

Vale S.A.
Form 6-K
October 26, 2017
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**United States
Securities and Exchange Commission**

Washington, D.C. 20549

FORM 6-K

**Report of Foreign Private Issuer
Pursuant to Rule 13a-16 or 15d-16
of the
Securities Exchange Act of 1934**

For the month of

October, 2017

Vale S.A.

**Avenida das Américas, No. 700
22640-100 Rio de Janeiro, RJ, Brazil**

(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

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(Check One) Form 20-F Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1)

(Check One) Yes No

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7)

(Check One) Yes No

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

(Check One) Yes No

If Yes is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b). 82- .

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Interim Financial Statements

September 30, 2017

IFRS in US\$

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Vale S.A. Interim Financial Statements

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| | | |
|---|-------------|-------------------|
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Report of independent registered public accounting firm

To the Board of Directors and Stockholders of

Vale S.A.

Rio de Janeiro - RJ

We have reviewed the accompanying condensed consolidated balance sheet of Vale S.A. (the Company) and subsidiaries as of September 30, 2017, the related condensed consolidated statements of income, comprehensive income and cash flows for the three and nine-month periods ended on September 30, 2017 and 2016, and the related condensed consolidated statement of changes in equity for the nine-month periods ended on September 30, 2017 and 2016. These condensed consolidated financial statements are the responsibility of the Company s management.

We conducted our review in accordance with the standards of the Public Company Accounting Oversight Board (United States). A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States), the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an audit opinion.

Based on our review, we are not aware of any material modification that should be made to the condensed consolidated financial statements referred to above for them to be in conformity with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

We have previously audited, in accordance with standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of Vale S.A. and subsidiaries as of December 31, 2016 and the related consolidated statements of income, comprehensive income, changes in equity and cash flows for the year then ended (not presented herein); and in our report dated February 22, 2017, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying condensed consolidated balance sheet as of December 31, 2016, is fairly stated, in all material respects, in relation to the consolidated balance sheet from which it has been derived.

KPMG Auditores Independentes

Rio de Janeiro, Brazil

October 25, 2017

Table of Contents**Consolidated Income Statement**

In millions of United States dollars, except earnings per share data

| | Notes | Three-month period ended September 30, | | Nine-month period ended September 30, | |
|--|-----------|---|--------------|--|----------------|
| | | 2017 | 2016 (i) | 2017 | 2016 (i) |
| Continuing operations | | | | | |
| Net operating revenue | 3(c) | 9,050 | 6,726 | 24,800 | 18,223 |
| Cost of goods sold and services rendered | 5(a) | (5,412) | (4,345) | (15,248) | (12,547) |
| Gross profit | | 3,638 | 2,381 | 9,552 | 5,676 |
| Operating expenses | | | | | |
| Selling and administrative expenses | 5(b) | (129) | (137) | (385) | (371) |
| Research and evaluation expenses | | (91) | (80) | (236) | (207) |
| Pre operating and operational stoppage | | (83) | (116) | (288) | (323) |
| Other operating revenues (expenses), net | 5(c) | (151) | 63 | (316) | (115) |
| | | (454) | (270) | (1,225) | (1,016) |
| Impairment and other results on non-current assets | 13 and 16 | (169) | (29) | 123 | (95) |
| Operating income | | 3,015 | 2,082 | 8,450 | 4,565 |
| Financial income | 6 | 1,513 | 362 | 2,911 | 7,501 |
| Financial expenses | 6 | (1,293) | (1,401) | (4,643) | (5,054) |
| Equity results in associates and joint ventures | 14 | 115 | 45 | 164 | 390 |
| Impairment and other results in associates and joint ventures | 18 | (26) | (33) | (121) | (1,146) |
| Income before income taxes | | 3,324 | 1,055 | 6,761 | 6,256 |
| Income taxes | | | | | |
| | 7 | | | | |
| Current tax | | (522) | (64) | (1,092) | (818) |
| Deferred tax | | (457) | (370) | (561) | (1,906) |
| | | (979) | (434) | (1,653) | (2,724) |
| Net income from continuing operations | | 2,345 | 621 | 5,108 | 3,532 |
| Net income attributable to noncontrolling interests | 7 | | 11 | 53 | 25 |
| Net income from continuing operations attributable to Vale's stockholders | | 2,338 | 610 | 5,055 | 3,507 |
| Discontinued operations | | | | | |
| | 12 | | | | |
| Loss from discontinued operations | | (106) | (39) | (313) | (49) |
| Net income attributable to noncontrolling interests | 2 | | (4) | 6 | 1 |
| Loss from discontinued operations attributable to Vale's stockholders | | (108) | (35) | (319) | (50) |
| Net income | | 2,239 | 582 | 4,795 | 3,483 |
| Net income attributable to noncontrolling interests | 9 | | 7 | 59 | 26 |

| | | | | |
|--|--------------|------------|--------------|--------------|
| Net income attributable to Vale's stockholders | 2,230 | 575 | 4,736 | 3,457 |
| Earnings per share attributable to Vale's stockholders: | | | | |
| Basic and diluted earnings per share(restated in note 4): | 8 | | | |
| Preferred share (US\$) | 0.43 | 0.11 | 0.92 | 0.67 |
| Common share (US\$) | 0.43 | 0.11 | 0.92 | 0.67 |

(i) Period restated according to Note 12.

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

Table of Contents**Consolidated Statement of Comprehensive Income**

In millions of United States dollars

| | Three-month period ended | | Nine-month period ended | |
|---|--------------------------|--------------|-------------------------|----------------|
| | 2017 | 2016 | 2017 | 2016 |
| Net income | 2,239 | 582 | 4,795 | 3,483 |
| Other comprehensive income: | | | | |
| Items that will not be reclassified subsequently to the income statement | | | | |
| Cumulative translation adjustments | 1,797 | (447) | 1,158 | 6,660 |
| Retirement benefit obligations | 64 | (43) | (249) | (311) |
| Tax recognized within other comprehensive income | (19) | 14 | 76 | 96 |
| Total items that will not be reclassified subsequently to the income statement | 1,842 | (476) | 985 | 6,445 |
| Items that may be reclassified subsequently to the income statement | | | | |
| Cumulative translation adjustments | (603) | 219 | 88 | (3,459) |
| Cash flow hedge | | | | 6 |
| Net investments hedge | 290 | | 162 | |
| Equity results in associates and joint ventures, net of taxes | | | | 5 |
| Transfer of realized results to net income, net of taxes | | | | (78) |
| Tax recognized within other comprehensive income | (180) | 18 | (209) | (124) |
| Total of items that may be reclassified subsequently to the income statement | (493) | 237 | 41 | (3,650) |
| Total comprehensive income | 3,588 | 343 | 5,821 | 6,278 |
| Comprehensive income (loss) attributable to noncontrolling interests | 37 | (3) | 78 | 150 |
| Comprehensive income attributable to Vale's stockholders | 3,551 | 346 | 5,743 | 6,128 |

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

Table of Contents**Consolidated Statement of Cash Flows**

In millions of United States dollars

| | Three-month period ended September 30, | | Nine-month period ended September 30, | |
|---|---|--------------|--|----------------|
| | 2017 | 2016 (i) | 2017 | 2016 (i) |
| Cash flow from operating activities: | | | | |
| Income before income taxes from continuing operations | 3,324 | 1,055 | 6,761 | 6,256 |
| Continuing operations adjustments for: | | | | |
| Equity results in associates and joint ventures | (115) | (45) | (164) | (390) |
| Impairment and other results on non-current assets | 169 | 29 | (123) | 95 |
| Impairment and other results in associates and joint ventures | 26 | | 121 | 1,113 |
| Depreciation, amortization and depletion | 920 | 853 | 2,732 | 2,475 |
| Financial results, net | (220) | 1,039 | 1,732 | (2,447) |
| Changes in assets and liabilities: | | | | |
| Accounts receivable | (936) | 127 | 1,104 | (787) |
| Inventories | (52) | (72) | (496) | (87) |
| Suppliers and contractors | 37 | 436 | 363 | 462 |
| Provision - Payroll, related charges and others remunerations | 205 | (15) | 162 | 28 |
| Deferred revenue - Gold stream | | 524 | | 524 |
| Other assets and liabilities, net | (235) | (739) | (928) | (299) |
| | 3,123 | 3,192 | 11,264 | 6,943 |
| Interest on loans and borrowings paid | (407) | (422) | (1,334) | (1,243) |
| Derivatives paid, net | (113) | (191) | (223) | (1,054) |
| Interest on participative stockholders debentures paid | | | (70) | (37) |
| Income taxes | (84) | (88) | (489) | (342) |
| Income taxes - Settlement program | (124) | (116) | (365) | (304) |
| Net cash provided by operating activities from continuing operations | 2,395 | 2,375 | 8,783 | 3,963 |
| Net cash provided by operating activities from discontinued operations | 87 | 34 | 78 | 88 |
| Net cash provided by operating activities | 2,482 | 2,409 | 8,861 | 4,051 |
| Cash flow from investing activities: | | | | |
| Financial investments redeemed (invested) | (34) | 69 | (53) | 46 |
| Loans and advances - Net receipts (payments) (note 18) | (101) | (123) | (332) | (126) |
| Additions to investments | (57) | (4) | (74) | (230) |
| Additions to property, plant and equipment and intangible | (856) | (1,150) | (2,853) | (3,640) |
| Proceeds from disposal of assets and investments (note 13) | 198 | 326 | 721 | 350 |
| Dividends received from associates and joint ventures | 21 | | 103 | 115 |
| Others investments activities | 4 | 51 | (30) | 4 |
| Proceeds from gold stream transaction | | 276 | | 276 |
| Net cash used in investing activities from continuing operations | (825) | (555) | (2,518) | (3,205) |
| Net cash used in investing activities from discontinued operations | (71) | (103) | (215) | (208) |
| Net cash used in investing activities | (896) | (658) | (2,733) | (3,413) |

| | | | | |
|---|----------------|--------------|----------------|--------------|
| Cash flow from financing activities: | | | | |
| Loans and borrowings | | | | |
| Additions | 351 | 1,573 | 1,801 | 6,206 |
| Repayments | (2,818) | (1,979) | (5,788) | (4,940) |
| Transactions with stockholders: | | | | |
| Dividends and interest on capital attributed to stockholders | | | (1,454) | |
| Dividends and interest on capital paid to noncontrolling interest | (116) | (129) | (124) | (204) |
| Transactions with noncontrolling stockholders (note 13) | | | (98) | (17) |
| Net cash provided by (used in) financing activities from continuing operations | (2,583) | (535) | (5,663) | 1,045 |
| Net cash used in financing activities from discontinued operations | (34) | (8) | (34) | (13) |
| Net cash provided by (used in) financing activities | (2,617) | (543) | (5,697) | 1,032 |
| Increase (decrease) in cash and cash equivalents | (1,031) | 1,208 | 431 | 1,670 |
| Cash and cash equivalents in the beginning of the period | 5,720 | 4,168 | 4,262 | 3,591 |
| Effect of exchange rate changes on cash and cash equivalents | 28 | (7) | 38 | 108 |
| Effects of disposals of subsidiaries and merger, net on cash and cash equivalents | 2 | | (12) | |
| Cash and cash equivalents at end of the period | 4,719 | 5,369 | 4,719 | 5,369 |
| Non-cash transactions: | | | | |
| Additions to property, plant and equipment - capitalized loans and borrowing costs | 111 | 172 | 297 | 562 |

(i) Period restated according to Note 12.

