21 | - | - | - |
| Companhia Coreano-Brasileira de Pelotização | 50.00 | 50.00 | 247 | 354 | 10 | 37 | 25 | 104 | 89 | 126 | 126 |
| Companhia Hispano-Brasileira de Pelotização (i) | 50.89 | 50.89 | 200 | 284 | 4 | 32 | 16 | 79 | 72 | 148 | 148 |
| Companhia Ítalo-Brasileira de Pelotização (i) | 50.90 | 51.00 | 253 | 262 | 27 | 26 | 51 | 57 | 119 | 109 | 109 |
| Companhia Nipo-Brasileira de Pelotização (i) | 51.00 | 51.11 | 645 | 605 | 30 | 80 | 40 | 194 | - | 182 | 182 |
| MRS Logística S.A. | 48.16 | 46.75 | 2,009 | 1,999 | 77 | 57 | 68 | 101 | - | - | - |
| VLI S.A. | 37.60 | 37.60 | 3,168 | 3,273 | 39 | 27 | (92) | 30 | - | - | - |
| Zhuhai YPM Pellet Co. | 25.00 | 25.00 | 121 | 91 | - | - | - | - | - | - | - |
| | | | 6,756 | 6,970 | 193 | 274 | 119 | 586 | 280 | 565 | 565 |
| Coal | | | | | | | | | | | |
| Henan Longyu Energy Resources Co., Ltd. | 25.00 | 25.00 | - | - | - | 15 | - | (6) | - | - | - |
| | | | - | - | - | 15 | - | (6) | - | - | - |
| Base metals | | | | | | | | | | | |
| Korea Nickel Corp. | 25.00 | 25.00 | 90 | 56 | - | - | 2 | (2) | - | - | - |
| | | | 90 | 56 | - | - | 2 | (2) | - | - | - |
| Others | | | | | | | | | | | |
| Aliança Geração de Energia S.A. (i) | 55.00 | 55.00 | 1,852 | 1,894 | 38 | 37 | 84 | 91 | 126 | 111 | 111 |
| Aliança Norte Energia Participações S.A. (i) | 51.00 | 51.00 | 631 | 646 | (11) | (2) | (15) | 5 | - | - | - |
| California Steel Industries, Inc. | 50.00 | 50.00 | 1,313 | 975 | 26 | 40 | (2) | 102 | - | 83 | 83 |
| Companhia Siderúrgica do Pecém (ii) | 50.00 | 50.00 | - | - | - | - | (364) | - | - | - | - |
| Mineração Rio do Norte S.A. | 40.00 | 40.00 | 338 | 393 | (9) | 17 | (55) | 13 | - | - | - |
| Others | | | 363 | 344 | (9) | (26) | (62) | (37) | 3 | 2 | 2 |
| | | | 4,497 | 4,252 | 35 | 66 | (414) | 174 | 129 | 196 | 196 |
| Total | | | 11,343 | 11,278 | 228 | 355 | (293) | 752 | 409 | 761 | 761 |

(i) Although the Company held a majority of the voting capital, the entities are accounted under the equity method due to the stockholders' agreement where relevant decisions are shared with other parties.

(ii) Companhia Siderúrgica do Pecém ("CSP") is a joint venture and its results are accounted for under the equity method, in which the accumulated losses are capped to the Company's interest in the investee's capital based on the applicable law and requirements. That is, after the investment is reduced to zero, the Company does not recognize further losses nor liabilities associated with the investee.

13. Intangibles

Changes in intangibles are as follows:

| | Consolidated | | | | | |
|-------------------------------------|---------------|---------------|----------------|------------|--|---------------|
| | Goodwill | Concessions | Contract right | Software | Research and development project and patents | Total |
| Balance at December 31, 2019 | 14,628 | 16,005 | 563 | 304 | 2,757 | 34,257 |
| Additions | - | 358 | - | 37 | - | 395 |
| Disposals | - | (18) | - | - | - | (18) |
| Amortization | - | (451) | (3) | (57) | - | (511) |
| Translation adjustment | 2,431 | - | 139 | 29 | 2 | 2,601 |
| Balance at June 30, 2020 | 17,059 | 15,894 | 699 | 313 | 2,759 | 36,724 |
| Cost | 17,059 | 20,767 | 1,221 | 3,734 | 2,759 | 45,540 |
| Accumulated amortization | - | (4,873) | (522) | (3,421) | - | (8,816) |
| Balance at June 30, 2020 | 17,059 | 15,894 | 699 | 313 | 2,759 | 36,724 |

| | Consolidated | | | | | |
|-------------------------------------|---------------|---------------|----------------|------------|--|---------------|
| | Goodwill | Concessions | Contract right | Software | Research and development project and patents (i) | Total |
| Balance at December 31, 2018 | 14,155 | 15,737 | 530 | 428 | - | 30,850 |
| Additions | - | 818 | - | 101 | 1,888 | 2,807 |
| Disposals | - | (44) | - | (1) | - | (45) |
| Amortization | - | (519) | (3) | (151) | - | (673) |
| Translation adjustment | 181 | 9 | 13 | 6 | (30) | 179 |
| Balance at June 30, 2019 | 14,336 | 16,001 | 540 | 383 | 1,858 | 33,118 |
| Cost | 14,336 | 20,132 | 821 | 3,768 | 1,858 | 40,915 |
| Accumulated amortization | - | (4,131) | (281) | (3,385) | - | (7,797) |
| Balance at June 30, 2019 | 14,336 | 16,001 | 540 | 383 | 1,858 | 33,118 |

(i) Refers mainly to the acquisition of New Steel Global N.V. (note 12c).

Concessions

The Federal Court of Audit approved on July 29, 2020 (subsequent event), the early extension of the Vitória Minas Railroad (EFVM) and Carajás Railroad (EFC) concessions. The Company will assess the terms and consequences of this decision to submit the proposal, with the required counterparts, to its Board of Directors.

14. Property, plant and equipment

Changes in property, plant and equipment are as follows:

| | Consolidated | | | | | | | |
|--|--------------|---------------|---------------|---------------|--------------------|---------------------|---------------|---------------------------|
| | Land | Building | Facilities | Equipment | Mineral properties | Right of use assets | Others | Constructions in progress |
| Balance at December 31, 2019 | 2,881 | 40,256 | 38,713 | 22,921 | 33,302 | 6,819 | 25,201 | 17,640 |
| Additions (i) | - | - | - | - | - | 166 | - | 8,974 |
| Disposals | (4) | (9) | (17) | (17) | (38) | - | (19) | (160) |
| Assets retirement obligation | - | - | - | - | 1,770 | - | - | - |
| Depreciation, amortization and depletion | - | (1,091) | (1,349) | (1,930) | (1,267) | (402) | (1,237) | - |
| Impairment (note 12b) | - | (947) | (1,289) | (93) | (692) | (3) | (342) | (529) |
| Translation adjustment | 374 | 3,619 | 2,385 | 4,218 | 6,771 | 1,805 | 1,629 | 1,239 |
| Transfers | 87 | 488 | 754 | 972 | 1,779 | - | 1,006 | (5,086) |
| Balance at June 30, 2020 | 3,338 | 42,316 | 39,197 | 26,071 | 41,625 | 8,385 | 26,238 | 22,078 |
| Cost | 3,338 | 75,148 | 59,276 | 55,725 | 87,228 | 10,062 | 50,260 | 22,078 |
| Accumulated depreciation | - | (32,832) | (20,079) | (29,654) | (45,603) | (1,677) | (24,022) | - |
| Balance at June 30, 2020 | 3,338 | 42,316 | 39,197 | 26,071 | 41,625 | 8,385 | 26,238 | 22,078 |

| | Consolidated | | | | | | | |
|--|--------------|---------------|---------------|---------------|--------------------|---------------------|---------------|---------------------------|
| | Land | Building | Facilities | Equipment | Mineral properties | Right of use assets | Others | Constructions in progress |
| Balance at December 31, 2018 | 2,459 | 42,434 | 43,536 | 24,826 | 32,931 | - | 28,175 | 13,120 |
| Effects of IFRS 16/CPC 06 (R2) adoption | - | - | - | - | - | 6,978 | - | - |
| Additions (i) | - | - | - | - | - | 236 | - | 6,626 |
| Disposals | (78) | (423) | (117) | (98) | (613) | (16) | (644) | (100) |
| Assets retirement obligation | - | - | - | - | 907 | - | - | - |
| Depreciation, amortization and depletion | - | (1,000) | (1,228) | (1,645) | (1,235) | (346) | (1,264) | - |
| Translation adjustment | (1) | 56 | 86 | (62) | 478 | (44) | 31 | 87 |
| Transfers | 1 | 342 | 486 | 2,092 | 1,284 | - | 1,575 | (5,780) |
| Balance at June 30, 2019 | 2,381 | 41,409 | 42,763 | 25,113 | 33,752 | 6,808 | 27,873 | 13,953 |
| Cost | 2,381 | 71,380 | 68,038 | 48,783 | 67,152 | 7,383 | 47,036 | 13,953 |
| Accumulated depreciation | - | (29,971) | (25,275) | (23,670) | (33,400) | (575) | (19,163) | - |
| Balance at June 30, 2019 | 2,381 | 41,409 | 42,763 | 25,113 | 33,752 | 6,808 | 27,873 | 13,953 |

(i) Includes capitalized borrowing costs.

There are no material changes to the net book value of consolidated property, plant and equipment pledged to secure judicial claims and loans and borrowings (note 15) compared to those disclosed in the financial statements as at December 31, 2019.

Leases

Changes in the recognized right-of-use assets and leases liabilities are as follows:

| | | | | | Assets |
|------------------|-------------------|--|--------------|------------------------|---------------|
| | December 31, 2019 | Additions and contract modifications (i) | Depreciation | Translation adjustment | June 30, 2020 |
| Ports | 2,958 | 3 | (95) | 896 | 3,762 |
| Vessels | 2,341 | - | (123) | 827 | 3,045 |
| Pellets plants | 676 | 126 | (104) | 19 | 717 |
| Properties | 521 | 18 | (53) | (41) | 445 |
| Energy plants | 250 | - | (6) | 101 | 345 |
| Locomotives | - | 11 | - | - | 11 |
| Mining equipment | 73 | 5 | (21) | 3 | 60 |
| Total | 6,819 | 163 | (402) | 1,805 | 8,385 |

| | | | | | | Liabilities |
|------------------|----------------------|---|--------------|------------|---------------------------|---------------|
| | December 31, 2019 | Additions and contract modifications (i) | Payments | Interest | Translation adjustment | June 30, 2020 |
| Ports | 3,023 | 3 | (201) | 70 | 978 | 3,873 |
| Vessels | 2,343 | - | (185) | 63 | 824 | 3,045 |
| Pellets plants | 705 | 126 | (10) | 24 | (24) | 821 |
| Properties | 614 | 18 | (37) | 10 | 80 | 685 |
| Energy plants | 282 | - | (7) | - | 48 | 323 |
| Locomotives | 154 | 11 | (20) | - | 58 | 203 |
| Mining equipment | 97 | 5 | (22) | 4 | 15 | 99 |
| Total | 7,218 | 163 | (482) | 171 | 1,979 | 9,049 |

(i) Additions mainly relates to renewal of the contract with the pelletizing companies Hispanobras and Itabasco, which expires in March 2021 and June 2021, respectively.

The annual minimum payments are presented as follows:

| | 2020 | 2021 | 2022 | 2023 | 2024 onwards | Total |
|------------------|------------|------------|------------|------------|--------------|--------------|
| Ports | 82 | 181 | 181 | 181 | 3,379 | 4,004 |
| Vessels | 181 | 356 | 345 | 340 | 2,546 | 3,768 |
| Pellets plants | 159 | 115 | 115 | 33 | 394 | 816 |
| Properties | 110 | 148 | 93 | 77 | 219 | 647 |
| Energy plants | 16 | 33 | 33 | 33 | 181 | 296 |
| Locomotives | 22 | 49 | 49 | 49 | 126 | 295 |
| Mining equipment | 16 | 27 | 27 | 16 | 11 | 97 |
| Total | 586 | 909 | 843 | 729 | 6,856 | 9,923 |

The amounts in the table above presents the undiscounted lease obligation by maturity date. The lease liability disclosed as “leases” in the balance sheet is measured at the present value of such obligations.