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

Table of Contents**Consolidated Statement of Financial Position**

In millions of United States dollars

| | Notes | September 30, 2017 | December 31, 2016 |
|--|-------|-----------------------|----------------------|
| Assets | | | |
| Current assets | | | |
| Cash and cash equivalents | 17 | 4,719 | 4,262 |
| Accounts receivable | 9 | 2,712 | 3,663 |
| Other financial assets | 11 | 2,255 | 363 |
| Inventories | 10 | 4,083 | 3,349 |
| Prepaid income taxes | | 333 | 159 |
| Recoverable taxes | | 1,125 | 1,625 |
| Others | | 337 | 557 |
| | | 15,564 | 13,978 |
| Non-current assets held for sale | 12 | 4,325 | 8,589 |
| | | 19,889 | 22,567 |
| Non-current assets | | | |
| Judicial deposits | 23(c) | 2,005 | 962 |
| Other financial assets | 11 | 3,262 | 628 |
| Prepaid income taxes | | 539 | 527 |
| Recoverable taxes | | 651 | 727 |
| Deferred income taxes | 7(a) | 6,651 | 7,343 |
| Others | | 309 | 274 |
| | | 13,417 | 10,461 |
| Investments in associates and joint ventures | 14 | 3,855 | 3,696 |
| Intangibles | 15 | 8,651 | 6,871 |
| Property, plant and equipment | 16 | 56,280 | 55,419 |
| | | 82,203 | 76,447 |
| Total assets | | 102,092 | 99,014 |
| Liabilities | | | |
| Current liabilities | | | |
| Suppliers and contractors | | 4,013 | 3,630 |
| Loans and borrowings | 17 | 1,838 | 1,660 |
| Other financial liabilities | 11 | 634 | 1,086 |
| Taxes payable | 7(c) | 730 | 657 |
| Provision for income taxes | | 309 | 171 |
| Liabilities related to associates and joint ventures | 18 | 301 | 292 |
| Provisions | 22 | 1,197 | 952 |
| Dividends and interest on capital | | | 798 |
| Others | | 563 | 896 |
| | | 9,585 | 10,142 |
| Liabilities associated with non-current assets held for sale | 12 | 1,132 | 1,090 |

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| | | | |
|--|------|----------------|---------------|
| | | 10,717 | 11,232 |
| Non-current liabilities | | | |
| Loans and borrowings | 17 | 23,952 | 27,662 |
| Other financial liabilities | 11 | 2,963 | 2,127 |
| Taxes payable | 7(c) | 5,168 | 4,961 |
| Deferred income taxes | 7(a) | 1,604 | 1,700 |
| Provisions | 22 | 6,877 | 5,748 |
| Liabilities related to associates and joint ventures | 18 | 725 | 785 |
| Deferred revenue - Gold stream | | 1,922 | 2,090 |
| Others | | 1,682 | 1,685 |
| | | 44,893 | 46,758 |
| Total liabilities | | 55,610 | 57,990 |
| Stockholders equity | 25 | | |
| Equity attributable to Vale's stockholders | | 45,008 | 39,042 |
| Equity attributable to noncontrolling interests | | 1,474 | 1,982 |
| Total stockholders equity | | 46,482 | 41,024 |
| Total liabilities and stockholders equity | | 102,092 | 99,014 |

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

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Statement of Changes in Equity

In millions of United States dollars

| | Share capital | Results on conversion of shares | Capital reserve | Results from operation with noncontrolling interest | Profit reserves | Treasury stocks | Unrealized fair value gain (losses) | Cumulative translation adjustments | Retained earnings | Equity attributable to Vale s stockholders | E |
|--|---------------|---------------------------------|-----------------|---|-----------------|-----------------|-------------------------------------|------------------------------------|-------------------|--|---|
| Balance at December 31, 2016 | 61,614 | (152) | | (699) | 4,203 | (1,477) | (1,147) | (23,300) | | 39,042 | |
| Net income | | | | | | | | | 4,736 | 4,736 | |
| Other comprehensive income: | | | | | | | | | | | |
| Retirement benefit obligations | | | | | | | (173) | | | (173) | |
| Net investments hedge (note 17 (vi)) | | | | | | | | 107 | | 107 | |
| Translation adjustments | | | | | 127 | | (18) | 936 | 28 | 1,073 | |
| Transactions with stockholders: | | | | | | | | | | | |
| Dividends and interest on capital of Vale s stockholders | | | | | (658) | | | | | (658) | |
| Dividends of noncontrolling interest | | | | | | | | | | | |
| Acquisitions and disposal of noncontrolling interest (note 13) | | | | (277) | | | | | | (277) | |
| Capitalization of noncontrolling interest advances | | | | | | | | | | | |
| Merger of Valepar - Note 4 | | | 1,158 | | | | | | | 1,158 | |
| Balance at September 30, 2017 | 61,614 | (152) | 1,158 | (976) | 3,672 | (1,477) | (1,338) | (22,257) | 4,764 | 45,008 | |

| | Share capital | Results on conversion of shares | Capital reserve | Results from operation with noncontrolling interest | Profit reserves | Treasury stocks | Unrealized fair value gain (losses) | Cumulative translation adjustments | Retained earnings | Equity attributable to Vale s stockholders | E |
|--|---------------|---------------------------------|-----------------|---|-----------------|-----------------|-------------------------------------|------------------------------------|-------------------|--|---|
|--|---------------|---------------------------------|-----------------|---|-----------------|-----------------|-------------------------------------|------------------------------------|-------------------|--|---|

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| | | | | | | | | | |
|--|---------------|--------------|--------------|--------------|----------------|----------------|-----------------|--------------|---------------|
| Balance at December 31, 2015 | 61,614 | (152) | (702) | 985 | (1,477) | (992) | (25,687) | | 33,589 |
| Net income | | | | | | | | 3,457 | 3,457 |
| Other comprehensive income: | | | | | | | | | |
| Retirement benefit obligations | | | | | | (215) | | | (215) |
| Cash flow hedge | | | | | | 7 | | | 7 |
| Translation adjustments | | | | 200 | | (90) | 2,608 | 161 | 2,879 |
| Transactions with stockholders: | | | | | | | | | |
| Dividends of noncontrolling interest | | | | | | | | | |
| Acquisitions and disposal of noncontrolling interest (note 13) | | | | 2 | | | | | 2 |
| Capitalization of noncontrolling interest advances | | | | | | | | | |
| Balance at September 30, 2016 | 61,614 | (152) | (700) | 1,185 | (1,477) | (1,290) | (23,079) | 3,618 | 39,719 |

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

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Selected Notes to the Interim Financial Statements

Expressed in millions of United States dollar, unless otherwise stated

1. Corporate information

Vale S.A. (the Parent Company) is a public company headquartered in the city of Rio de Janeiro, Brazil with securities traded on the stock exchanges of São Paulo B3 S.A. (Vale3 and Vale5), New York - NYSE (VALE and VALE.P), Paris - NYSE Euronext (Vale3 and Vale5) and Madrid LATIBEX (XVALO and XVALP).

Vale S.A. and its direct and indirect subsidiaries (Vale or 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 3.

2. Basis for preparation of the interim financial statements

a) Statement of compliance

The condensed consolidated interim financial statements of the Company (interim financial statements) present the accounts of the Company and have been prepared in accordance with IAS 34 Interim Financial Reporting of the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

b) Basis of presentation

The interim financial statements have been prepared under the historical cost convention as adjusted to reflect: (i) the fair value of financial instruments measured at fair value through the income statement or available-for-sale financial instruments measured at fair value through the statement of comprehensive income; and (ii) impairment of assets.

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The accounting practices, accounting estimates and judgments, risk management and measurement methods are the same as those adopted when preparing the financial statements for the year ended December 31, 2016. The accounting policy for recognizing and measuring income taxes in the interim period is described in note 7. These interim financial statements were prepared to update users about relevant information presented in the period and should be read in conjunction with the financial statements for the year ended December 31, 2016.

The consolidated comparative information for the periods ended September 30, 2016 was restated for the purposes of applying IFRS 5

Non-current assets held for sale and discontinued operations after approval by the Board of Directors of the sale of the fertilizers assets, as presented in Note 12. Also earnings per share were restated as disclosed in note 4.

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 (BRL or R\$). For presentation purposes, these interim financial statements are presented in United States dollar (USD or US\$) as the Company believes that this is how international investors analyze the interim financial statements.

The exchange rates used by the Company for major currencies to translate its operations are as follows:

| | Closing rate | | Average rate for the | | | |
|---------------------------|-----------------------|----------------------|---|---|--|--|
| | September 30, 2017 | December 31, 2016 | Three-month period ended September 30, 2017 | Three-month period ended September 30, 2016 | Nine-month period ended September 30, 2017 | Nine-month period ended September 30, 2016 |
| US Dollar (US\$) | 3.1680 | 3.2591 | 3.1639 | 3.2460 | 3.1750 | 3.5450 |
| Canadian dollar (CAD) | 2.5334 | 2.4258 | 2.5235 | 2.4881 | 2.4319 | 2.6802 |
| Australian dollar (AUD) | 2.4837 | 2.3560 | 2.4969 | 2.4616 | 2.4320 | 2.6273 |
| Euro (EUR or) | 3.7430 | 3.4384 | 3.7162 | 3.6232 | 3.5392 | 3.9549 |

Subsequent events were evaluated through October 25, 2017, which is the date the interim financial statements were approved by the Board of Directors.