The total amount of the variable lease payments not included in the measurement of lease liabilities, which have been recognized straight to the income statement, for the three and six-month periods ended June 30, 2020 was R\$51 and R\$199, respectively, and for the three and six-month periods ended June 30, 2019 was R\$469 and R\$1,179, respectively. The interest accretion recognized in the income statement is disclosed in note 6.

15. Loans, borrowings, 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 | |
|---|---------------|-------------------|
| | June 30, 2020 | December 31, 2019 |
| Debt contracts in the international markets | 83,492 | 42,298 |
| Debt contracts in Brazil | 9,066 | 10,327 |
| Total of loans and borrowings | 92,558 | 52,625 |
| (-) Cash and cash equivalents | 66,333 | 29,627 |
| (-) Short-term investments | 507 | 3,329 |
| Net debt | 25,718 | 19,669 |

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. They are readily convertible to cash, being R\$10,673 denominated in R\$, indexed to the Brazilian Interbank Interest rate ("DI Rate" or "CDI"), R\$54,296 denominated in US\$ and R\$1,364 denominated in other currencies.

c) Short-term investments

At June 30, 2020, the balance of R\$507 is substantially comprised of investments in an exclusive investment fund immediately liquid, whose portfolio is composed of committed transactions and Financial Treasury Bills ("LFTs"), which are floating-rate securities issued by the Brazilian government. At December 31, 2019, the balance of R\$3,329 is mainly comprised of investments directly in LFTs.

d) Loans and borrowings

i) Total debt

| | Consolidated | | | |
|--|---------------------|-------------------|-------------------------|-------------------|
| | Current liabilities | | Non-current liabilities | |
| | June 30, 2020 | December 31, 2019 | June 30, 2020 | December 31, 2019 |
| Debt contracts in the international markets | | | | |
| Floating rates in: | | | | |
| US\$ | 946 | 456 | 42,094 | 11,294 |
| EUR | - | - | 1,232 | 907 |
| Fixed rates in: | | | | |
| US\$ | 77 | 593 | 33,234 | 24,506 |
| EUR | - | - | 4,617 | 3,398 |
| Other currencies | 60 | 56 | 498 | 427 |
| Accrued charges | 734 | 645 | - | 16 |
| | 1,817 | 1,750 | 81,675 | 40,548 |
| Debt contracts in Brazil | | | | |
| Floating rates in: | | | | |
| R\$, indexed to TJLP, TR, IPCA, IGP-M and CDI | 3,087 | 2,620 | 5,169 | 6,759 |
| Basket of currencies and US\$ indexed to LIBOR | 246 | 177 | 181 | 226 |
| Fixed rates in: | | | | |
| R\$ | 120 | 174 | 126 | 181 |
| Accrued charges | 137 | 174 | - | 16 |
| | 3,590 | 3,145 | 5,476 | 7,182 |
| Total | 5,407 | 4,895 | 87,151 | 47,730 |

The future flows of debt payments, principal and interest, are as follows:

| | | Consolidated |
|-----------------------|---------------|--|
| | Principal | Estimated future interest payments (i) |
| 2020 | 1,951 | 1,727 |
| 2021 | 3,591 | 3,464 |
| 2022 | 15,929 | 3,222 |
| 2023 | 6,334 | 3,031 |
| Between 2024 and 2028 | 40,134 | 11,015 |
| 2029 onwards | 23,748 | 14,815 |
| Total | 91,687 | 37,274 |

(i) Based on interest rate curves and foreign exchange rates applicable as at June 30, 2020 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 interim financial statements.

At June 30, 2020, the average annual interest rates by currency are as follows:

| | Average interest rate (i) | Consolidated Total debt |
|-----------------------------|---------------------------|-------------------------|
| Loans and borrowings | | |
| US\$ | 3.85% | 77,406 |
| R\$ (ii) | 8.93% | 8,639 |
| EUR (iii) | 3.79% | 5,952 |
| Other currencies | 3.45% | 561 |
| | | 92,558 |

(i) In order to determine the average interest rate for debt contracts with floating rates, the Company used the rate applicable at June 30, 2020.

(ii) R\$ denominated debt that bears interest at IPCA, CDI, TR or TJLP, plus spread. For a total of R\$8,176 the Company entered into derivative transactions to mitigate the exposure to the cash flow variations of the floating rate debt denominated in R\$, resulting in an average cost of 2.97% per year in US\$.

(iii) Eurobonds, for which the Company entered into derivatives to mitigate the exposure to the cash flow variations of the debt denominated in EUR, resulting in an average cost of 4.29% per year in US\$.

ii) Reconciliation of debt to cash flows arising from financing activities

| | Consolidated |
|--|----------------------|
| | Loans and borrowings |
| December 31, 2019 | 52,625 |
| Additions | 24,419 |
| Repayments | (2,306) |
| Interest paid | (2,009) |
| Cash flow from financing activities | 20,104 |
| Effect of exchange rate | 18,026 |
| Interest accretion | 1,803 |
| Non-cash changes | 19,829 |
| June 30, 2020 | 92,558 |

iii) Credit and financing lines

In March 2020, the Company drew down R\$27,380 (US\$5 billion) under its revolving credit lines agreements, maturing in June 2022 R\$10,952 (US\$2 billion) and in December 2024 R\$16,428 (US\$3 billion), as a precautionary measure in order to increase its cash position and preserve financial flexibility in light of current uncertainty in the global markets resulting from the COVID-19 outbreak

iv) Funding

In July 2020 (subsequent event), the Company issued through Vale Overseas Limited guaranteed notes due July 2030 totaling R\$8,214 (US\$1,500 million). The notes bear 3.750% coupon per year, payable semi-annually, and were sold at a price of 99.176% of the principal amount.

v) Guarantees

As at June 30, 2020 and December 31, 2019, loans and borrowings are secured by property, plant and equipment in the amount of R\$876 and R\$887, respectively.

The securities issued through Vale's wholly-owned finance subsidiary Vale Overseas Limited are fully and unconditionally guaranteed by Vale.

vi) Covenants

Some of the Company's debt agreements with lenders contain financial covenants. The primary financial covenants in those agreements require maintaining certain ratios, such as debt to EBITDA (Earnings before Interest Taxes, Depreciation and Amortization) and interest coverage. The Company has not identified any instances of noncompliance as at June 30, 2020.

16. Liabilities related to associates and joint ventures

On November 5, 2015, a rupture occurred in the Fundão tailings dam, in Mariana (State of Minas Gerais), operated by Samarco Mineração S.A. ("Samarco"), a joint venture controlled by Vale S.A. and BHP Billiton Brasil Ltda. ("BHP Brasil"). In March 2016, Samarco and its shareholders entered into a Framework Agreement with governmental authorities, in which Samarco, Vale and BHP Brasil agreed to establish the Renova Foundation, an entity responsible to develop and implement 42 long-term mitigation and compensation programs. In addition, the Company has a provision of R\$1,001 for the de-characterization of the Germano dam.

On October 25, 2019, Samarco obtained the Corrective Operation License for its operating activities in the Germano Complex. Following this authorization, Samarco has obtained all environmental licenses required to restart its operations and expects to restart its operations by the end of 2020, subject to its shareholders' approval.

The changes in the provision for the periods ended June 30, 2020 and 2019 are as follows:

| | Consolidated | |
|-------------------------|--------------|-------|
| | 2020 | 2019 |
| Balance at January 1, | 6,853 | 4,346 |
| Provision increase | 2,939 | 2,470 |
| Payments | (852) | (575) |
| Present value valuation | 198 | 311 |
| Balance at June 30, | 9,138 | 6,552 |

| | June 30, 2020 | December 31, 2019 |
|-------------------------|---------------|-------------------|
| Current liabilities | 3,880 | 2,079 |
| Non-current liabilities | 5,258 | 4,774 |
| Liabilities | 9,138 | 6,853 |

Renova Foundation

During the second quarter of 2020, Fundação Renova reviewed the assumptions used on the preparation of the estimates incorporated into the mitigation and compensation programs. The periodic review, resulted in an additional provision of R\$2,939 for the Company, which corresponds to its portion of the responsibility to support the Renova Foundation for the next 10 years. The contingencies related to the Fundão dam rupture are disclosed in note 21.

Samarco's working capital

In addition to the provision, Vale may provide a short-term credit facility up to R\$1,164 (US\$213 million), to support Samarco's cash requirements, of which R\$362 (US\$76 million) has already been made available during the six-month period ended June 30, 2020. This amount was recognized in Vale's income statement as an expense in "Equity results and other results in associates and joint ventures".

Insurance

Since the Fundão dam rupture, the Company has been negotiating with insurers the indemnification payments based on its general liability policies. During the second quarter of 2020, the Company received payments in the amount of R\$32 (US\$6 million) and recognized a gain in the income statement as “Equity results and other results in associates and joint ventures”.

Critical accounting estimates and judgments

Under Brazilian legislation and the terms of the joint venture agreement, Vale does not have an obligation to provide funding to Samarco. Accordingly, Vale’s investment in Samarco was fully impaired and no provision was recognized in relation to the Samarco’s negative equity.

The provision related to Renova Foundation requires the use of assumptions that may be mainly affected by: (i) changes in scope of work required under the Framework Agreement as a result of further technical analysis and the ongoing negotiations with the Federal Prosecution Office, (ii) resolution of uncertainty in respect of the resumption of Samarco’s operations; (iii) updates of the discount rate; and (iv) resolution of existing and potential legal claims.

Moreover, the main critical assumptions and estimates applied in the Germano dam provision considers, among others: (i) volume of the waste to be removed based on historical data available and interpretation of the enacted laws and regulations; (ii) location availability for the tailings disposal; and (iii) acceptance by the authorities of the proposed engineering methods and solution.

As a result, future expenditures may differ from the amounts currently provided and changes to key assumptions could result in a material impact to the amount of the provision in future reporting periods. At each reporting period, the Company reassess the key assumptions used by Samarco in the preparation of the projected cash flows and adjust the provision, if required.