Table of Contents**c) Accounting standards issued but not yet effective**

The standards and interpretations issued by IASB relevant to the Company but not yet effective are the same as those applicable when preparing the financial statements for the year ended December 31, 2016.

3. Information by business segment and by geographic area

The information presented to the Executive Board on the performance of each segment is derived from the accounting records, adjusted for reallocations between segments.

a) Adjusted EBITDA

Adjusted EBITDA is used by management to support the decision making process for segments. The definition of adjusted EBITDA for the Company is the operating income or loss excluding (i) the depreciation, depletion and amortization, (ii) results on measurement or sales of non-current assets, (iii) impairment, (iv) onerous contracts and plus (v) dividends received and interest from associates and joint ventures.

| | Three-month period ended September 30, 2017 | | | | | | |
|-------------------------------------|---|--|--|-------------------------|--|--|-----------------|
| | 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 EBITDA |
| Ferrous minerals | | | | | | | |
| Iron ore | 5,131 | (2,086) | (89) | (22) | (47) | 1 | 2,888 |
| Iron ore Pellets | 1,441 | (733) | (21) | (5) | (3) | | 679 |
| Ferrous alloys and manganese | 131 | (71) | (4) | | 1 | | 57 |
| Other ferrous products and services | 117 | (77) | (2) | | | 12 | 50 |
| | 6,820 | (2,967) | (116) | (27) | (49) | 13 | 3,674 |
| Coal | 360 | (368) | (9) | (4) | | 67 | 46 |
| Base metals | | | | | | | |
| | 1,168 | (883) | (44) | (14) | | | 227 |

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| | | | | | | | |
|--|--------------|----------------|--------------|-------------|-------------|-----------|--------------|
| Nickel and other products | | | | | | | |
| Copper | 594 | (246) | (8) | (6) | | | 334 |
| | 1,762 | (1,129) | (52) | (20) | | | 561 |
| Others | 108 | (80) | (86) | (40) | 1 | 8 | (89) |
| Total of continuing operations | 9,050 | (4,544) | (263) | (91) | (48) | 88 | 4,192 |
| Discontinued operations (Fertilizers) | 533 | (490) | (23) | (3) | (5) | | 12 |
| Total | 9,583 | (5,034) | (286) | (94) | (53) | 88 | 4,204 |

Three-month period ended September 30, 2016

| | Net operating revenue | Cost of goods sold and services rendered | Sales, administrative and other operating expenses | Research and evaluation | Pre operating and operational stoppage | Adjusted EBITDA |
|--|-----------------------|--|--|-------------------------|--|-----------------|
| Ferrous minerals | | | | | | |
| Iron ore | 3,782 | (1,648) | (80) | (25) | (40) | 1,989 |
| Iron ore Pellets | 991 | (512) | (8) | (4) | (5) | 462 |
| Ferroalloys and manganese | 76 | (63) | (6) | | (3) | 4 |
| Other ferrous products and services | 110 | (70) | (1) | | (1) | 38 |
| | 4,959 | (2,293) | (95) | (29) | (49) | 2,493 |
| Coal | 163 | (157) | 3 | (3) | (13) | (7) |
| Base metals | | | | | | |
| Nickel and other products | 1,159 | (792) | (31) | (21) | (26) | 289 |
| Copper | 420 | (255) | (2) | (2) | | 161 |
| Other base metals products | | | 150 | | | 150 |
| | 1,579 | (1,047) | 117 | (23) | (26) | 600 |
| Others | 25 | (58) | (64) | (25) | | (122) |
| Total of continuing operations | 6,726 | (3,555) | (39) | (80) | (88) | 2,964 |
| Discontinued operations (Fertilizers) | 598 | (501) | (29) | (5) | (4) | 59 |
| Total | 7,324 | (4,056) | (68) | (85) | (92) | 3,023 |

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| | Nine-month period ended September 30, 2017 | | | | | | Adjusted EBITDA |
|--|--|--|--|-------------------------|--|--|-----------------|
| | 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 | |
| Ferrous minerals | | | | | | | |
| Iron ore | 13,501 | (5,648) | (181) | (61) | (128) | 1 | 7,484 |
| Iron ore Pellets | 4,231 | (2,097) | (43) | (13) | (5) | 37 | 2,110 |
| Ferrous alloys and manganese | 334 | (196) | (8) | | (3) | | 127 |
| Other ferrous products and services | 365 | (230) | 6 | (1) | | 12 | 152 |
| | 18,431 | (8,171) | (226) | (75) | (136) | 50 | 9,873 |
| Coal | 1,165 | (921) | (32) | (11) | (4) | 67 | 264 |
| Base metals | | | | | | | |
| Nickel and other products | 3,309 | (2,563) | (119) | (34) | (50) | | 543 |
| Copper | 1,562 | (723) | (15) | (10) | | | 814 |
| | 4,871 | (3,286) | (134) | (44) | (50) | | 1,357 |
| Others | 333 | (304) | (239) | (106) | (2) | 53 | (265) |
| Total of continuing operations | 24,800 | (12,682) | (631) | (236) | (192) | 170 | 11,229 |
| Discontinued operations (Fertilizers) | 1,304 | (1,201) | (58) | (8) | (26) | | 11 |
| Total | 26,104 | (13,883) | (689) | (244) | (218) | 170 | 11,240 |

| | Nine-month period ended September 30, 2016 | | | | | | Adjusted EBITDA |
|-------------------------------------|--|--|--|-------------------------|--|--|-----------------|
| | 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 | |
| Ferrous minerals | | | | | | | |
| Iron ore | 10,208 | (4,609) | (386) | (52) | (107) | | 5,054 |
| Iron ore Pellets | 2,611 | (1,408) | (43) | (8) | (17) | 60 | 1,195 |
| Ferrous alloys and manganese | 185 | (162) | (3) | | (9) | | 11 |
| Other ferrous products and services | 300 | (192) | 2 | (1) | (2) | | 107 |
| | 13,304 | (6,371) | (430) | (61) | (135) | 60 | 6,367 |
| Coal | 463 | (687) | 46 | (8) | (24) | | (210) |

Base metals

| | | | | | | | |
|----------------------------|--------------|----------------|-----------|-------------|-------------|--|--------------|
| Nickel and other products | 3,209 | (2,332) | (55) | (57) | (84) | | 681 |
| Copper | 1,170 | (684) | (9) | (3) | | | 474 |
| Other base metals products | | | 150 | | | | 150 |
| | 4,379 | (3,016) | 86 | (60) | (84) | | 1,305 |

| | | | | | | | |
|---------------------------------------|---------------|-----------------|--------------|--------------|--------------|------------|--------------|
| Others | 77 | (158) | (106) | (78) | (2) | 55 | (212) |
| Total of continuing operations | 18,223 | (10,232) | (404) | (207) | (245) | 115 | 7,250 |

Discontinued operations

| | | | | | | | |
|----------------------|---------------|-----------------|--------------|--------------|--------------|------------|--------------|
| (Fertilizers) | 1,446 | (1,190) | (68) | (16) | (14) | 3 | 161 |
| Total | 19,669 | (11,422) | (472) | (223) | (259) | 118 | 7,411 |

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

From Continuing operations

| | Three-month period ended September | | Nine-month period ended September | |
|--|------------------------------------|--------------|-----------------------------------|--------------|
| | 2017 | 2016 | 2017 | 2016 |
| Adjusted EBITDA from continuing operations | 4,192 | 2,964 | 11,229 | 7,250 |
| Depreciation, depletion and amortization | (920) | (853) | (2,732) | (2,475) |
| Dividends received and interest from associates and joint ventures | (88) | | (170) | (115) |
| Impairment and other results on non-current assets | (169) | (29) | 123 | (95) |
| Operating income | 3,015 | 2,082 | 8,450 | 4,565 |
| Financial results, net | 220 | (1,039) | (1,732) | 2,447 |
| Equity results in associates and joint ventures | 115 | 45 | 164 | 390 |
| Impairment and other results in associates and joint ventures | (26) | (33) | (121) | (1,146) |
| Income taxes | (979) | (434) | (1,653) | (2,724) |
| Net income from continuing operations | 2,345 | 621 | 5,108 | 3,532 |
| Net income attributable to noncontrolling interests | 7 | 11 | 53 | 25 |
| Net income attributable to Vale's stockholders | 2,338 | 610 | 5,055 | 3,507 |