17. Financial instruments classification

| | June 30, 2020 | | | | December 31, 2019 | | | |
|--|----------------|---------------------------|--------------------------------------|----------------|-------------------|---------------------------|--------------------------------------|----------------|
| | 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 |
| Financial assets | | | | | | | | |
| Current | | | | | | | | |
| Cash and cash equivalents | 66,333 | - | - | 66,333 | 29,627 | - | - | 29,627 |
| Short-term investments | - | - | 507 | 507 | - | - | 3,329 | 3,329 |
| Derivative financial instruments | - | - | 533 | 533 | - | - | 1,160 | 1,160 |
| Accounts receivable | 14,071 | - | 148 | 14,219 | 9,885 | - | 310 | 10,195 |
| Related parties | 1,650 | - | - | 1,650 | 1,289 | - | - | 1,289 |
| | 82,054 | - | 1,188 | 83,242 | 40,801 | - | 4,799 | 45,600 |
| Non-current | | | | | | | | |
| Judicial deposits | 11,333 | - | - | 11,333 | 12,629 | - | - | 12,629 |
| Restricted cash | 830 | - | - | 830 | 609 | - | - | 609 |
| Derivative financial instruments | - | - | 344 | 344 | - | - | 742 | 742 |
| Investments in equity securities | - | 2,341 | - | 2,341 | - | 2,925 | - | 2,925 |
| Loans | 355 | - | - | 355 | 350 | - | - | 350 |
| Related parties | 8,720 | - | - | 8,720 | 6,448 | - | - | 6,448 |
| | 21,238 | 2,341 | 344 | 23,923 | 20,036 | 2,925 | 742 | 23,703 |
| Total of financial assets | 103,292 | 2,341 | 1,532 | 107,165 | 60,837 | 2,925 | 5,541 | 69,303 |
| Financial liabilities | | | | | | | | |
| Current | | | | | | | | |
| Suppliers and contractors | 16,068 | - | - | 16,068 | 16,556 | - | - | 16,556 |
| Leases | 1,206 | - | - | 1,206 | 910 | - | - | 910 |
| Derivative financial instruments | - | - | 2,881 | 2,881 | - | - | 377 | 377 |
| Loans and borrowings | 5,407 | - | - | 5,407 | 4,895 | - | - | 4,895 |
| Interest on capital | 6,348 | - | - | 6,348 | 6,333 | - | - | 6,333 |
| Related parties | 4,074 | - | - | 4,074 | 3,951 | - | - | 3,951 |
| | 33,103 | - | 2,881 | 35,984 | 32,645 | - | 377 | 33,022 |
| Non-current | | | | | | | | |
| Leases | 7,843 | - | - | 7,843 | 6,308 | - | - | 6,308 |
| Derivative financial instruments | - | - | 4,823 | 4,823 | - | - | 1,237 | 1,237 |
| Loans and borrowings | 87,151 | - | - | 87,151 | 47,730 | - | - | 47,730 |
| Related parties | 5,151 | - | - | 5,151 | 3,853 | - | - | 3,853 |
| Participative stockholders' debentures | - | - | 11,285 | 11,285 | - | - | 10,416 | 10,416 |
| Financial guarantees | - | - | 2,971 | 2,971 | - | - | 2,116 | 2,116 |
| | 100,145 | - | 19,079 | 119,224 | 57,891 | - | 13,769 | 71,660 |
| Total of financial liabilities | 133,248 | - | 21,960 | 155,208 | 90,536 | - | 14,146 | 104,682 |

18. Fair value estimate

a) Assets and liabilities measured and recognized at fair value:

| | June 30, 2020 | | | | December 31, 2019 | | | |
|--|---------------|---------------|------------|---------------|-------------------|---------------|------------|---------------|
| | Level 1 | Level 2 | Level 3 | Total | Level 1 | Level 2 | Level 3 | Total |
| Financial assets | | | | | | | | |
| Short-term investments | 507 | - | - | 507 | 3,329 | - | - | 3,329 |
| Derivative financial instruments | - | 748 | 129 | 877 | - | 1,806 | 96 | 1,902 |
| Accounts receivable | - | 148 | - | 148 | - | 310 | - | 310 |
| Investments in equity securities | 2,341 | - | - | 2,341 | 2,925 | - | - | 2,925 |
| Total | 2,848 | 896 | 129 | 3,873 | 6,254 | 2,116 | 96 | 8,466 |
| Financial liabilities | | | | | | | | |
| Derivative financial instruments | - | 7,492 | 212 | 7,704 | - | 1,130 | 484 | 1,614 |
| Participative stockholders' debentures | - | 11,285 | - | 11,285 | - | 10,416 | - | 10,416 |
| Financial guarantees | - | 2,971 | - | 2,971 | - | 2,116 | - | 2,116 |
| Total | - | 21,748 | 212 | 21,960 | - | 13,662 | 484 | 14,146 |

There were no transfers between Level 1 and Level 2, or between Level 2 and Level 3 for the six-month period ended June 30, 2020.

The following table presents the changes in Level 3 assets and liabilities for the six-month period ended June 30, 2020:

| | Consolidated | |
|--|------------------|-----------------------|
| | Financial assets | Financial liabilities |
| Balance at December 31, 2019 | 96 | 484 |
| Gain and losses recognized in income statement | 33 | (272) |
| Balance at June 30, 2020 | 129 | 212 |

Methods and techniques of evaluation

i) Derivative financial instruments

Derivative financial instruments are evaluated through the use of market curves and prices impacting each instrument at the closing dates, detailed in the item "market curves" (note 26).

For the pricing of options, the Company often uses the Black & Scholes model. In this model, the fair value of the derivative is determined basically as a function of the volatility and the price of the underlying asset, the strike price of the option, the risk-free interest rate and the option maturity. In the case of options where payoff is a function of the average price of the underlying asset over a certain period during the life of the option, the Company uses Turnbull & Wakeman model. In this model, in addition to the factors that influence the option price in the Black-Scholes model, the formation period of the average price is also considered.

In the case of swaps, both the present value of the long and short positions are estimated by discounting their cash flows by the interest rate in the related currency. The fair value is determined by the difference between the present value of the long and short positions of the swap in the reference currency.

For the swaps indexed to TJLP, the calculation of the fair value assumes that TJLP is constant, that is, the projections of future cash flows in Brazilian Reais are made considering the last TJLP disclosed.

Forward and future contracts are priced using the future curves of their corresponding underlying assets. Typically, these curves are obtained on the stock exchanges where these assets are traded, such as the London Metals Exchange ("LME"), the Commodity Exchange ("COMEX") or other providers of market prices. When there is no price for the desired maturity, Vale uses an interpolation between the available maturities.

The fair value of derivatives within level 3 is estimated using discounted cash flows and option model valuation techniques with unobservable inputs of discount rates, stock prices and commodities prices.

b) Fair value of financial instruments not measured at fair value

The fair values and carrying amounts of loans and borrowings are as follows:

| | Consolidated | | | |
|-----------------------|--------------|------------|---------|---------|
| Financial liabilities | Balance | Fair value | Level 1 | Level 2 |
| June 30, 2020 | | | | |
| Debt principal | 91,687 | 99,154 | 48,326 | 50,828 |
| December 31, 2019 | | | | |
| Debt principal | 51,774 | 58,784 | 36,208 | 22,576 |

Due to the short-term cycle, the fair value of cash and cash equivalents balances, financial investments, accounts receivable and accounts payable approximate their book values.

19. Derivative financial instruments

a) Derivatives effects on statement of financial position

| | Consolidated | | | |
|--|---------------|-------------|-------------------|-------------|
| | June 30, 2020 | | December 31, 2019 | |
| | Current | Non-current | Current | Non-current |
| Foreign exchange and interest rate risk | | | | |
| CDI & TJLP vs. US\$ fixed and floating rate swap | - | - | 53 | - |
| IPCA swap | 235 | 203 | 337 | 474 |
| Pre-dollar swap | - | - | 84 | 31 |
| | 235 | 203 | 474 | 505 |
| Commodities price risk | | | | |
| Nickel (i) | 16 | 1 | 606 | 36 |
| Bunker oil, Gasoil and Brent | 244 | 16 | 76 | - |
| | 260 | 17 | 682 | 36 |
| Others | 38 | 124 | 4 | 201 |
| | 38 | 124 | 4 | 201 |
| Total | 533 | 344 | 1,160 | 742 |

(i) The nickel hedge accounting program was fully settled on April 1, 2020. The remaining balance relates to the palladium (a nickel by-product) hedge accounting program.

| | Consolidated | | | |
|--|---------------|--------------|-------------------|--------------|
| | June 30, 2020 | | December 31, 2019 | |
| | Current | Non-current | Current | Non-current |
| Foreign exchange and interest rate risk | | | | |
| CDI & TJLP vs. US\$ fixed and floating rate swap | 1,084 | 3,339 | 196 | 322 |
| IPCA swap | 498 | 567 | 52 | 150 |
| Eurobonds swap | 34 | 273 | 24 | 117 |
| Pre-dollar swap | 412 | 412 | 32 | 148 |
| | 2,028 | 4,591 | 304 | 737 |
| Commodities price risk | | | | |
| Nickel | 6 | - | 13 | 16 |
| Bunker oil, Gasoil and Brent | 841 | - | 29 | - |
| | 847 | - | 42 | 16 |
| Others | 6 | 232 | 31 | 484 |
| | 6 | 232 | 31 | 484 |
| Total | 2,881 | 4,823 | 377 | 1,237 |

b) Effects of derivatives on the income statement, cash flow and other comprehensive income

| | Consolidated | | | |
|--|--|-------------|---------------------------------|------------|
| | Gain (loss) recognized in the income statement | | | |
| | Three-month period ended June 30, | | Six-month period ended June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Foreign exchange and interest rate risk | | | | |
| CDI & TJLP vs. US\$ fixed and floating rate swap | (969) | 65 | (4,095) | 37 |
| IPCA swap | (123) | 63 | (1,212) | 109 |
| Eurobonds swap | 38 | (11) | (107) | (83) |
| Pre-dollar swap | (146) | (20) | (807) | (12) |
| | (1,200) | 97 | (6,221) | 51 |
| Commodities price risk | | | | |
| Nickel | 3 | (14) | 3 | 60 |
| Bunker oil, Gasoil and Brent | 540 | (1) | (1,098) | 107 |
| | 543 | (15) | (1,095) | 167 |
| Options - MBR | - | 138 | - | 145 |
| Others | 236 | 35 | 501 | 232 |
| | 236 | 173 | 501 | 377 |
| Total | (421) | 255 | (6,815) | 595 |

| | Consolidated | | | |
|--|---|-------------|---------------------------------|--------------|
| | Financial settlement inflows (outflows) | | | |
| | Three-month period ended June 30, | | Six-month period ended June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Foreign exchange and interest rate risk | | | | |
| CDI & TJLP vs. US\$ fixed and floating rate swap | (168) | (76) | (248) | (400) |
| IPCA swap | - | - | 1 | (101) |
| Eurobonds swap | - | - | (24) | (19) |
| Pre-dollar swap | 42 | 63 | (58) | 55 |
| | (126) | (13) | (329) | (465) |
| Commodities price risk | | | | |
| Nickel | 219 | 3 | 1,462 | 16 |
| Bunker oil, Gasoil and Brent | (702) | - | (706) | - |
| | (483) | 3 | 756 | 16 |
| Others | 11 | (5) | 307 | (6) |
| Total | (598) | (15) | 734 | (455) |

| | Consolidated | | | |
|---|---|----------|---------------------------------|----------|
| | Gain recognized in other comprehensive income | | | |
| | Three-month period ended June 30, | | Six-month period ended June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Derivatives designated as cash flow hedge accounting | | | | |
| Nickel | (269) | - | 8 | - |
| Total | (269) | - | 8 | - |

The maturity dates of the derivative financial instruments are as follows:

| | Last maturity dates |
|------------------------------------|---------------------|
| Currencies and interest rates | September 2029 |
| Palladium | March 2021 |
| Nickel | December 2021 |
| Brent | June 2021 |
| Gasoil | December 2020 |
| Debentures convertible into shares | December 2027 |
| Others | July 2022 |

c) Hedge in foreign operations

In January 2017, the Company implemented hedge accounting for the foreign currency risk arising from Vale S.A.'s net investments in Vale International S.A. and Vale Holding BV. Under the hedge accounting program, the Company's debt denominated in U.S. dollars and Euros serves as a hedge instrument for these investments. With the program, the impact of exchange rate variations on debt denominated in U.S. dollars and Euros has been partially recorded in other comprehensive income, in the "Cumulative translation adjustments". As at June 30, 2020, the carrying value of the debts designated as instrument hedge of these investments are R\$12,369 (US\$2,259 million) and R\$4,615 (EUR750 million).

| | Consolidated | | | |
|--|--|------|---------------------------------|------|
| | Gain (loss) recognized in the other comprehensive income | | | |
| | Three-month period ended June 30, | | Six-month period ended June 30, | |
| | 2020 | 2019 | 2020 | 2019 |
| Hedge in foreign operation, net of tax | (632) | 128 | (3,026) | 84 |

20. Provisions

| | Consolidated | | | |
|--|---------------------|-------------------|-------------------------|-------------------|
| | Current liabilities | | Non-current liabilities | |
| | June 30, 2020 | December 31, 2019 | June 30, 2020 | December 31, 2019 |
| Payroll, related charges and other remunerations | 2,716 | 3,183 | - | - |
| Onerous contracts | 310 | 229 | 4,685 | 3,489 |
| Environmental obligations | 539 | 587 | 1,286 | 980 |
| Asset retirement obligations | 690 | 638 | 18,480 | 15,323 |
| Provisions for litigation (note 21) | - | - | 6,265 | 5,895 |
| Employee postretirement obligations (note 22) | 401 | 319 | 12,039 | 8,546 |
| Provisions | 4,656 | 4,956 | 42,755 | 34,233 |

21. Litigations

a) Provision for litigations

Vale is party to labor, civil, tax and other ongoing lawsuits, at administrative and court levels. Provisions for losses resulting from lawsuits are estimated and updated by the Company, based on analysis from the Company's legal consultants.

Changes in provision for litigations are as follows:

| | Consolidated | | | |
|-------------------------------------|----------------|------------------|------------------|--------------------------|
| | Tax litigation | Civil litigation | Labor litigation | Environmental litigation |
| Balance at December 31, 2019 | 2,804 | 1,213 | 1,835 | 43 |
| Additions and reversals, net | 95 | 153 | 68 | 10 |
| Payments | (58) | (51) | (167) | - |
| Indexation and interest | 65 | 77 | 60 | 3 |
| Translation adjustment | 107 | 8 | - | - |
| Balance at June 30, 2020 | 3,013 | 1,400 | 1,796 | 56 |

| | Consolidated | | | |
|-------------------------------------|--------------------|------------------|------------------|--------------------------|
| | Tax litigation (i) | Civil litigation | Labor litigation | Environmental litigation |
| Balance at December 31, 2018 | 2,816 | 644 | 1,785 | 13 |
| Additions and reversals, net (ii) | 5 | 659 | 241 | 20 |
| Payments | (57) | (142) | (276) | - |
| Indexation and interest | (6) | 76 | 56 | 6 |
| Translation adjustment | 8 | (5) | - | - |
| Balance at June 30, 2019 | 2,766 | 1,232 | 1,806 | 39 |

(i) Includes amounts regarding to social security claims that were classified as labor claims.

(ii) Includes the change in the expected outcome of probable loss of the lawsuit related to the accident of ship loaders, at the Praia Mole maritime terminal, in Espírito Santo.

b) Contingent liabilities

The Company has contingent liabilities where claims are debated in both administrative and judicial claims and whose expected loss is classified as possible, and for which are not recognized by the Company.

Based in the legal opinions, the presentation of the litigations classified with expected loss as possible are presented as follow:

| | Consolidated | |
|---------------------------|---------------|-------------------|
| | June 30, 2020 | December 31, 2019 |
| Tax litigations | 37,730 | 33,839 |
| Civil litigations | 6,654 | 6,116 |
| Labor litigations | 2,800 | 3,116 |
| Environmental litigations | 4,533 | 4,410 |
| Brumadinho event | 712 | 635 |
| Total | 52,429 | 48,116 |

i - Tax litigations - The most relevant tax and social security contingent liabilities are associated with proceedings related to the collection of: (i) corporate income tax ("IRPJ") and social contributions on the net income ("CSLL"), (ii) PIS and COFINS tax credits, (iii) value added tax on the services and circulation of goods ("ICMS"), (iv) the mining royalty known as CFEM (Compensação Financeira pela Exploração de Recursos Minerais). The increase in the contingent liability for the six-month period ended June 30, 2020 is mainly due to new proceedings related to CFEM, ICMS and PIS, associated with the changes on the stage of the proceedings and monetary updates of the judicial claims under discussion.

ii - Civil litigations - Most of these lawsuits have been filed by suppliers under the argument of contractual imbalance and non-compliance, thus seeking compensation for alleged losses, payments and contractual fines. In addition, there are also land-based lawsuits regarding Vale's operational properties.

iii - Labor litigations - Represents 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.

iv - Environmental litigations - The most significant claims concern alleged environmental damages and issues related to environmental licensing.

c) Judicial deposits

In addition to the provisions and contingent liabilities, the Company is required, by law, to make judicial deposits to secure a potential adverse outcome of certain lawsuits. These court-ordered deposits are monetarily adjusted and reported as non-current assets until a judicial decision to draw the deposit occurs.

| | Consolidated | |
|---------------------------|---------------|-------------------|
| | June 30, 2020 | December 31, 2019 |
| Tax litigations | 5,112 | 5,152 |
| Civil litigations | 416 | 346 |
| Labor litigations | 910 | 992 |
| Environmental litigations | 242 | 163 |
| Brumadinho event (note 3) | 4,653 | 5,976 |
| Total | 11,333 | 12,629 |

In addition to the above-mentioned tax, civil, labor and environmental judicial deposits, the Company contracted R\$10 billion in guarantees for its lawsuits, as an alternative to judicial deposits. For the Brumadinho event, the Company contracted guarantees in the amount of R\$5.7 billion which were presented in court according to agreements with Treasury Court of Minas Gerais and Public Prosecutor's Office.

d) Contingencies related to Samarco accident

(i) Public civil claim filed by the Federal Government and others and Public civil claim filed by Federal Prosecution Office ("MPF")

In 2016, the federal government, the Brazilian states of Espírito Santo and Minas Gerais and other governmental authorities have initiated a public civil lawsuit against Samarco and its shareholders, with an estimated value indicated by the plaintiffs of R\$20.2 billion. In the same year, MPF filed a public civil action against Samarco and its shareholders and presented several claims, including: (i) the adoption of measures for mitigating the social, economic and environmental impacts resulting from the dam failure and other emergency measures; (ii) the payment of compensation to the community; and (iii) payments for the collective moral damage. The action value indicated by MPF is R\$155 billion.

In June 2018, the parties entered into an agreement ("Term of Adjustment of Conduct"), which extinguished (i) the public civil claim of R\$20.2 billion filed by the Federal Government and others; and (ii) part of the claims included in the public civil claim of R\$155 billion filed by MPF. The agreement also established a possible renegotiation of Renova Foundation's reparation programs upon the completion of studies carried by specialist engaged by the Public Prosecutor's Office in this process. These negotiations are ongoing and the conclusion is expected to occur by the end of this year.

In September 2019, the Court approved the list of entities selected by the community to provide it with technical assistance to assure its participation on the debates regarding the measures to be adopted to mitigate the impacts, in accordance with to the referred agreement.

In January 2020, the Court issued an order for the Brazilian Mining Authority ("ANM") ratifying the injunction issued on the public civil actions, filed by the Brazilian Federal Government and others, and determining the immediate revocation of the restrictions on Vale's mining concessions.

In January 2020, the Court also determined the commencement of 10 specific proceedings to address the controverted and pending items related to settlement agreements, signed by the parties (TTAC and TacGov), according to some aspects from the referred agreements (the "Priority Topics"). The Court has been establishing specific obligations in each of the Priority Topics for public authorities, Renova Foundation, Vale, Samarco and BHP Brasil with the purpose of overcoming any pending and controversial for each of the Priority Topics.

(ii) United States class action lawsuits

In March 2017, holders of bonds issued by Samarco Mineração S.A., filed a class action suit in the Federal Court in New York against Samarco Mineração S.A., Vale, BHP Billiton Limited, BHP Billiton PLC and BHP Brasil Ltda. under U.S. federal securities laws. The plaintiffs alleged that Vale S.A. made false and misleading statements or did not make disclosures concerning the risks and threats of Samarco's Fundão dam operation and on the adequacy of programs and related procedures.

In June 2019, the Court issued a decision and order dismissing with prejudice the putative federal securities class action. In December 2019 the plaintiffs filed a Notice of Appeal to the Court of Appeals. On March 10, 2020, the plaintiff filed its opening appeal brief. In June 8, 2020, Vale has filed the opposition to Safra's Appeal and they have filed their reply. The New York State Court of Appeals should rule the case during 2020. Based on the assessment of the Company's legal consultants, Vale has good arguments to oppose the appeal.

(iii) Class action lawsuits related to Vale's American Depositary Receipts

Vale and some of its Executive Officers were named as defendants in a class action filed with the Federal Court in New York, which was raised by holders of Vale's ADRs under U.S. federal securities laws. The suit was brought as a putative class action on behalf of holders of Vale's ADRs, alleging violations of the U.S. Federal Securities laws on the basis of alleged false and misleading statements or omissions concerning the risks of Samarco's Fundão dam operation and the adequacy of the related programs and procedures.

On March 23, 2017 the judge issued a decision rejecting a significant portion of the claims against Vale and individual defendants, determining the prosecution of the action with respect to more limited claims. The portion of plaintiffs' case that remains is related to certain statements about procedures, policies and risk mitigation plans contained in Vale S.A.'s sustainability reports in 2013 and 2014, and certain statements regarding to the responsibility of Vale S.A. for the Fundão dam failure made in a conference call in November 2015.

Upon the Court's determination, the parties submitted, on February 7, 2020, a settlement proposal whereby the defendants agreed to pay the amount of R\$137 (US\$25 million) for closing the case and, in a public hearing held on June 10, 2020, the final agreement was approved by the Court. The agreement amount was recognized in the Company's income statement within "Result from interests and other results in associates and joint ventures".

(iv) Criminal lawsuit

In 2016, the MPF brought a criminal lawsuit against Samarco and its shareholders, VogBr Recursos Hídricos e Geotecnia Ltda. and 22 individuals for the consequences related to Fundão dam failure. On April 23, 2019, the Federal Court from the 1st Region ("TRF 1") granted a writ of Habeas Corpus to dismiss the criminal charges of homicide and physical injuries committed by oblique intent held against one of the defendants on the criminal action. At the same time, the Court extended the writ's issuance to all other defendants on the case as the criminal information does not describe the crimes of homicide and physical injury, but the crime of flooding qualified by the result of death and physical injury as a consequence of the Fundão dam's failure. Therefore, the Court dismissed the homicide and physical injuries charges held against all defendants.

Currently, the progress of the criminal action is on hold due to the judgment of Habeas Corpus, with no decision.

After acknowledging the Court's decisions, the Ponte Nova Court changed the process, withdrawing the case from the grand jury and putting it in the ordinary processing. In the same opportunity, the judge ruled to determine the parties to manifest themselves about this process alteration and, after the Federal Prosecution and the defenses presented their petitions, the judge withdrew the charges against Vale and BHP executives and the accusation withheld for trial for the two companies together with Samarco and its representatives. The accusation of crimes committed against the Environmental Public Administration by Vale and one of its executives also remained unaltered. Additionally, the judge determined precatory letters to be sent to collect the defense witnesses testimonies and opened a 60 day term for the defenses to present a list of questions to be put together with the international cooperation for the testimony of the accusation witnesses residing in Canada.

In March 2020, the Lower Court at Ponte Nova scheduled hearings to take place in April and May, 2020, to take depositions of those defense witnesses who were able to attend it, but due to the new coronavirus pandemic, all hearings in the country which were previously scheduled to take place in April have been cancelled by an express determination from the National Justice Council. Vale is currently waiting for confirmation from the Courts whether hearings previously scheduled to take place in the next months will be maintained or not.

In July 2020, the Federal Court of the 1st Region denied an appeal presented by Vale and rejected the claim to recognize the state of limitation to keep the company within the criminal process.

(v) Tax proceedings

In 2018, the Office of the Attorney General for the National Treasury (PGFN) requested a judicial order to secure the payment of alleged federal tax and social security debts regarding Samarco. In May 2019, a favorable decision was issued dismissing the claim without prejudice, due to lack of procedural interest. The PGFN filed an appeal to the Local Court. The Company is waiting for the Court ruling.

e) Contingent Assets

(i) Compulsory loan

In 2015, the Company requested for the enforcement of the judicial decision in the amount of R\$524 related to a favorable unappealable decision which partially recognized its right to refund the differences of monetary adjustments and interests due over to the third convertible bonds issued by Eletrobrás shares in the period within 1987 to 1993. In November 2019, the Company requested for the payment of the amount recognized by Eletrobrás as due and such requirement was granted by the court. In June 2020, Eletrobrás made a deposit of R\$301, accordingly, the Company recognized an asset of such amount in these interim financial statements. The remaining amount is still under assessment and so, the Company did not recognize the asset in these interim financial statements.