From Discontinued operations

| | Three-month period ended September | | Nine-month period ended September | |
|--|------------------------------------|-------------|-----------------------------------|--------------|
| | 2017 | 2016 | 2017 | 2016 |
| Adjusted EBITDA from discontinued operations | 12 | 59 | 11 | 161 |
| Depreciation, depletion and amortization | (1) | (110) | (1) | (265) |
| Dividends received and interest from associates and joint ventures | | | | (3) |
| Impairment of non-current assets (note 12a) | (220) | | (597) | |
| Operating loss | (209) | (51) | (587) | (107) |
| Financial results, net | | (8) | (10) | 22 |
| Equity results in associates and joint ventures | | 1 | | 2 |
| Income taxes | 103 | 19 | 284 | 34 |
| Loss from discontinued operations | (106) | (39) | (313) | (49) |
| Net income (loss) attributable to noncontrolling interests | 2 | (4) | 6 | 1 |
| Loss attributable to Vale's stockholders | (108) | (35) | (319) | (50) |

b) Assets by segment

| | September 30, 2017 | | Three-month period ended | | | September 30, 2017 | | Nine-month period ended | |
|------------------|--------------------|--|--|--|--|--|--|-------------------------|--|
| | Product inventory | Investments in associates and joint ventures | Property, plant and equipment and intangible (i) | Additions to property, plant and equipment and intangible (ii) | Depreciation, depletion and amortization (iii) | Additions to property, plant and equipment and intangible (ii) | Depreciation, depletion and amortization (iii) | | |
| Ferrous minerals | 1,757 | 2,044 | 37,359 | 550 | 456 | 2,000 | | 1,300 | |
| Coal | 147 | 305 | 1,718 | 14 | 55 | 85 | | 234 | |
| Base metals | 1,127 | 13 | 23,655 | 289 | 398 | 751 | | 1,176 | |
| Others | 24 | 1,493 | 2,199 | 3 | 11 | 17 | | 22 | |
| Total | 3,055 | 3,855 | 64,931 | 856 | 920 | 2,853 | | 2,732 | |

| | December 31, 2016 | | Three-month period ended | | | September 30, 2016 | | Nine-month period ended | |
|------------------|-------------------|--|--|--|--|--|--|-------------------------|--|
| | Product inventory | Investments in associates and joint ventures | Property, plant and equipment and intangible (i) | Additions to property, plant and equipment and intangible (ii) | Depreciation, depletion and amortization (iii) | Additions to property, plant and equipment and intangible (ii) | Depreciation, depletion and amortization (iii) | | |
| Ferrous minerals | 1,134 | 1,808 | 34,834 | 797 | 401 | 2,481 | | 1,129 | |
| Coal | 126 | 285 | 1,907 | 152 | 42 | 441 | | 80 | |
| Base metals | 1,110 | 12 | 23,372 | 189 | 403 | 691 | | 1,248 | |
| Others | 3 | 1,591 | 2,177 | 12 | 7 | 27 | | 18 | |
| Total | 2,373 | 3,696 | 62,290 | 1,150 | 853 | 3,640 | | 2,475 | |

(i) Goodwill is allocated mainly in ferrous minerals and base metals segments in the amount of US\$2,252 and US\$1,960 in September 30, 2017 and US\$1,246 and US\$1,835 in December 31, 2016, respectively.

(ii) Includes only cash effect.

(iii) Refers to amounts recognized in the income statement.

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c) Net operating revenue by geographic area

| | Three-month period ended September 30, 2017 | | | | |
|---|---|------------|--------------|------------|--------------|
| | Ferrous minerals | Coal | Base metals | Others | Total |
| Americas, except United States and Brazil | 137 | | 246 | 15 | 398 |
| United States of America | 83 | | 244 | 25 | 352 |
| Europe | 759 | 42 | 608 | | 1,409 |
| Middle East/Africa/Oceania | 529 | 56 | 3 | | 588 |
| Japan | 601 | 34 | 101 | | 736 |
| China | 3,684 | | 138 | | 3,822 |
| Asia, except Japan and China | 374 | 200 | 388 | | 962 |
| Brazil | 653 | 28 | 34 | 68 | 783 |
| Net operating revenue | 6,820 | 360 | 1,762 | 108 | 9,050 |

| | Three-month period ended September 30, 2016 | | | | |
|---|---|------------|--------------|-----------|--------------|
| | Ferrous minerals | Coal | Base metals | Others | Total |
| Americas, except United States and Brazil | 81 | | 304 | | 385 |
| United States of America | 54 | | 184 | | 238 |
| Europe | 624 | 56 | 446 | | 1,126 |
| Middle East/Africa/Oceania | 333 | 14 | 4 | | 351 |
| Japan | 373 | 18 | 92 | | 483 |
| China | 2,720 | 17 | 172 | | 2,909 |
| Asia, except Japan and China | 286 | 58 | 333 | | 677 |
| Brazil | 488 | | 44 | 25 | 557 |
| Net operating revenue | 4,959 | 163 | 1,579 | 25 | 6,726 |

| | Nine-month period ended September 30, 2017 | | | | |
|---|--|--------------|--------------|------------|---------------|
| | Ferrous minerals | Coal | Base metals | Others | Total |
| Americas, except United States and Brazil | 417 | | 740 | 70 | 1,227 |
| United States of America | 257 | | 619 | 83 | 959 |
| Europe | 2,338 | 242 | 1,632 | 30 | 4,242 |
| Middle East/Africa/Oceania | 1,310 | 144 | 9 | | 1,463 |
| Japan | 1,431 | 113 | 279 | | 1,823 |
| China | 9,811 | | 383 | | 10,194 |
| Asia, except Japan and China | 929 | 547 | 1,090 | | 2,566 |
| Brazil | 1,938 | 119 | 119 | 150 | 2,326 |
| Net operating revenue | 18,431 | 1,165 | 4,871 | 333 | 24,800 |

| | Nine-month period ended September 30, 2016 | | | | |
|---|--|------|-------------|--------|-------|
| | Ferrous minerals | Coal | Base metals | Others | Total |
| Americas, except United States and Brazil | 246 | 14 | 862 | | 1,122 |

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| | | | | | |
|------------------------------|---------------|------------|--------------|-----------|---------------|
| United States of America | 141 | | 532 | 4 | 677 |
| Europe | 1,702 | 85 | 1,364 | | 3,151 |
| Middle East/Africa/Oceania | 784 | 55 | 17 | | 856 |
| Japan | 927 | 83 | 218 | | 1,228 |
| China | 7,573 | 48 | 442 | | 8,063 |
| Asia, except Japan and China | 671 | 178 | 840 | | 1,689 |
| Brazil | 1,260 | | 104 | 73 | 1,437 |
| Net operating revenue | 13,304 | 463 | 4,379 | 77 | 18,223 |

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4. Special events occurred during the period

At the General Extraordinary Shareholders Meeting, held on June 27, 2017, was approved the corporate reorganization of the Company proposed by Valepar (Controlling shareholder), with the purpose of enabling Vale to be listed at B3 S.A. Novo Mercado, the highest standard of corporate governance in Brazil, and Vale becoming a company with no controlling shareholder. The Proposal approved the following:

(i) Voluntary conversion of Vale class A preferred share into common share, based on the conversion rate of 0.9342 common shares for each Vale class A preferred share;

(ii) Amendment of Vale's bylaws, so as to adjust it to B3 S.A. Novo Mercado segment rules so Vale may be effectively listed on such special segment;

(iii) The merger of Valepar into Vale at an exchange ratio that increased by 10% the number of shares held by the shareholders of Valepar compared to their indirect interest in Vale prior to the merger.

The items from (i) to (iii) above were considered a series of indivisible and interdependent steps, whose effectiveness was subject to the successful performance of the other steps and the voluntary conversion by at least 54.09% of class A preferred shares.

a) Voluntary conversion and merger of Valepar S.A.

On August 11, 2017, the Voluntary Conversion date expired and an aggregate of 1,660,581,830 preferred shares (excluding treasury shares), corresponding to 84.4% of the total outstanding preferred shares, were converted.

At the Extraordinary shareholders meeting of Valepar S.A, held on August 14, 2017, the merger of Valepar with and into Vale was approved. Therefore, Valepar ceases to exist and, consequently, Valepar's shareholders hold direct interests in Vale and received 1.2065 Vale common shares for each Valepar share held by them. As a result, Vale issued 173,543,667 new common shares, all registered and without par value, in favor of Valepar's shareholders, which now own a total of 1,908,980,340 Vale common shares. There were no changes in the amounts of share capital. The Company's shareholding structure is shown in note 25.

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On the date of the merger, August 14, 2017, based on the accounting appraisal report, Valepar's net assets amounting to US\$1,158 were incorporated in Vale's shareholders' equity as capital reserve.

The Company's policy choice for combination of business where companies are under common control requires that assets and liabilities are reflected at the carrying amount.

The impacts arising from the Merger in the Company's assets and liabilities are as follows:

| | August 14, 2017 |
|--|------------------------|
| Current assets | 24 |
| Judicial deposits (note 23(c)) | 951 |
| Intangible (note 15) | 964 |
| Current liabilities | 20 |
| Provisions for litigation (note 23(a)) | 631 |
| Taxes payable (note 7) | 130 |
| Net assets | 1,158 |

Table of Contents**b) Shareholding structure**

After the conversion of the shares and merger of Valepar, the stockholders' equity is represented by 5,304,684,600 shares, of which 4,910,512,212 common shares, 87,032,292 common treasury shares and 307,140,096 preferred shares, with no change in the amounts of share capital.

| | Share position before conversion | Voluntary conversion | Issue of new shares | Share position after conversion |
|----------------------------|-------------------------------------|----------------------|---------------------|------------------------------------|
| Shares outstanding | | | | |
| ON Common shares | 3,185,653,000 | 1,551,315,545 | 173,543,667 | 4,910,512,212 |
| PNA Preferred shares | 1,967,721,926 | (1,660,581,830) | | 307,140,096 |
| | 5,153,374,926 | (109,266,285) | 173,543,667 | 5,217,652,308 |
| Shares in treasury | | | | |
| ON Common shares | 31,535,402 | 55,496,890 | | 87,032,292 |
| PNA Preferred shares | 59,405,792 | (59,405,792) | | |
| Total issued shares | 5,244,316,120 | (113,175,187) | 173,543,667 | 5,304,684,600 |

The calculation of basic and diluted earnings per share considered, retrospectively, the changes described above. The comparative information for the periods ended September 30, 2016 was restated, as presented in note 8.

At the Extraordinary shareholders' meeting and at the Special shareholders meeting, held on October 18, 2017 (subsequent event), preferred shareholders approved the conversion of all Class A preferred shares into common shares of the Company, in the proportion of 0.9342 common share for each class A preferred share.

During the period from October 20, 2017 until November 21, 2017, inclusive, the shareholders holding Vale's Class A preferred shares dissenting with regard to the resolution of the Special Meeting, will have the right to withdraw from the Company, receiving R\$24.26 per share which is the equivalent of Vale shareholders' equity per share at December 31, 2016.

Management bodies may call a shareholders general meeting to reconsider the resolution in function of the volume of the withdrawal exercised.

c) Shareholders Agreement

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On the date of the merger of Valepar into Vale, August 14, 2017, the former Controlling Shareholders of Valepar executed a new shareholders agreement (Vale Agreement) that binds only 20% of the totality of Vale s common shares issued by Vale, and will be in force until November 9, 2020, with no provision for renewal.