(ii) ICMS included in PIS and COFINS tax base

Vale had been discussing the issue regarding the exclusion of ICMS in PIS and COFINS tax basis in two judicial proceedings, related to taxable events after December 2001. In one of the proceedings, the company has obtained a definitive favorable decision (*res judicata*). In the second proceeding the current decision is also favorable to the Company, but this proceeding did not reach the *res judicata*. Vale is waiting for a final decision on the leading that will be issued by Supreme Court in order to calculate the amount to be refunded arising from both proceedings. The Company did not record an asset in these interim financial statements.

(iii) Arbitral award related to Simandou

In 2010, Vale acquired a 51% stake in VBG - Vale BSGR Limited ("VBG") (formerly BSG Resources (Guinea) Limited), which had iron ore concession rights in Simandou South ("Zogota") and iron ore exploration permits over the areas known as Simandou Blocks 1 & 2 in Guinea. In 2014, the Republic of Guinea revoked those rights after a finding that BSGR had obtained them through bribery of Guinean government officials. The Republic of Guinea did not make any finding of any involvement or responsibility on Vale's part.

Vale commenced arbitration proceedings against BSG Resources Limited ("BSGR") in April 2014, and in April 2019, the arbitral tribunal in London ruled in Vale's favor and ordered BSGR to pay to Vale the amount of R\$6,571 (US\$1.2 billion) plus costs and interest (with interest and costs, the award exceeds R\$10,952 (US\$2.0 billion)). The arbitral tribunal ruled that BSGR had defrauded Vale by inducing Vale to enter into the joint venture. On September 20, 2019, the English High Court ruled that Vale can proceed with enforcement of its R\$10,952 (US\$2.0 billion) arbitration award.

BSGR went into administration in March 2018, and Vale has commenced legal proceedings against BSGR before courts in London, England and in the United States District Court for the Southern District of New York to enforce the arbitral award against BSGR.

BSGR challenged the award before the English High Court, and its challenge was dismissed on November 29, 2019. BSGR has also applied to the United States Bankruptcy Court to have its administration recognized in the United States.

On December 3, 2019, Vale and two of its affiliates filed new litigation proceedings in the English High Court, claiming damages of approximately R\$10,131 (US\$1.85 billion), against certain individuals and related parties to BSGR.

Vale intends to pursue the enforcement of the award and collection of the amounts due by all legally available means, but since there can be no assurance as to the timing and amount of any collections, the asset was not recognized in its financial statements.

(iv) Canadian Tax Litigation Matter

Vale Canada Limited ("VCL") and the Canadian Department of Justice - Canada Revenue Agency signed an agreement regarding a tax litigation matter related to the appropriate tax treatment of certain receipts received and expenditures incurred by VCL in respect of merger and acquisition transactions in 2006. In 2019, the Company recognized an asset in the amount of R\$889 (CAD221 million) for the agreed tax refund including interest and recognized in 2020 an additional amount of R\$84 (CAD21 million) related to interest. The total amount has been paid in full to the company.

22. Employee post-retirement obligations

Reconciliation of net liabilities recognized in the statement of financial position

| | June 30, 2020 | | | Consolidated December 31, 2019 | | |
|---|-----------------------------|------------------------------|----------------|-----------------------------------|------------------------------|----------------|
| | Overfunded pension plans | Underfunded pension plans | Other benefits | Overfunded pension plans | Underfunded pension plans | Other benefits |
| Amount recognized in the statement of financial position | | | | | | |
| Present value of actuarial liabilities | (15,493) | (23,765) | (8,050) | (16,148) | (17,818) | (6,066) |
| Fair value of assets | 19,655 | 19,373 | - | 21,380 | 15,019 | - |
| Effect of the asset ceiling | (4,162) | - | - | (5,232) | - | - |
| Liabilities | - | (4,392) | (8,050) | - | (2,799) | (6,066) |
| Current liabilities | - | (133) | (241) | - | (50) | (269) |
| Non-current liabilities | - | (4,259) | (7,809) | - | (2,749) | (5,797) |
| Liabilities | - | (4,392) | (8,050) | - | (2,799) | (6,066) |

23. Stockholders' equity

a) Share capital

As at June 30, 2020, the share capital was R\$77,300 corresponding to 5,284,474,782 shares issued and fully paid without par value.

| Stockholders | June 30, 2020 | | |
|--|----------------------|---------------|----------------------|
| | Common shares | Golden shares | Total |
| Litel Participações S.A. and Litela Participações S.A. | 594,565,564 | - | 594,565,564 |
| BNDES Participações S.A. | 323,496,276 | - | 323,496,276 |
| Bradespar S.A. | 293,907,266 | - | 293,907,266 |
| Mitsui & Co., Ltd | 286,347,055 | - | 286,347,055 |
| Foreign investors - ADRs | 1,114,017,346 | - | 1,114,017,346 |
| Foreign institutional investors in local market | 1,236,753,147 | - | 1,236,753,147 |
| FMP - FGTS | 44,454,824 | - | 44,454,824 |
| PIBB - Fund | 3,290,327 | - | 3,290,327 |
| Institutional investors | 922,693,533 | - | 922,693,533 |
| Retail investors in Brazil | 310,385,604 | - | 310,385,604 |
| Brazilian Government (Golden Share) | - | 12 | 12 |
| Shares outstanding | 5,129,910,942 | 12 | 5,129,910,954 |
| Shares in treasury | 154,563,828 | - | 154,563,828 |
| Total issued shares | 5,284,474,770 | 12 | 5,284,474,782 |
| Share capital per class of shares (in millions) | 77,300 | - | 77,300 |
| Total authorized shares | 7,000,000,000 | - | 7,000,000,000 |

b) Shares in treasury

The Company used 1,628,485 and 2,024,059 treasury shares, to pay the Matching program of its eligible executives, in the amount of R\$68 and R\$84 recognized as "assignment and transfer of shares" for the six-month periods ended June 30, 2020 and 2019, respectively.

c) Remuneration to the Company's stockholders

On July 29, 2020 (subsequent event), the Board of Directors approved the resumption of the stockholders' remuneration policy, which was suspended as a result of the Brumadinho dam failure. This policy, formerly approved in March 2018, set a semi-annual payment that is calculated by applying 30% on Adjusted EBITDA less sustaining capital expenditures. In addition, the Board of Directors approved the payment of interest on capital in the total gross amount of R\$7,253, equivalent to R\$1.414364369 per share, declared in December 2019 based on profit reserves.

24. Related parties

The Company's related parties are subsidiaries, joint ventures, associates, stockholders and its related entities and key management personnel of the Company. Transactions between the parent company and its subsidiaries are eliminated on consolidation and are not disclosed in this note.

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.

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.

Information about related party transactions and effects on the financial statements is set out below:

a) Transactions with related parties

| | Consolidated | | | | | | | |
|-----------------------------|-----------------------------------|------------|--------------------|---------|----------------|------------|--------------------|---------|
| | Three-month period ended June 30, | | | | | | | |
| | 2020 | | | | 2019 | | | |
| | Joint Ventures | Associates | Major stockholders | Total | Joint Ventures | Associates | Major stockholders | Total |
| Net operating revenue | 370 | 303 | 296 | 969 | 377 | 267 | 180 | 824 |
| Cost and operating expenses | (1,411) | (25) | - | (1,436) | (1,555) | (26) | - | (1,581) |
| Financial result | 43 | (8) | (61) | (26) | (45) | (1) | (4) | (50) |

| | Consolidated | | | | | | | |
|-----------------------------|---------------------------------|------------|--------------------|---------|----------------|------------|--------------------|---------|
| | Six-month period ended June 30, | | | | | | | |
| | 2020 | | | | 2019 | | | |
| | Joint Ventures | Associates | Major stockholders | Total | Joint Ventures | Associates | Major stockholders | Total |
| Net operating revenue | 678 | 577 | 438 | 1,693 | 620 | 522 | 345 | 1,487 |
| Cost and operating expenses | (2,612) | (53) | - | (2,665) | (3,437) | (56) | - | (3,493) |
| Financial result | 76 | 16 | (167) | (75) | (33) | (2) | (120) | (155) |

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 and the logistical costs for using the Nacala Logistic Corridor.

b) Outstanding balances with related parties

| | June 30, 2020 | | | | Consolidated December 31, 2019 | | | |
|-----------------------------------|----------------|------------|--------------------------|---------------|-----------------------------------|------------|--------------------------|---------------|
| | Joint Ventures | Associates | Major stockholders (iii) | Total | Joint Ventures | Associates | Major stockholders (iii) | Total |
| Assets | | | | | | | | |
| Cash and cash equivalents | - | - | 7,453 | 7,453 | - | - | 5,578 | 5,578 |
| Accounts receivable | 383 | 158 | 16 | 557 | 367 | 88 | 19 | 474 |
| Dividends receivable | 413 | 33 | - | 446 | 335 | 25 | - | 360 |
| Loans (i) | 10,370 | - | - | 10,370 | 7,737 | - | - | 7,737 |
| Derivatives financial instruments | - | - | - | - | - | - | 169 | 169 |
| Other assets | 341 | - | - | 341 | 262 | - | - | 262 |
| Liabilities | | | | | | | | |
| Supplier and contractors | 515 | 53 | 667 | 1,235 | 1,218 | 113 | 149 | 1,480 |
| Loans (ii) | - | 7,610 | 5,410 | 13,020 | - | 5,511 | 6,804 | 12,315 |
| Derivatives financial instruments | - | - | 559 | 559 | - | - | 259 | 259 |
| Other liabilities | 1,615 | 269 | - | 1,884 | 2,293 | - | - | 2,293 |

(i) Refers to the loan with Nacala BV.

(ii) Mainly relates to the loan from Pangea Emirates Ltd.

(iii) Refers to regular financial instruments with large financial institutions of which the stockholders are part of the controlling "shareholders' agreement".

25. Select notes to Parent Company information (individual interim information)

a) Other financial assets and liabilities

| | Current | | Parent company Non-Current | |
|--|---------------|-------------------|-------------------------------|-------------------|
| | June 30, 2020 | December 31, 2019 | June 30, 2020 | December 31, 2019 |
| Other financial assets | | | | |
| Restricted cash | - | - | 578 | 530 |
| Loans | - | - | 18 | 18 |
| Derivative financial instruments | 236 | 450 | 332 | 593 |
| Investments in equity securities | - | - | 2,045 | 2,555 |
| Related parties - Loans | 329 | 690 | 203 | 276 |
| | 565 | 1,140 | 3,176 | 3,972 |
| Other financial liabilities | | | | |
| Derivative financial instruments | 1,693 | 280 | 3,944 | 972 |
| Related parties - Loans | 10,718 | 6,392 | 79,705 | 62,861 |
| Financial guarantees | - | - | 2,971 | 2,116 |
| Participative stockholders' debentures | - | - | 11,285 | 10,416 |
| | 12,411 | 6,672 | 97,905 | 76,365 |

b) Investments

| | Parent company | |
|---|----------------|----------------|
| | 2020 | 2019 |
| Balance at January 1st, | 144,594 | 139,510 |
| Additions and Capitalizations | 1,341 | 2,334 |
| Disposals | (117) | (84) |
| Translation adjustment | 36,445 | (69) |
| Equity results in income statement | (298) | 7,118 |
| Equity results in statement of comprehensive income | (1,157) | (589) |
| Dividends declared | (839) | (1,082) |
| Merger (i) | (2,105) | - |
| Others | 683 | (21) |
| Balance at June 30, | 178,547 | 147,117 |

(i) On April 30, 2020 the incorporation of the wholly owned subsidiary Ferrous Resources do Brasil S.A. was approved at the General Shareholders' Meeting.