For 6 months from the date of entry into force of the Vale Agreement, the Shareholders will be obligated not to transfer, by any means, either directly or indirectly, Vale shares they receive as a result of the implementation of the Proposal (Lock-Up), except for (i) the transfer of Vale s shares by the Shareholders to their affiliates and their current shareholders, provided that such transferred shares shall remain subject to the Lock-Up, and (ii) the transfer of shares held by the Shareholders prior to the merger of Valepar.

Table of Contents**5. Costs and expenses by nature****a) Cost of goods sold and services rendered**

| | Three-month period ended September 30, | | Nine-month period ended September 30, | |
|----------------------------|--|--------------|---------------------------------------|---------------|
| | 2017 | 2016 | 2017 | 2016 |
| Personnel | 565 | 491 | 1,668 | 1,474 |
| Materials and services | 1,070 | 759 | 2,751 | 2,310 |
| Fuel oil and gas | 331 | 306 | 949 | 887 |
| Maintenance | 778 | 704 | 2,254 | 1,943 |
| Energy | 246 | 179 | 693 | 488 |
| Acquisition of products | 145 | 132 | 468 | 361 |
| Depreciation and depletion | 868 | 790 | 2,566 | 2,315 |
| Freight | 890 | 617 | 2,320 | 1,728 |
| Others | 519 | 367 | 1,579 | 1,041 |
| Total | 5,412 | 4,345 | 15,248 | 12,547 |
| Cost of goods sold | 5,256 | 4,210 | 14,797 | 12,189 |
| Cost of services rendered | 156 | 135 | 451 | 358 |
| Total | 5,412 | 4,345 | 15,248 | 12,547 |

b) Selling and administrative expenses

| | Three-month period ended September 30, | | Nine-month period ended September 30, | |
|-------------------------------|--|------------|---------------------------------------|------------|
| | 2017 | 2016 | 2017 | 2016 |
| Personnel | 56 | 56 | 172 | 157 |
| Services | 19 | 17 | 48 | 44 |
| Depreciation and amortization | 19 | 36 | 70 | 90 |
| Taxes and rents | 3 | 4 | 14 | 14 |
| Selling expenses | 17 | 12 | 49 | 27 |
| Others | 15 | 12 | 32 | 39 |
| Total | 129 | 137 | 385 | 371 |

c) Others operational expenses (incomes), net

| | Three-month period ended September 30, | | Nine-month period ended September 30, | |
|--|--|------|---------------------------------------|------|
| | 2017 | 2016 | 2017 | 2016 |

| | | | | |
|--|------------|-------------|------------|------------|
| Provision for litigation | 60 | 11 | 89 | 117 |
| Profit sharing program | 34 | 18 | 103 | 18 |
| Disposals (reversals) of materials and inventories | 7 | (11) | 14 | (20) |
| Others | 50 | (81) | 110 | |
| Total | 151 | (63) | 316 | 115 |

6. Financial result

| | Three-month period ended September 30, | | Nine-month period ended September 30, | |
|--|--|----------------|---------------------------------------|----------------|
| | 2017 | 2016 | 2017 | 2016 |
| Financial expenses | | | | |
| Loans and borrowings gross interest | (417) | (465) | (1,370) | (1,327) |
| Capitalized loans and borrowing costs | 111 | 172 | 297 | 562 |
| Derivative financial instruments | (147) | (101) | (413) | (325) |
| Indexation and exchange rate variation (a) | (320) | (596) | (1,516) | (2,814) |
| Participative stockholders debentures | (72) | (48) | (571) | (250) |
| Expenses of REFIS | (94) | (144) | (328) | (387) |
| Others | (354) | (219) | (742) | (513) |
| | (1,293) | (1,401) | (4,643) | (5,054) |
| Financial income | | | | |
| Short-term investments | 51 | 2 | 139 | 64 |
| Derivative financial instruments | 512 | 62 | 896 | 1,485 |
| Indexation and exchange rate variation (b) | 849 | 270 | 1,683 | 5,899 |
| Others | 101 | 28 | 193 | 53 |
| | 1,513 | 362 | 2,911 | 7,501 |
| Financial results, net | 220 | (1,039) | (1,732) | 2,447 |
| Summary of indexation and exchange rate variation | | | | |
| Loans and borrowings | 673 | (295) | 432 | 5,124 |
| Others | (144) | (31) | (265) | (2,039) |
| Net (a) + (b) | 529 | (326) | 167 | 3,085 |

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As from January 1, 2017, the Company applies net investment hedge accounting in foreign operation. For more information see note 17.

7. Income taxes

a) Deferred income tax assets and liabilities

Changes in deferred tax are as follows:

| | Assets | Liabilities | Total |
|--------------------------------------|--------------|--------------|--------------|
| Balance at December 31, 2016 | 7,343 | 1,700 | 5,643 |
| Effect in income statement | (674) | (113) | (561) |
| Translation adjustment | 176 | 78 | 98 |
| Other comprehensive income | (194) | (61) | (133) |
| Balance at September 30, 2017 | 6,651 | 1,604 | 5,047 |

| | Assets | Liabilities | Total |
|---|--------------|--------------|--------------|
| Balance at December 31, 2015 | 7,904 | 1,670 | 6,234 |
| Effect in income statement | (1,865) | 41 | (1,906) |
| Transfers between asset and liabilities | (4) | (4) | |
| Translation adjustment | 921 | 48 | 873 |
| Other comprehensive income | (107) | (79) | (28) |
| Balance at September 30, 2016 | 6,849 | 1,676 | 5,173 |

b) Income tax reconciliation Income statement

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

| | Three-month period ended September 30, | | Nine-month period ended September 30, | | |
|--|--|--------------|---------------------------------------|----------------|----------------|
| | 2017 | 2016 | 2017 | 2016 | |
| Income before income taxes | 3,324 | 1,055 | 6,761 | 6,256 | 6,256 |
| Income taxes at statutory rates - 34% | (1,130) | (359) | (2,299) | (2,128) | (2,128) |
| Adjustments that affect the basis of taxes: | | | | | |
| | 125 | | 377 | | |

Income tax benefit from interest on stockholders' equity

| | | | | |
|--|--------------|--------------|----------------|----------------|
| Tax incentives | 134 | 92 | 313 | 190 |
| Equity results | 40 | 9 | 57 | 129 |
| Unrecognized tax losses of the period | (176) | (167) | (445) | (516) |
| Gain on sale of subsidiaries (note 13) | | | 175 | |
| Others | 28 | (9) | 169 | (399) |
| Income taxes | (979) | (434) | (1,653) | (2,724) |

Income tax expense is recognized at an amount determined by the estimated tax rate, adjusted for the tax effect of certain items recognized in full in the interim period. Therefore, the effective tax rate in the interim financial statement may differ from management's estimate of the effective tax rate for the annual financial statement.

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

In 2013, the Company elected to participate in the REFIS, a federal tax settlement program, to settle most of the claims related to the collection of income tax and social contribution on equity gains of foreign subsidiaries and associates from 2003 to 2012.

At September 30, 2017, the balance of US\$5,668 (US\$500 as current and US\$5,168 as non-current) is due in 133 remaining monthly installments, bearing interest at the SELIC rate of 8.25% per year and at December 31, 2016, the balance of US\$5,419 (US\$458 as current and US\$ 4,961 as non-current) was due in 142 remaining monthly installments.

Table of Contents**8. Basic and diluted earnings per share**

The values of basic and diluted earnings per share are presented below. The weighted average number of shares was recalculated retrospectively, considering the conversion of class A preferred share into common shares, as mentioned in note 4.

| | Three-month period ended September | | Nine-month period ended September | |
|---|------------------------------------|------------------|-----------------------------------|------------------|
| | 2017 | 30, 2016 | 2017 | 30, 2016 |
| Basic and diluted earnings per share from continuing operations: | | | | |
| Income available to preferred stockholders | 505 | 132 | 1,646 | 1,142 |
| Income available to common stockholders | 1,833 | 478 | 3,409 | 2,365 |
| Total | 2,338 | 610 | 5,055 | 3,507 |
| Basic and diluted loss per share from discontinued operations: | | | | |
| Loss available to preferred stockholders | (23) | (8) | (104) | (16) |
| Loss available to common stockholders | (85) | (27) | (215) | (34) |
| Total | (108) | (35) | (319) | (50) |
| Basic and diluted earnings per share: | | | | |
| Income available to preferred stockholders | 482 | 124 | 1,542 | 1,126 |
| Income available to common stockholders | 1,748 | 451 | 3,194 | 2,331 |
| Total | 2,230 | 575 | 4,736 | 3,457 |
| Thousands of shares | | | | |
| Weighted average number of shares outstanding preferred shares | 1,119,381 | 1,119,381 | 1,681,834 | 1,681,834 |
| Weighted average number of shares outstanding common shares | 4,066,831 | 4,066,831 | 3,482,607 | 3,482,607 |
| Total | 5,186,212 | 5,186,212 | 5,164,441 | 5,164,441 |
| Basic and diluted earnings per share from continuing operations: | | | | |
| Preferred share (US\$) | 0.45 | 0.12 | 0.98 | 0.68 |
| Common share (US\$) | 0.45 | 0.12 | 0.98 | 0.68 |
| Basic and diluted loss per share from discontinued operations: | | | | |
| Preferred share (US\$) | (0.02) | (0.01) | (0.06) | (0.01) |
| Common share (US\$) | (0.02) | (0.01) | (0.06) | (0.01) |
| Basic and diluted earnings per share: | | | | |
| Preferred share (US\$) | 0.43 | 0.11 | 0.92 | 0.67 |
| Common share (US\$) | 0.43 | 0.11 | 0.92 | 0.67 |

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The Company does not have dilutive potential shares outstanding that could result in dilution of earnings (loss) per share.

9. **Accounts receivable**

| | September 30, 2017 | December 31, 2016 |
|--|--------------------|-------------------|
| Trade receivables | 2,777 | 3,723 |
| Impairment of trade receivables | (65) | (60) |
| | 2,712 | 3,663 |
| Trade receivables related to the steel sector - % | 83.46% | 83.44% |

| | Three-month period ended September 30, 2017 | September 30, 2016 | Nine-month period ended September 30, 2017 | September 30, 2016 |
|--|--|-----------------------|---|-----------------------|
| Impairment of trade receivables recorded in the income statement | (2) | (2) | (6) | (5) |

No individual customer represents over 10% of receivables or revenues.