Selected Notes to the Interim Financial Statements

Expressed in millions of Brazilian reais, unless otherwise stated



c) Intangibles

| | Parent company | | | |
|-------------------------------------|----------------|--------------|------------|---------------|
| | Concessions | Right of use | Software | Total |
| Balance at December 31, 2019 | 15,993 | 99 | 179 | 16,271 |
| Additions | 370 | - | 31 | 401 |
| Disposals | (18) | - | - | (18) |
| Amortization | (451) | (3) | (29) | (483) |
| Merger of Ferrous | - | - | 5 | 5 |
| Balance at June 30, 2020 | 15,894 | 96 | 186 | 16,176 |
| Cost | 20,767 | 223 | 2,559 | 23,549 |
| Accumulated amortization | (4,873) | (127) | (2,373) | (7,373) |
| Balance at June 30, 2020 | 15,894 | 96 | 186 | 16,176 |

| | Parent company | | | |
|-------------------------------------|----------------|--------------|------------|---------------|
| | Concessions | Right of use | Software | Total |
| Balance at December 31, 2018 | 15,240 | 105 | 277 | 15,622 |
| Additions | 817 | - | 58 | 875 |
| Disposals | (44) | - | - | (44) |
| Amortization | (454) | (3) | (124) | (581) |
| Balance at June 30, 2019 | 15,559 | 102 | 211 | 15,872 |
| Cost | 19,658 | 223 | 2,599 | 22,480 |
| Accumulated amortization | (4,099) | (121) | (2,388) | (6,608) |
| Balance at June 30, 2019 | 15,559 | 102 | 211 | 15,872 |

d) Property, plant and equipment

| | Parent company | | | | | | | | |
|--|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------------------|----------------|
| | Land | Building | Facilities | Equipment | Mineral properties | Leasing agreements | Others | Constructions in progress | Total |
| Balance at December 31, 2019 | 1,797 | 26,555 | 30,219 | 10,213 | 7,153 | 2,114 | 19,606 | 8,218 | 105,875 |
| Additions (i) | - | - | - | - | - | 133 | - | 4,348 | 4,481 |
| Disposals | (4) | (2) | (10) | (5) | (17) | - | (8) | (71) | (117) |
| Assets retirement obligation | - | - | - | - | (250) | - | - | - | (250) |
| Depreciation, amortization and depletion | - | (571) | (1,047) | (698) | (246) | (173) | (950) | - | (3,685) |
| Merger of Ferrous | 577 | 103 | 325 | 73 | 990 | 2 | 6 | (136) | 1,940 |
| Transfers | 90 | 297 | 698 | 512 | 1,159 | - | 974 | (3,730) | - |
| Balance at June 30, 2020 | 2,460 | 26,382 | 30,185 | 10,095 | 8,789 | 2,076 | 19,628 | 8,629 | 108,244 |
| Cost | 2,460 | 34,959 | 40,453 | 19,183 | 11,614 | 2,557 | 33,980 | 8,629 | 153,835 |
| Accumulated depreciation | - | (8,577) | (10,268) | (9,088) | (2,825) | (481) | (14,352) | - | (45,591) |
| Balance at June 30, 2020 | 2,460 | 26,382 | 30,185 | 10,095 | 8,789 | 2,076 | 19,628 | 8,629 | 108,244 |

| | Parent company | | | | | | | | |
|--|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------------------|----------------|
| | Land | Building | Facilities | Equipment | Mineral properties | Leasing agreements | Others | Constructions in progress | Total |
| Balance at December 31, 2018 | 1,735 | 26,559 | 30,593 | 10,004 | 7,689 | - | 19,240 | 7,996 | 103,816 |
| Effects of IFRS 16/CPC 06 (R2) adoption | - | - | - | - | - | 2,058 | - | - | 2,058 |
| Additions (i) | - | - | - | - | - | 229 | - | 2,424 | 2,653 |
| Disposals | (2) | (415) | (106) | (70) | (219) | - | (648) | (97) | (1,557) |
| Assets retirement obligation | - | - | - | - | 466 | - | - | - | 466 |
| Depreciation, amortization and depletion | - | (502) | (706) | (671) | (296) | (151) | (965) | - | (3,291) |
| Transfers | 2 | 525 | 463 | 855 | (274) | - | 1,615 | (3,186) | - |
| Balance at June 30, 2019 | 1,735 | 26,167 | 30,244 | 10,118 | 7,366 | 2,136 | 19,242 | 7,137 | 104,145 |
| Cost | 1,735 | 33,433 | 38,715 | 17,939 | 9,705 | 2,287 | 31,813 | 7,137 | 142,764 |
| Accumulated depreciation | - | (7,266) | (8,471) | (7,821) | (2,339) | (151) | (12,571) | - | (38,619) |
| Balance at June 30, 2019 | 1,735 | 26,167 | 30,244 | 10,118 | 7,366 | 2,136 | 19,242 | 7,137 | 104,145 |

(i) Includes capitalized borrowing costs.

e) Loans and borrowings

| | Current liabilities | | Parent company Non-current liabilities | |
|--|---------------------|-------------------|---|-------------------|
| | June 30, 2020 | December 31, 2019 | June 30, 2020 | December 31, 2019 |
| Debt contracts in the international markets | | | | |
| Floating rates in: | | | | |
| US\$ | 946 | 445 | 8,145 | 6,419 |
| Fixed rates in: | | | | |
| US\$ | - | 536 | 2,850 | 2,098 |
| EUR | - | - | 4,615 | 3,398 |
| Accrued charges | 181 | 238 | - | - |
| | 1,127 | 1,219 | 15,610 | 11,915 |
| Debt contracts in Brazil | | | | |
| Floating rates in: | | | | |
| R\$, indexed to TJLP, TR, IPCA, IGP-M and CDI | 2,718 | 2,279 | 5,157 | 6,418 |
| Basket of currencies and US\$ indexed to LIBOR | 244 | 180 | 183 | 225 |
| Fixed rates in: | | | | |
| R\$ | 100 | 151 | 111 | 155 |
| Accrued charges | 132 | 157 | - | - |
| | 3,194 | 2,767 | 5,451 | 6,798 |
| Total | 4,321 | 3,986 | 21,061 | 18,713 |

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

| | Parent company Debt principal |
|-----------------------|----------------------------------|
| 2020 | 1,938 |
| 2021 | 2,988 |
| 2022 | 3,456 |
| 2023 | 6,206 |
| Between 2024 and 2028 | 7,546 |
| 2029 onwards | 2,935 |
| | 25,069 |

f) Provisions

| | Current liabilities | | Parent company Non-current liabilities | |
|--|---------------------|-------------------|---|-------------------|
| | June 30, 2020 | December 31, 2019 | June 30, 2020 | December 31, 2019 |
| Payroll, related charges and other remunerations | 1,802 | 2,124 | - | - |
| Environmental obligations | 450 | 490 | 668 | 585 |
| Asset retirement obligations | 473 | 488 | 3,349 | 3,567 |
| Provisions for litigation | - | - | 5,245 | 5,102 |
| Employee postretirement obligations | 125 | 108 | 2,129 | 2,114 |
| Provisions | 2,850 | 3,210 | 11,391 | 11,368 |

Selected Notes to the Interim Financial Statements

Expressed in millions of Brazilian reais, unless otherwise stated



g) Provisions for litigation

| | | | | | Parent company |
|-------------------------------------|----------------|------------------|------------------|--------------------------|-------------------------------|
| | Tax litigation | Civil litigation | Labor litigation | Environmental litigation | Total of litigation provision |
| Balance at December 31, 2019 | 2,325 | 1,004 | 1,734 | 39 | 5,102 |
| Additions and reversals, net | 87 | 42 | 75 | 7 | 211 |
| Payments | (56) | (30) | (158) | - | (244) |
| Indexation and interest | 41 | 61 | 62 | 3 | 167 |
| Merger Ferrous | 1 | 3 | 3 | 2 | 9 |
| Balance at June 30, 2020 | 2,398 | 1,080 | 1,716 | 51 | 5,245 |

| | | | | | Parent company |
|-------------------------------------|--------------------|------------------|------------------|--------------------------|-------------------------------|
| | Tax litigation (i) | Civil litigation | Labor litigation | Environmental litigation | Total of litigation provision |
| Balance at December 31, 2018 | 2,347 | 467 | 1,660 | 9 | 4,483 |
| Additions and reversals, net (ii) | 14 | 489 | 211 | 20 | 734 |
| Payments | (8) | (97) | (180) | - | (285) |
| Indexation and interest | (10) | 46 | 55 | 6 | 97 |
| Balance at June 30, 2019 | 2,343 | 905 | 1,746 | 35 | 5,029 |

(i) Includes amounts regarding to social security claims that were classified as labor claims.

(ii) Includes the change in the expected outcome of probable loss of the lawsuit related to the accident of ship loaders, at the Praia Mole maritime terminal, in Espírito Santo.

h) Contingent liabilities

| | | Parent company |
|--------------------------|---------------|-------------------|
| | June 30, 2020 | December 31, 2019 |
| Tax litigation | 34,745 | 30,905 |
| Civil litigation | 5,087 | 4,589 |
| Labor litigation | 2,712 | 3,025 |
| Environmental litigation | 3,704 | 4,239 |
| Brumadinho event | 712 | 635 |
| Total | 46,960 | 43,393 |

i) Income taxes

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

| | | Parent company |
|--|---------------------------------|----------------|
| | Six-month period ended June 30, | |
| | 2020 | 2019 |
| Income (loss) before income taxes | 3,334 | (9,765) |
| Income taxes at statutory rates - 34% | (1,134) | 3,320 |
| Adjustments that affect the basis of taxes: | | |
| Tax incentives | 2,011 | 34 |
| Equity results | (101) | 2,420 |
| Others (i) | 2,163 | (2,815) |
| Income taxes | 2,939 | 2,959 |

(i) Refers to the impact on the parent company of the profit of the subsidiaries abroad taxed in Brazil.

26. Additional information about derivatives financial instruments

The risk of the derivatives portfolio is measured using the delta-Normal parametric approach and considers that the future distribution of the risk factors and its correlations tends to present the same statistic properties verified in the historical data. The value at risk estimate considers a 95% confidence level for a one-business day time horizon.

The following tables detail the derivatives positions for Vale and its controlled companies as of June 30, 2020, with the following information: notional amount, fair value including credit risk, gains or losses in the period, value at risk and the fair value breakdown by year of maturity.

a) Foreign exchange and interest rates derivative positions

(i) Protection programs for the R\$ denominated debt instruments and other liabilities

To reduce cash flow volatility, swap and forward transactions were implemented to convert into US\$ the cash flows from certain liabilities denominated in R\$ with interest rates linked mainly to CDI, TJLP and IPCA. In those swaps, Vale pays fixed or floating rates in US\$ and receives payments in R\$ linked to the interest rates of the protected liabilities.