Table of Contents**10. Inventories**

| | September 30, 2017 | December 31, 2016 |
|----------------------|--------------------|-------------------|
| Product inventory | 3,055 | 2,373 |
| Consumable inventory | 1,028 | 976 |
| Total | 4,083 | 3,349 |

Product inventories by segments are presented in note 3(b).

11. Other financial assets and liabilities

| | Current | | Non-Current | |
|--|--------------------|-------------------|--------------------|-------------------|
| | September 30, 2017 | December 31, 2016 | September 30, 2017 | December 31, 2016 |
| Other financial assets | | | | |
| Financial investments | 5 | 18 | | |
| Loans | | | 154 | 180 |
| Derivative financial instruments (note 21) | 136 | 274 | 438 | 446 |
| Related parties (note 26) | 2,114 | 71 | 2,670 | 2 |
| | 2,255 | 363 | 3,262 | 628 |
| Other financial liabilities | | | | |
| Derivative financial instruments (note 21) | | | 680 | 1,225 |
| Related parties (note 26) | 508 | 672 | 983 | 127 |
| Participative stockholders' debentures | | | 1,300 | 775 |
| | 634 | 1,086 | 2,963 | 2,127 |

12. Non-current assets and liabilities held for sale and discontinued operations

| | September 30, 2017 | | | December 31, 2016 | | |
|---|-----------------------|--------------------|-------|-----------------------|------------------------------|-------|
| | Fertilizers assets | Shipping assets | Total | Fertilizers assets | Nacala Shipping assets | Total |
| Assets | | | | | | |
| Accounts receivable | 73 | | 73 | 86 | 6 | 92 |
| Inventories | 350 | | 350 | 387 | 2 | 389 |
| Other current assets | 179 | | 179 | 107 | 114 | 221 |
| Investments in associates and joint ventures | 94 | | 94 | 90 | | 90 |

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| | | | | | | | |
|--|--------------|------------|--------------|--------------|--------------|------------|--------------|
| Property, plant and equipment and Intangible | 2,421 | 183 | 2,604 | 2,694 | 4,064 | 357 | 7,115 |
| Other non-current assets | 1,025 | | 1,025 | 679 | 3 | | 682 |
| Total assets | 4,142 | 183 | 4,325 | 4,043 | 4,189 | 357 | 8,589 |
| Liabilities | | | | | | | |
| Suppliers and contractors | 259 | | 259 | 280 | 41 | | 321 |
| Other current liabilities | 220 | | 220 | 192 | 13 | | 205 |
| Other non-current liabilities | 653 | | 653 | 559 | 5 | | 564 |
| Total liabilities | 1,132 | | 1,132 | 1,031 | 59 | | 1,090 |
| Net non-current assets held for sale | 3,010 | 183 | 3,193 | 3,012 | 4,130 | 357 | 7,499 |

a) **Discontinued operations (Fertilizers assets)**

In December 2016, the Company entered into an agreement with The Mosaic Company (Mosaic) to sell (i) the phosphate assets located in Brazil, except those mainly related to nitrogen assets located in Cubatão (Brazil); (ii) the control of Compañía Minera Miski Mayo S.A.C., in Peru; (iii) the potassium assets located in Brazil; and (iv) the potash projects in Canada. The fertilizer segment, including Cubatão, is presented as a discontinued operation and the related assets and liabilities were classified as assets and liabilities held for sale.

In December 2016, the agreed transaction price was US\$2.5 billion, of which US\$1.25 billion will be paid in cash and 42.3 million common shares to be issued by Mosaic, which at the agreement signature date represented US\$1.25 billion, around 11% of Mosaic's total outstanding common shares.

The net asset of the fertilizer segment was adjusted to reflect the fair value less cost to sell and a loss of US\$597 was recognized in the income statement as Impairment of non-current assets from discontinued operations for the nine-month period ended September 30, 2017, mainly due to the decline in the Mosaic stock prices.

The result and the cash flow of discontinued operations of the Fertilizer segment for the periods ended September 30, 2017 are presented as follows, and includes the comparative restated periods ended September 30, 2016, as described in note 3(b).

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| | Three-month period ended September 30, | | Nine-month period ended September 30, | |
|--|--|-------------|---------------------------------------|--------------|
| | 2017 | 2016 | 2017 | 2016 |
| Discontinued operations | | | | |
| Net operating revenue | 533 | 598 | 1,304 | 1,446 |
| Cost of goods sold and services rendered | (491) | (610) | (1,201) | (1,452) |
| Operating expenses | (31) | (39) | (93) | (101) |
| Impairment of non-current assets | (220) | | (597) | |
| Operating loss | (209) | (51) | (587) | (107) |
| Financial Results, net | | (8) | (10) | 22 |
| Equity results in associates and joint ventures | | 1 | | 2 |
| Loss before income taxes | (209) | (58) | (597) | (83) |
| Income taxes | 103 | 19 | 284 | 34 |
| Loss from discontinued operations | (106) | (39) | (313) | (49) |
| Net income (loss) attributable to noncontrolling interests | 2 | (4) | 6 | 1 |
| Loss attributable to Vale's stockholders | (108) | (35) | (319) | (50) |

| | Three-month period ended September 30, | | Nine-month period ended September 30, | |
|--|--|--------------|---------------------------------------|--------------|
| | 2017 | 2016 | 2017 | 2016 |
| Discontinued operations | | | | |
| Cash flow from operating activities | | | | |
| Loss before income taxes | (209) | (58) | (597) | (83) |
| Adjustments: | | | | |
| Equity results in associates and joint ventures | | (1) | | (2) |
| Depreciation, amortization and depletion | 1 | 110 | 1 | 265 |
| Impairment of non-current assets | 220 | | 597 | |
| Increase (decrease) in assets and liabilities | 75 | (17) | 77 | (92) |
| Net cash provided by operating activities | 87 | 34 | 78 | 88 |
| Cash flow from investing activities | | | | |
| Additions to property, plant and equipment | (71) | (100) | (215) | (207) |
| Others | | (3) | | (1) |
| Net cash used in investing activities | (71) | (103) | (215) | (208) |
| Cash flow from financing activities | | | | |
| Loans and borrowings | | | | |
| Repayments | (34) | (8) | (34) | (13) |
| Net cash used in financing activities | (34) | (8) | (34) | (13) |
| Net cash used in discontinued operations | (18) | (77) | (171) | (133) |

The spin-off of the nitrogen assets located in Cubatão from the remaining Vale Fertilizantes's assets was concluded in July 2017. The completion of this milestone was one of the requirements for the conclusion of the transaction, which is expected to be completed before the end of 2017 and, still, is subject to the fulfillment of usual precedent conditions, including other operational and regulatory matters.

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13. Acquisitions and divestitures

a) Coal - Nacala Logistic Corridor

In December 2014 and as amended in November 2016, the Company signed an agreement with Mitsui & Co., Ltd. (Mitsui) to transfer 50% of its stake of 66.7% in Nacala Logistic Corridor, which comprises entities that holds railroads and port concessions located in Mozambique and Malawi. Also, Mitsui committed to acquire 15% participation in the entity that owns Vale Moçambique, which holds the Moatize Coal Project.

In March 2017, the transaction was concluded, and a consideration of US\$690 was received by Vale. After the completion of the transaction, the Company (i) holds 81% of Vale Moçambique and retains the control of the Moatize Coal Project and (ii) shares control of the Nacala Logistic Corridor structure (Nacala BV), with Mitsui.

Nacala Logistic Corridor is in negotiations for a project finance, which the completion is expected to occur during the course of 2017. Upon the completion an additional amount of US\$57 will be paid by Mitsui. Mitsui has certain rights, based on the execution of the project finance, to sell their participation in the Moatize Coal Project and Nacala BV, back to Vale, at original amounts and the same number of shares. The fair value of these put options is non-significant.

As a consequence of sharing control of Nacala BV, the Company:

- (i) derecognized the assets and liabilities classified as held for sale in the total amount of US\$4,144, from which US\$4,063 refers to property, plant and equipment and intangibles;
- (ii) derecognized US\$14 related to cash and cash equivalents;
- (iii) recognized a gain of US\$504 in the income statement related to the sale and the re-measurement at fair value, of its remaining interest at Nacala BV based on the consideration received;
- (iv) reclassified the gain related to the cumulative translation adjustments on to income statements in the amount of US\$11;

The result of the transaction regarding the assets from Nacala s corridor was recognized in the income statement as Impairment and other results on non-current assets .

The results of the transaction with the Moatize Coal Project was recognized in Results from operation with noncontrolling interest in the amount of US\$105, directly in Stockholders Equity.

The consideration received was recognized in the statement of cash flows in Proceeds from disposal of assets and investments in the amount of US\$435 and Transactions with noncontrolling stockholders in the amount of US\$255.

Due to the deconsolidation of Nacala Logistic Corridor, Vale has after the transaction, outstanding loan balances with Nacala BV and Pangea Emirates Ltd stated as Related parties, as described in note 26. The use of proceeds of the project finance is expected to settle part of this debt.

b) Floating Transfer Stations (FTS)

In June 2017, the Company completed the sale of one of its Floating Transfer Stations in Philippines in the amount of US\$15. In this transaction, Vale recognized a loss of US\$55 as Impairment and other results on non-current assets .

c) Shipping assets

In August 2017, the Company concluded the sale of two Very Large Ore Carriers (VLOC s) for US\$178, which were recognized as Non-current assets and liabilities held for sale and discontinued operations .

Table of Contents**14. Investments in associates and joint ventures****a) Changes during the period**

Changes in investments in associates and joint ventures are as follows:

| | 2017 | | | 2016 | | |
|---|--------------|----------------|--------------|--------------|----------------|--------------|
| | Associates | Joint ventures | Total | Associates | Joint ventures | Total |
| Balance at January 1st, | 1,437 | 2,259 | 3,696 | 1,323 | 1,617 | 2,940 |
| Additions (i) | 1 | 90 | 91 | 1 | 227 | 228 |
| Disposals | | | | (4) | | (4) |
| Translation adjustment | 35 | 56 | 91 | 190 | 353 | 543 |
| Equity results in income statement | 47 | 117 | 164 | 55 | 335 | 390 |
| Equity results from discontinued operations | | | | 2 | | 2 |
| Equity results in statement of comprehensive income | | (172) | (172) | | | |
| Dividends declared (ii) | (43) | (91) | (134) | (25) | (91) | (116) |
| Others | | 119 | 119 | 1 | (8) | (7) |
| Balance at September 30, | 1,477 | 2,378 | 3,855 | 1,543 | 2,433 | 3,976 |

(i) Refers to the Coal and Other segments in the amounts of US\$75 and US\$16, respectively, on September 30, 2017.