The swap and forward transactions were negotiated over-the-counter and the protected items are the cash flows from debt instruments and other liabilities linked to R\$. These programs transform into US\$ the obligations linked to R\$ to achieve a currency offset in the Company's cash flows, by matching its receivables - mainly linked to US\$ - with its payables.

| Flow | Notional | | Index | Average rate | Fair value | | Financial Settlement Inflows (Outflows) | Value at Risk | Fair value by year | | |
|---|---------------|-------------------|--------|--------------|---------------|-------------------|---|---------------|--------------------|-------|---------|
| | June 30, 2020 | December 31, 2019 | | | June 30, 2020 | December 31, 2019 | June 30, 2020 | June 30, 2020 | 2020 | 2021 | 2022+ |
| CDI vs. US\$ fixed rate swap | | | | | (3,369) | (155) | (105) | 249 | (617) | (392) | (2,360) |
| Receivable | R\$ 10,850 | R\$ 2,115 | CDI | 100.07% | | | | | | | |
| Payable | US\$ 2,579 | US\$ 558 | Fix | 2.07% | | | | | | | |
| TJLP vs. US\$ fixed rate swap | | | | | (1,054) | (304) | (98) | 56 | (144) | (291) | (619) |
| Receivable | R\$ 1,881 | R\$ 2,111 | TJLP + | 1.15% | | | | | | | |
| Payable | US\$ 531 | US\$ 601 | Fix | 3.00% | | | | | | | |
| R\$ fixed rate vs. US\$ fixed rate swap | | | | | (769) | (72) | (57) | 62 | (40) | (398) | (331) |
| Receivable | R\$ 2,579 | R\$ 2,173 | Fix | 5.66% | | | | | | | |
| Payable | US\$ 642 | US\$ 604 | Fix | 0.20% | | | | | | | |
| IPCA vs. US\$ fixed rate swap | | | | | (1,064) | 185 | (48) | 68 | (23) | (496) | (545) |
| Receivable | R\$ 2,450 | R\$ 2,826 | IPCA + | 5.06% | | | | | | | |
| Payable | US\$ 649 | US\$ 759 | Fix | 4.01% | | | | | | | |
| IPCA vs. CDI swap | | | | | 438 | 422 | - | 11 | 236 | 31 | 171 |
| Receivable | R\$ 1,650 | R\$ 1,634 | IPCA + | 6.62% | | | | | | | |
| Pavable | R\$ 1,350 | R\$ 1,350 | CDI | 98.57% | | | | | | | |

| Flow | Notional | | Bought / Sold | Average rate (BRL/USD) | Fair value | | Value at Risk | Fair value by year |
|---------|---------------|-------------------|---------------|------------------------|---------------|-------------------|---------------|--------------------|
| | June 30, 2020 | December 31, 2019 | | | June 30, 2020 | December 31, 2019 | June 30, 2020 | 2020+ |
| Forward | R\$ 924 | R\$ 121 | B | 5.96 | (55) | 6 | 22 | (55) |

(ii) Protection program for EUR denominated debt instruments

To reduce the cash flow volatility, swap transactions were implemented to convert into US\$ the cash flows from certain debt instruments issued in Euros by Vale. In those swaps, Vale receives fixed rates in EUR and pays fixed rates in US\$.

The swap transactions were negotiated over-the-counter and the protected items are the cash flows from debt instruments linked to EUR. The financial settlement inflows/outflows are offset by the protected items' losses/gains due to EUR/US\$ exchange rate.

| Flow | Notional | | | Average rate | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk | Fair value by year | | |
|--|---------------|-------------------|-------|--------------|---------------|-------------------|---|---------------|--------------------|------|-------|
| | June 30, 2020 | December 31, 2019 | Index | | June 30, 2020 | December 31, 2019 | June 30, 2020 | June 30, 2020 | 2020 | 2021 | 2022+ |
| EUR fixed rate vs. US\$ fixed rate swap | | | | | (307) | (142) | (24) | 24 | - | (30) | (277) |
| Receivable | € 500 | € 500 | Fix | 3.75% | | | | | | | |
| Payable | US\$ 613 | US\$ 613 | Fix | 4.29% | | | | | | | |

(iii) Protection program for Libor floating interest rate US\$ denominated debt

To reduce the cash flow volatility, swap transactions were implemented to convert Libor floating interest rate cash flows from certain debt instruments issued by Vale into fixed interest rate. In those swaps, Vale receives floating rates and pays fixed rates in US\$.

| Flow | Notional | | | Average rate | Fair value | | Value at Risk | Fair value by year | | |
|---------------------------------------|---------------|-------------------|----------|--------------|---------------|-------------------|---------------|--------------------|------|-------|
| | June 30, 2020 | December 31, 2019 | Index | | June 30, 2020 | December 31, 2019 | June 30, 2020 | 2020 | 2021 | 2022+ |
| Libor vs. US\$ fixed rate swap | | | | | (25) | - | 13 | 3 | (10) | (18) |
| Receivable | US\$ 800 | - | Libor 3M | - | | | | | | |
| Payable | US\$ 800 | - | Fix | 0.45% | | | | | | |

b) Commodities derivative positions

(i) Protection program for the purchase of fuel oil used on ships

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, hedging operations were carried out through options contracts on Brent Crude Oil and Gasoil (10ppm) for different portions of the exposure.

The derivative transactions were negotiated over-the-counter and the protected item is part of the Vale's costs linked to the price of fuel oil used on ships. The financial settlement inflows/outflows are offset by the protected items' losses/gains.

Brent Crude Oil Options

| Flow | Notional (bbl) | | | | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk | Fair value by year | |
|--------------|----------------|-------------------|---------------|---------------------------|---------------|-------------------|---|---------------|--------------------|------------|
| | June 30, 2020 | December 31, 2019 | Bought / Sold | Average strike (US\$/bbl) | June 30, 2020 | December 31, 2019 | June 30, 2020 | June 30, 2020 | 2020 | 2021 |
| Call options | 11,089,494 | 7,048,500 | B | 63 | 201 | 45 | - | 17 | 34 | 167 |
| Put options | 11,089,494 | 7,048,500 | S | 38 | (342) | (15) | (299) | 43 | (295) | (47) |
| Total | | | | | (141) | 30 | (299) | 60 | (261) | 120 |

Gasol Options

| Flow | Notional (bbl) | | | | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk | Fair value by year |
|--------------|-------------------|-----------|---------------|---------------------------|-------------------|-----------|---|---------------|--------------------|
| | December 31, 2019 | | Bought / Sold | Average strike (US\$/bbl) | December 31, 2019 | | June 30, 2020 | June 30, 2020 | 2020 |
| | June 30, 2020 | | | | June 30, 2020 | | | | |
| Call options | 6,481,500 | 7,710,750 | B | 88 | 14 | 24 | - | 3 | 14 |
| Put options | 6,481,500 | 7,710,750 | S | 56 | (388) | (10) | (471) | 44 | (388) |
| Total | | | | | (374) | 14 | (471) | 47 | (374) |

(ii) Protection programs for base metals products

Operational Hedging Programs

In the operational hedging program for nickel sales at fixed prices, derivatives transactions were implemented, usually through the purchase of nickel forwards, to convert into floating prices the contracts with clients that required a fixed price.

| Flow | Notional (ton) | | | | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk | Fair value by year | |
|------------------------------|----------------|-------------------|---------------|---------------------------|---------------|-------------------|---|---------------|--------------------|------|
| | June 30, 2020 | December 31, 2019 | Bought / Sold | Average strike (US\$/ton) | June 30, 2020 | December 31, 2019 | June 30, 2020 | June 30, 2020 | 2020 | 2021 |
| | | | | | | | | | | |
| Fixed price sales protection | | | | | | | | | | |
| Nickel forwards | 3,139 | - | B | 11,843 | 17 | - | 4 | 6 | 14 | 3 |
| Total | | | | | 17 | - | 4 | 6 | 14 | 3 |

Nickel Revenue Hedging Program

In 2019, to reduce the volatility of its future cash flows arising from changes in nickel prices, the company implemented a Nickel Revenue Hedging Program. Under this program, hedge operations were executed using option contracts to protect a portion of the highly probable forecast sales at floating prices, thus establishing a cushion to guarantee prices above our Nickel Average Unit Cash Cost and investments for the hedged volumes and hedge accounting treatment is given to this program.

In April 2020 the hedge program was fully settled. The cumulative gain recognized in the cash flow hedge reserve until the settlement of the option contracts will be reclassified to the income statement as the Company recognizes the revenue from nickel sales (hedged item).

| Flow | Notional (ton) | | Bought / Sold | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk | Fair value by year | |
|--------------------------------|------------------|----------------------|------------------|---------------|----------------------|--|------------------|--------------------|------|
| | June 30, 2020 | December 31, 2019 | | June 30, 2020 | December 31, 2019 | June 30, 2020 | June 30, 2020 | 2020 | 2021 |
| | | | | | | | | | |
| Nickel Revenue Hedging Program | | | | | | | | | |
| Call options | - | 75,984 | S | - | (49) | - | - | - | - |
| Put options | - | 75,984 | B | - | 652 | 1,412 | - | - | - |
| Total | | | | - | 603 | 1,412 | - | - | |

Palladium Revenue Hedging Program

To reduce the volatility of its future cash flows arising from changes in palladium prices, the Company implemented a Palladium Revenue Hedging Program. Under this program, hedge operations were executed using forwards and option contracts to protect a portion of the highly probable forecast sales at floating prices. A hedge accounting treatment is given to this program.

The derivative transactions under the program are negotiated over-the-counter and the financial settlement inflows/outflows are offset by the protected items' losses/gains due to palladium price changes.

| Flow | | | | | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk | Fair value by year | |
|-----------------------------------|------------------|----------------------|------------------|-------------------------------|------------------|----------|---|------------------|-----------------------|------|
| | Notional (t oz) | | | | June 30, | December | | | | |
| | June 30, 2020 | December 31, 2019 | Bought / Sold | Average strike (US\$/t oz) | June 30, 2020 | 31, 2019 | June 30, 2020 | June 30, 2020 | 2020 | 2021 |
| Palladium Revenue Hedging Program | | | | | | | | | | |
| Palladium Forwards | 7,200 | - | S | 2,228 | 12 | - | 14 | 3 | 12 | - |
| Call Options | 14,400 | - | S | 2,387 | (6) | - | - | 2 | (2) | (4) |
| Put Options | 14,400 | - | B | 2,050 | 22 | - | - | 4 | 10 | 12 |
| Total | | | | | 28 | - | 14 | 9 | 20 | 8 |

c) Freight derivative positions

To reduce the impact of maritime freight price volatility on the Company's cash flow, freight hedging transactions were implemented, through Forward Freight Agreements (FFAs). The protected item is part of Vale's costs linked to maritime freight spot prices. The financial settlement inflows/outflows of the FFAs are offset by the protected items' losses/gains due to freight prices changes.

The FFAs are contracts traded over the counter and can be cleared through a Clearing House, in this case subject to margin requirements.

| Flow | Notional (days) | | Bought / Sold | Average strike (US\$/day) | Fair value | | Financial Settlement Inflows (Outflows) | Value at Risk | Fair value by year |
|------------------|-----------------|-------------------|---------------|---------------------------|---------------|-------------------|---|---------------|--------------------|
| | June 30, 2020 | December 31, 2019 | | | June 30, 2020 | December 31, 2019 | | | |
| | 2020 | 31, 2019 | | | 2020 | 31, 2019 | | | 2020+ |
| Freight forwards | 2,575 | 1,050 | B | 12,914 | 35 | 1 | (29) | 10 | 35 |

d) Wheaton Precious Metals Corp. warrants

The Company owned warrants issued by Wheaton Precious Metals Corp. (WPM), a Canadian company with stocks negotiated on the Toronto Stock Exchange and the New York Stock Exchange. Such warrants have payoff similar to that of an American call option and were received as part of the payment regarding the sale of part of gold payable flows produced as a sub product from Salobo copper mine and some nickel mines in Sudbury. In February 2020, the Company sold all of its warrants of Wheaton (equivalent to 10,000,000 common shares) for US\$2.50 per warrant, totaling R\$110 (US\$25 million).

| Flow | Notional (quantity of warranties) | | Bought / Sold | Average strike (US\$/share) | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk | Fair value by year |
|--------------|-----------------------------------|-------------------|---------------|-----------------------------|---------------|-------------------|---|---------------|--------------------|
| | June 30, 2020 | December 31, 2019 | | | June 30, 2020 | December 31, 2019 | | | |
| | 2020 | 31, 2019 | | | 2020 | 2019 | | | 2023 |
| Call options | - | 10,000,000 | B | - | - | 105 | 110 | - | - |

e) Debentures convertible into shares

The Company has debentures which lenders have the option to convert the outstanding debt into a specified quantity of an associate's shares, held by the Company. This option may be fully, or partly exercised, upon payment to the Company of the strike price, considering the terms, conditions and other limitations existing in the agreement, at any time and at the discretion of the creditor, until the maturity date of the debentures.

| Flow | Notional (quantity) | | Bought / Sold | Average strike (R\$/share) | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk | Fair value by year |
|--------------------|---------------------|-------------------|---------------|----------------------------|---------------|-------------------|---|---------------|--------------------|
| | June 30, 2020 | December 31, 2019 | | | June 30, 2020 | December 31, 2019 | June 30, 2020 | June 30, 2020 | 2027 |
| Conversion options | 140,239 | 140,239 | S | 6,688 | (212) | (206) | - | 14 | (212) |

f) Option related to a Special Purpose Entity "SPE"

The Company acquired in January 2019 a call option related to shares of certain special purpose entities, which are part of a wind farm located in Bahia, Brazil. This option was acquired in the context of the Company's signing of electric power purchase and sale agreements with an SPE, supplied by this wind farm.

| Flow | Notional (quantity) | | Bought / Sold | Average strike (R\$/share) | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk | Fair value by year |
|-------------|---------------------|-------------------|---------------|----------------------------|---------------|-------------------|---|---------------|--------------------|
| | June 30, 2020 | December 31, 2019 | | | June 30, 2020 | December 31, 2019 | June 30, 2020 | June 30, 2020 | 2022 |
| Call option | 137,751,623 | 137,751,623 | B | 2.69 | 129 | 96 | - | 11 | 129 |

g) Embedded derivatives in contracts

In 2014, the Company sold part of its stake in an associate to an investment fund, of which sales contract establishes, under certain conditions, a minimum return guarantee on the investment until August 2020. This is considered an embedded derivative, with payoff equivalent to a put option.

| Flow | Notional (quantity) | | Bought / Sold | Average strike (R\$/share) | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk | Fair value by year |
|------------|---------------------|-------------------|---------------|----------------------------|---------------|-------------------|---|---------------|--------------------|
| | June 30, 2020 | December 31, 2019 | | | June 30, 2020 | December 31, 2019 | June 30, 2020 | June 30, 2020 | 2020 |
| Put option | 1,105,070,863 | 1,105,070,863 | S | 4.04 | - | (279) | - | 131 | - |

The Company has some nickel concentrate and raw materials purchase agreements in which there are provisions based on nickel and copper future prices behavior. These provisions are considered as embedded derivatives.

| Flow | Notional (ton) | | Bought / Sold | Average strike (US\$/ton) | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk | Fair value by year |
|-----------------|----------------|-------------------|---------------|---------------------------|---------------|-------------------|---|---------------|--------------------|
| | June 30, 2020 | December 31, 2019 | | | June 30, 2020 | December 31, 2019 | June 30, 2020 | June 30, 2020 | 2020 |
| Nickel forwards | 3,078 | 1,497 | S | 12,446 | (4) | 9 | - | 6 | (4) |
| Copper forwards | 1,348 | 1,009 | S | 5,479 | (2) | (1) | - | 1 | (2) |
| Total | | | | | (6) | 8 | - | 7 | (6) |

The Company has also a natural gas purchase agreement in which there's a clause that defines that a premium can be charged if the Company's pellet sales prices trade above a pre-defined level. This clause is considered an embedded derivative.

| Flow | Notional (volume/month) | | Bought / Sold | Average strike (US\$/ton) | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk | Fair value by year | |
|--------------|-------------------------|-------------------|---------------|---------------------------|---------------|-------------------|---|---------------|--------------------|-------|
| | June 30, 2020 | December 31, 2019 | | | June 30, 2020 | December 31, 2019 | June 30, 2020 | June 30, 2020 | 2020 | 2021+ |
| Call options | 746,667 | 746,667 | S | 233 | (1) | (3) | - | 1 | - | - |

h) 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 at June 30, 2020
- *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 |
|---|---|----------|------------|-------------|
| CDI vs. US\$ fixed rate swap | R\$ depreciation | (3,369) | (6,983) | (10,597) |
| | US\$ interest rate inside Brazil decrease | (3,369) | (3,545) | (3,730) |
| | Brazilian interest rate increase | (3,369) | (3,515) | (3,670) |
| Protected item: R\$ denominated liabilities | R\$ depreciation | n.a. | - | - |
| TJLP vs. US\$ fixed rate swap | R\$ depreciation | (1,054) | (1,824) | (2,594) |
| | US\$ interest rate inside Brazil decrease | (1,054) | (1,077) | (1,101) |
| | Brazilian interest rate increase | (1,054) | (1,114) | (1,168) |
| | TJLP interest rate decrease | (1,054) | (1,115) | (1,177) |
| Protected item: R\$ denominated debt | R\$ depreciation | n.a. | - | - |
| R\$ fixed rate vs. US\$ fixed rate swap | R\$ depreciation | (769) | (1,630) | (2,491) |
| | US\$ interest rate inside Brazil decrease | (769) | (789) | (809) |
| | Brazilian interest rate increase | (769) | (828) | (884) |
| Protected item: R\$ denominated debt | R\$ depreciation | n.a. | - | - |
| IPCA vs. US\$ fixed rate swap | R\$ depreciation | (1,064) | (2,026) | (2,988) |
| | US\$ interest rate inside Brazil decrease | (1,064) | (1,103) | (1,144) |
| | Brazilian interest rate increase | (1,064) | (1,157) | (1,249) |
| | IPCA index decrease | (1,064) | (1,126) | (1,189) |
| Protected item: R\$ denominated debt | R\$ depreciation | n.a. | - | - |
| IPCA vs. CDI swap | Brazilian interest rate increase | 438 | 420 | 403 |
| | IPCA index decrease | 438 | 429 | 420 |
| Protected item: R\$ denominated debt linked to IPCA | IPCA index decrease | n.a. | (429) | (420) |
| EUR fixed rate vs. US\$ fixed rate swap | EUR depreciation | (307) | (1,168) | (2,029) |
| | Euribor increase | (307) | (311) | (315) |
| | US\$ Libor decrease | (307) | (313) | (318) |
| Protected item: EUR denominated debt | EUR depreciation | n.a. | 1,168 | 2,029 |
| US\$ floating rate vs. US\$ fixed rate swap | US\$ Libor decrease | (25) | (37) | (48) |
| Protected item: Libor US\$ indexed debt | US\$ Libor decrease | n.a. | 37 | 48 |
| NDF BRL/USD | R\$ depreciation | (55) | (303) | (552) |
| | US\$ interest rate inside Brazil decrease | (55) | (67) | (80) |
| | Brazilian interest rate increase | (55) | (105) | (156) |
| Protected item: R\$ denominated liabilities | R\$ depreciation | n.a. | - | - |

Selected Notes to the Interim Financial Statements

Expressed in millions of Brazilian reais, unless otherwise stated



| Instrument | Instrument's main risk events | Probable | Scenario I | Scenario II |
|---|-------------------------------|----------|------------|-------------|
| Fuel oil protection | | | | |
| Options | Price input decrease | (515) | (1,254) | (2,017) |
| Protected item: Part of costs linked to fuel oil prices | Price input decrease | n.a. | 1,254 | 2,107 |
| Maritime Freight protection | | | | |
| Forwards | Freight price decrease | 35 | (19) | (74) |
| Protected item: Part of costs linked to maritime freight prices | Freight price decrease | n.a. | 19 | 74 |
| Nickel sales fixed price protection | | | | |
| Forwards | Nickel price decrease | 17 | (38) | (93) |
| Protected item: Part of nickel revenues with fixed prices | Nickel price decrease | n.a. | 38 | 93 |
| Palladium Revenue Hedging Program | | | | |
| Options | Palladium price increase | 29 | (20) | (70) |
| Protected item: Part of palladium future revenues | Palladium price increase | n.a. | 20 | 70 |
| Conversion options | Stock value increase | (212) | (353) | (548) |
| Option - SPCs | SPCs stock value decrease | 129 | 58 | 13 |
| Instrument | Main risks | Probable | Scenario I | Scenario II |
| Embedded derivatives - Raw material purchase (nickel) | Nickel price increase | (4) | (58) | (111) |
| Embedded derivatives - Raw material purchase (copper) | Copper price increase | (2) | (13) | (23) |
| Embedded derivatives - Gas purchase | Pellet price increase | (1) | (3) | (9) |
| Embedded derivatives - Guaranteed minimum return | Stock value decrease | - | (1,047) | (2,187) |

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 published by agencies Moody's and S&P regarding the main financial institutions that we hire derivative instruments, cash and cash equivalents transactions

| Long term ratings by counterparty | Moody's | S&P |
|---------------------------------------|---------|------|
| ABN Amro | A1 | A |
| Agricultural Bank of China | A1 | A |
| ANZ Australia and New Zealand Banking | Aa3 | AA- |
| Banco ABC | Ba3 | BB- |
| Banco Bradesco | Ba3 | BB- |
| Banco do Brasil | Ba3 | BB- |
| Banco do Nordeste do Brasil SA | Ba3 | BB- |
| Banco Itaú Unibanco | Ba3 | BB- |
| Bank Mandiri | Baa2 | BBB- |
| Banco Santander | A2 | A |
| Banco Votorantim | Ba3 | BB- |
| Bancolombia | Baa2 | BB+ |
| Bank of America | A2 | A- |
| Bank of China | A1 | A |
| Bank of Montreal | Aa2 | A+ |
| Bank of Nova Scotia | A2 | A+ |
| Bank of Shanghai | Baa2 | - |
| Bank Rakyat Indonesia (BRI) | Baa2 | BBB- |
| Banpara | - | BB- |
| Barclays | Baa2 | BBB |
| BBVA Banco Bilbao Vizcaya Argentaria | A3 | A- |
| BNP Paribas | Aa3 | A+ |
| BTG Pactual | Ba3 | BB- |
| Caixa Econômica Federal | Ba3 | BB- |
| Calyon | Aa3 | A+ |
| China Construction Bank | A1 | A |
| CIBC Canadian Imperial Bank | Aa2 | A+ |
| CIMB Bank | Baa1 | A- |
| Citigroup | A3 | BBB+ |
| Credit Suisse | Baa2 | BBB+ |

| Long term ratings by counterparty | Moody's | S&P |
|---|---------|------|
| Deutsche Bank | A3 | BBB+ |
| Goldman Sachs | A3 | BBB+ |
| HSBC | A2 | A- |
| Industrial and Commercial Bank of China | A1 | A |
| ING | Baa1 | BBB |
| Intesa Sanpaolo Spa | Baa1 | BBB |
| JP Morgan Chase & Co | A2 | A- |
| Macquarie Group Ltd | A3 | BBB+ |
| Mega International Commercial Bank | A1 | A |
| Millennium BIM | A1 | A- |
| Bank of Tokyo Mitsubishi UFJ | A1 | A- |
| Mitsui & Co | A1 | A- |
| Mizuho Financial | A1 | A- |
| Morgan Stanley | A3+ | BBB+ |
| Muscat Bank | B1 | BB- |
| National Australia Bank | Aa3 | AA- |
| National Bank of Canada | Aa3 | A |
| National Bank of Oman | B1 | - |
| Natixis | A1 | A+ |
| Rabobank | Aa3 | A+ |
| Royal Bank of Canada | Aa2 | AA- |
| Banco Safra | Ba3 | BB- |
| Société Générale | A1 | A |
| Standard Bank Group | Ba2 | - |
| Standard Chartered | A2 | BBB+ |
| Sumitomo Mitsui Financial | A1 | A- |
| Toronto Dominion Bank | Aa3 | AA- |
| UBS | Aa3 | A- |
| Unicredit | Baa1 | BBB |
| United Overseas Bank | Aa1 | AA- |