(ii) The Company received the amount of US\$59 during the nine-month period ended September 30, 2017 related to dividends declared in 2017.

The investments by segments are presented in note 3(b).

Table of Contents**Investments in associates and joint ventures (continued)**

| Associates and joint ventures | % ownership | % voting capital | Investments in associates and joint ventures | | Equity results in the income statement | | | | | Dividends received | |
|---|-------------|------------------|--|-------------------|---|---|---|---|---|---|----------------|
| | | | September 30, 2017 | December 31, 2016 | Three-month period ended September 30, 2017 | Three-month period ended September 30, 2016 | Three-month period ended September 30, 2017 | Three-month period ended September 30, 2016 | Three-month period ended September 30, 2017 | Three-month period ended September 30, 2016 | |
| Ferrous minerals | | | | | | | | | | | |
| Baovale Mineração S.A. Companhia | 50.00 | 50.00 | 33 | 26 | 1 | 9 | 5 | 8 | | | |
| Coreano-Brasileira de Pelotização Companhia | 50.00 | 50.00 | 91 | 68 | 11 | 2 | 36 | 11 | | | 13 |
| Hispano-Brasileira de Pelotização (i) Companhia | 50.89 | 51.00 | 85 | 59 | 9 | 4 | 30 | 10 | | | 5 18 |
| Companhia Ítalo-Brasileira de Pelotização (i) Companhia | 50.90 | 51.00 | 91 | 69 | 9 | 5 | 29 | 11 | | | 17 9 |
| Companhia Nipo-Brasileira de Pelotização (i) Companhia | 51.00 | 51.11 | 164 | 108 | 22 | 9 | 68 | 17 | | | 15 20 |
| MRS Logística S.A. | 48.16 | 46.75 | 546 | 488 | 22 | 17 | 59 | 49 | | | |
| VLI S.A. | 37.60 | 37.60 | 1,012 | 969 | 17 | 16 | 23 | 32 | 12 | | 12 |
| Zhuhai YPM Pellet Co. | 25.00 | 25.00 | 22 | 21 | | | | | | | |
| | | | 2,044 | 1,808 | 91 | 62 | 250 | 138 | 12 | | 49 60 |
| Coal | | | | | | | | | | | |
| Henan Longyu Energy Resources Co., Ltd. | 25.00 | 25.00 | 305 | 285 | 4 | 2 | 20 | (8) | | | |
| | | | 305 | 285 | 4 | 2 | 20 | (8) | | | |
| Base metals | | | | | | | | | | | |
| Korea Nickel Corp. | 25.00 | 25.00 | 13 | 12 | 1 | 1 | 1 | (1) | | | |
| | | | 13 | 12 | 1 | 1 | 1 | (1) | | | |
| Others | | | | | | | | | | | |
| Aliança Geração de Energia S.A. (i) | 55.00 | 55.00 | 597 | 582 | 3 | 11 | 18 | 33 | 9 | | 20 22 |
| Aliança Norte Energia Participações S.A. (i) | 51.00 | 51.00 | 167 | 148 | (3) | 2 | | (1) | | | |
| California Steel Industries, Inc. Companhia | 50.00 | 50.00 | 207 | 185 | 10 | 17 | 35 | 20 | | | 13 |
| Siderúrgica do Pecém | 50.00 | 50.00 | 398 | 527 | (1) | (52) | (143) | 177 | | | |
| Mineração Rio Grande do Norte S.A. | 40.00 | 40.00 | 108 | 129 | 9 | 7 | 10 | 42 | | | 21 32 |
| Others | | | 16 | 20 | 1 | (5) | (27) | (10) | | | 1 |
| | | | 1,493 | 1,591 | 19 | (20) | (107) | 261 | 9 | | 54 55 |
| Total | | | 3,855 | 3,696 | 115 | 45 | 164 | 390 | 21 | | 103 115 |

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

Table of Contents**15. Intangibles**

Changes in intangibles are as follows:

| | Goodwill | Concessions | Right of use | Software | Total |
|--------------------------------------|--------------|--------------|--------------|------------|--------------|
| Balance at December 31, 2016 | 3,081 | 3,301 | 147 | 342 | 6,871 |
| Additions | | 740 | | 23 | 763 |
| Disposals | | (5) | | | (5) |
| Amortization | | (115) | (1) | (108) | (224) |
| Translation adjustment | 167 | 94 | 9 | 12 | 282 |
| Merger of Valepar (note 4) | 964 | | | | 964 |
| Balance at September 30, 2017 | 4,212 | 4,015 | 155 | 269 | 8,651 |
| Cost | 4,212 | 5,256 | 246 | 1,608 | 11,322 |
| Accumulated amortization | | (1,241) | (91) | (1,339) | (2,671) |
| Balance at September 30, 2017 | 4,212 | 4,015 | 155 | 269 | 8,651 |

| | Goodwill | Concessions | Right of use | Software | Total |
|--------------------------------------|--------------|--------------|--------------|------------|--------------|
| Balance at December 31, 2015 | 2,956 | 1,814 | 207 | 347 | 5,324 |
| Additions | | 1,015 | 1 | 10 | 1,026 |
| Disposals | | (8) | | | (8) |
| Amortization | | (177) | (2) | (117) | (296) |
| Translation adjustment | 235 | 515 | (1) | 81 | 830 |
| Transfers | | 77 | (67) | 73 | 83 |
| Balance at September 30, 2016 | 3,191 | 3,236 | 138 | 394 | 6,959 |
| Cost | 3,191 | 4,376 | 218 | 1,572 | 9,357 |
| Accumulated amortization | | (1,140) | (80) | (1,178) | (2,398) |
| Balance at September 30, 2016 | 3,191 | 3,236 | 138 | 394 | 6,959 |

The goodwill was recognized on the acquisition of Vale controlling interest by Valepar, based on the expected future returns on the ferrous segment. As the fundamentals are still valid on the date of the merger of Valepar by Vale, which is supported by projected cash flow of this cash generation unit, the goodwill was fully recognized. The company did not recognize the deferred taxes above goodwill, due to the fact that there are no differences between the tax basis and accounting basis. The company will periodically evaluate goodwill for recoverability purposes.

Table of Contents**16. Property, plant and equipment**

Changes in property, plant and equipment are as follows:

| | Land | Building | Facilities | Equipment | Mineral properties | Others | Constructions in progress | Total |
|--|------------|---------------|---------------|--------------|--------------------|--------------|---------------------------|---------------|
| Balance at December 31, 2016 | 724 | 10,674 | 9,471 | 6,794 | 8,380 | 7,515 | 11,861 | 55,419 |
| Additions (i) | | | | | | | 2,229 | 2,229 |
| Disposals | | | (48) | (31) | (125) | (115) | (141) | (460) |
| Assets retirement obligation | | | | | (74) | | | (74) |
| Depreciation, amortization and depletion | | (440) | (543) | (638) | (480) | (568) | | (2,669) |
| Translation adjustment | 18 | 321 | 282 | 124 | 452 | 285 | 353 | 1,835 |
| Transfers | 19 | 1,821 | 2,652 | 734 | 655 | 1,399 | (7,280) | |
| Balance at September 30, 2017 | 761 | 12,376 | 11,814 | 6,983 | 8,808 | 8,516 | 7,022 | 56,280 |
| Cost | 761 | 19,195 | 18,463 | 12,888 | 17,226 | 12,841 | 7,022 | 88,396 |
| Accumulated depreciation | | (6,819) | (6,649) | (5,905) | (8,418) | (4,325) | | (32,116) |
| Balance at September 30, 2017 | 761 | 12,376 | 11,814 | 6,983 | 8,808 | 8,516 | 7,022 | 56,280 |

| | Land | Building | Facilities | Equipment | Mineral properties | Others | Constructions in progress | Total |
|---|------------|---------------|--------------|--------------|--------------------|--------------|---------------------------|---------------|
| Balance at December 31, 2015 | 766 | 9,101 | 8,292 | 7,307 | 10,304 | 7,206 | 11,126 | 54,102 |
| Additions (i) | | | | | | | 3,242 | 3,242 |
| Disposals | | (1) | (3) | (28) | (125) | (345) | (21) | (523) |
| Assets retirement obligation | | | | | 513 | | | 513 |
| Depreciation, amortization and depletion | | (372) | (471) | (663) | (590) | (454) | | (2,550) |
| Translation adjustment | 114 | 793 | 1,004 | 655 | 907 | 957 | 2,493 | 6,923 |
| Transfers | 26 | 1,271 | 498 | 701 | 240 | (66) | (2,753) | (83) |
| Transfers to non-current assets held for sale | | | | | | (497) | | (497) |
| Balance at September 30, 2016 | 906 | 10,792 | 9,320 | 7,972 | 11,249 | 6,801 | 14,087 | 61,127 |
| Cost | 906 | 16,588 | 15,209 | 14,175 | 19,108 | 10,544 | 14,087 | 90,617 |
| Accumulated depreciation | | (5,796) | (5,889) | (6,203) | (7,859) | (3,743) | | (29,490) |
| Balance at September 30, 2016 | 906 | 10,792 | 9,320 | 7,972 | 11,249 | 6,801 | 14,087 | 61,127 |

(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 17(c)) compared to those disclosed in the financial statements as at December 31, 2016.

In the nine-month period ended in September, 2017, Vale placed an underground mine, which is part of Sudbury operations, in Canada, on care and maintenance. Parts of the mine, affected by seismic activity, for which repairs would be uneconomical, are not expected to resume operations in the future, was derecognized from property, plant and equipment. As a result, the Company recognized a loss of US\$133 in the income statement as Impairment and other results on non-current assets. As other parts of the mine are subject to resume operation in the future, a net book value in the amount of US\$232 remains as part of the cost of the mine.

Table of Contents**17. Loans, borrowings, cash and cash equivalents and financial investments****a) Net debt**

The Company evaluates the net debt with the objective of ensuring the continuity of its business in the long term, being able to generate value to its stockholders, through the payment of dividends and capital gain.

| | September 30, 2017 | December 31, 2016 |
|---|--------------------|-------------------|
| Debt contracts in the international markets | 18,503 | 21,130 |
| Debt contracts in Brazil | 7,287 | 8,192 |
| Total of loans and borrowings | 25,790 | 29,322 |
| (-) Cash and cash equivalents | 4,719 | 4,262 |
| (-) Financial investments | 5 | 18 |
| Net debt | 21,066 | 25,042 |

b) Cash and cash equivalents

Cash and cash equivalents includes cash, immediately redeemable deposits and short-term investments with an insignificant risk of change in value. They are readily convertible to cash, part in R\$, indexed to the Brazilian Interbank Interest rate (DI Rate or CDI) and part denominated in US\$, mainly time deposits.

c) Loans and borrowings**i) Total debt**

| | Current liabilities | | Non-current liabilities | |
|--|---------------------|-------------------|-------------------------|-------------------|
| | September 30, 2017 | December 31, 2016 | September 30, 2017 | December 31, 2016 |
| Debt contracts in the international markets | | | | |
| Floating rates in: | | | | |

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| | | | | |
|---|--------------|--------------|---------------|---------------|
| US\$ | 295 | 234 | 4,008 | 5,489 |
| EUR | | | 236 | 211 |
| Fixed rates in: | | | | |
| US\$ | | | 12,583 | 13,083 |
| EUR | | | 886 | 1,583 |
| Other currencies | 17 | 17 | 208 | 209 |
| Accrued charges | 270 | 304 | | |
| | 582 | 555 | 17,921 | 20,575 |
| Debt contracts in Brazil | | | | |
| Floating rates in: | | | | |
| R\$, indexed to TJLP, TR, IPCA, IGP-M and CDI | 506 | 402 | 4,848 | 5,621 |
| Basket of currencies and US\$ indexed to LIBOR | 367 | 343 | 978 | 1,217 |
| Fixed rates in: | | | | |
| R\$ | 71 | 66 | 198 | 216 |
| Accrued charges | 312 | 294 | 7 | 33 |
| | 1,256 | 1,105 | 6,031 | 7,087 |
| | 1,838 | 1,660 | 23,952 | 27,662 |

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

| | Principal | | | Total | Estimated future interest payments (i) |
|-----------------------|--------------|-----------------|----------------------|---------------|--|
| | Bank loans | Capital markets | Development agencies | | |
| 2017 | 5 | | 257 | 262 | 1,667 |
| 2018 | 256 | | 1,125 | 1,381 | 1,428 |
| 2019 | 1,093 | | 968 | 2,061 | 1,316 |
| 2020 | 1,623 | 846 | 832 | 3,301 | 1,244 |
| 2021 | 1,059 | 1,345 | 778 | 3,182 | 1,070 |
| Between 2022 and 2025 | 1,506 | 3,394 | 1,259 | 6,159 | 2,848 |
| 2026 onwards | 113 | 8,490 | 252 | 8,855 | 5,930 |
| | 5,655 | 14,075 | 5,471 | 25,201 | 15,503 |

(i) Estimated future payments of interest, calculated based on interest rate curves and foreign exchange rates applicable as at September 30, 2017 and considering that all amortization payments and payments at maturity on loans and borrowings will be made on their contracted payments dates. The amount includes the estimated values of future interest payments (not yet accrued), in addition to interest already recognized in the financial statements.

At September 30, 2017, the average annual interest rates by currency are as follows:

| Loans and borrowings | Average interest rate (i) | Total debt |
|----------------------|---------------------------|---------------|
| US\$ | 5.24% | 18,477 |
| R\$ (ii) | 8.14% | 5,934 |
| EUR (iii) | 3.35% | 1,150 |
| Other currencies | 3.16% | 229 |
| | | 25,790 |

(i) In order to determine the average interest rate for debt contracts with floating rates, the Company used the rate applicable at September 30, 2017.

(ii) R\$ denominated debt that bears interest at IPCA, CDI, TR or TJLP, plus spread. For a total of US\$3,325 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 2.46% 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) Credit and financing lines

| Type | Contractual currency | Date of agreement | Period of the agreement | Total amount | Available amount September 30, 2017 |
|-------------------------------|-------------------------|-------------------|----------------------------|--------------|--|
| Credit lines | | | | | |
| Revolving credit facilities | US\$ | May 2015 | 5 years | 3,000 | 3,000 |
| Revolving credit facilities | US\$ | June 2017 | 5 years | 2,000 | 2,000 |
| Financing lines | | | | | |
| BNDES (i) | R\$ | April 2008 | 10 years | 2,304 | 89 |
| BNDES - CLN 150 | R\$ | September 2012 | 10 years | 1,226 | 6 |
| BNDES - S11D e S11D Logística | R\$ | May 2014 | 10 years | 1,945 | 647 |

(i) Memorandum of understanding signature date, however term is considered from the signature date of each contract amendment. This credit line supported or supports the pelletizing plant VIII, Onça Puma, Salobo I and II and capital expenditure of Itabira projects.

In June 2017, the Company signed a US\$2,000 revolving credit facility, which will be available for five years, to replace the US\$2,000 line that was signed in 2013, which was cancelled. At September 30, 2017, the total available amount in revolving credit facilities remains at US\$5,000.

iii) Funding

In February 2017, the Company issued through Vale Overseas Limited guaranteed notes due August 2026 totaling US\$1,000. The notes bears 6.250% coupon per year, payable semi-annually, and were sold at a price of 107.793% of the principal amount. The notes were consolidated with, and formed a single series with, Vale Overseas' s US\$1,000 6.250% notes due 2026 issued on August, 2016. Vale applied the net proceeds from the offering on the earlier redemption of Vale' s 750 notes (due in March 2018).

In September 2017, the Company redeemed all of its 5.625% guaranteed notes due 2019 issued through Vale Overseas Limited totaling US\$1,000. Additionally, the Company entered into a Tender Offer of the outstanding 4.625% guaranteed notes due 2020 issued by its subsidiary Vale Overseas Limited. In September 2017, the total principal amount of 2020 Notes accepted for purchase pursuant to the Tender Offer was US\$501 from a total of US\$1,000.

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iv) Guarantees

As at September 30, 2017 and December 31, 2016, loans and borrowings are secured by property, plant and equipment and receivables in the amount of US\$378 and US\$472, respectively.

The securities issued through Vale's 100%-owned finance subsidiary Vale Overseas Limited are fully and unconditionally guaranteed by Vale.

v) 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 and interest coverage. The Company has not identified any instances of noncompliance as at September 30, 2017 and December 31, 2016.

vi) Hedge in foreign operations

Implementation of net investment hedge

As at January 1, 2017, Vale S.A., which the functional currency is Reals, designated its debts in US\$ and Euro, as an instrument in a hedge of its investment in foreign operations (Vale International S.A. and Vale International Holding GmbH; hedging objects) to mitigate part of the foreign exchange risk on financial statements.

At September 30, 2017 the carrying value of the designated debts are US\$6,162 and EUR750. The foreign exchange gains of US\$290 and US\$162 (US\$191 and US\$107, net of taxes), were recognized in the Cumulative translation adjustments in stockholders' equity for the three and nine month periods ended September 30, 2017, respectively. This hedge was highly effective throughout the period ended on September 30, 2017.

Accounting policy

Foreign currency differences arising on the translation of a financial liability designated as a hedge of a net investment in a foreign operation are recognized in other comprehensive income to the extent that the hedge is effective and regardless of whether the net investment is held directly or through an intermediate parent.

The hedging instrument is accounted for in the same way as a cash flow hedge, i.e. translated at the closing rate with the gain or loss on the effective hedge being recognized in equity. Gains or losses in the reserves will only be realized when the foreign operation is disposed of.

18. Liabilities related to associates and joint ventures

a) Movements of the provision

The movements of the provision to comply with the obligations under the agreement related to the dam failure of Samarco Mineração S.A. (Samarco), which is a Brazilian joint venture between Vale S.A. and BHP Billiton Brasil Ltda. (BHPB), in the three and nine-month periods ended in September 30, 2017 are as follows:

| | |
|---------------------------------|--------------|
| | 2017 |
| Balance at June 30, | 1,019 |
| Payments | (77) |
| Interests | 45 |
| Translation adjustment | 39 |
| Balance at September 30, | 1,026 |
| | 2017 |
| Balance at January 1st, | 1,077 |
| Payments | (216) |
| Interests | 136 |
| Translation adjustment | 29 |
| Balance at September 30, | 1,026 |
| Current liabilities | 301 |
| Non-current liabilities | 725 |
| Liabilities | 1,026 |

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In addition to the provision above, Vale S.A. made available in the three-month and nine-month periods ended in September 30, 2017 the amount of US\$26 (R\$78 million) and US\$117 (R\$370 million), respectively, to fund the working capital of Samarco, which was recognized in Vale's income statement as Impairment and other results in associates and joint ventures. Vale S.A. might make available until December, 2017 of up to US\$51 (R\$188 million) to Samarco to support its operations, without undertaking an obligation to Samarco. Funds for working capital requirements will be released as needed by the shareholders subject to achieving certain milestone, on the same basis.

At each reporting period, Vale S.A. will reassess the key assumptions used by Samarco in the preparation of the projected future cash flows and will adjust the provision, if required.

b) Contingencies related to Samarco accident

(i) Public civil lawsuit filed by the Federal Government and others

The federal government, the two Brazilian states affected by the failure (Espírito Santo and Minas Gerais) and other governmental authorities have initiated a public civil lawsuit against Samarco and its shareholders, Vale S.A. and BHPB, with an estimated value indicated by the plaintiffs of US\$6,3 billion (R\$20.2 billion).

On May 5, 2016, the Framework Agreement, which was signed on March 2, 2016, was ratified by the Federal Regional Court (TRF), 1st Region. In June 2016 the Superior Court of Justice (STJ) in Brazil issued an interim order, suspending the decision of TRF, which ratified the Framework Agreement until the final judgments of the claim.

On August 17, 2016, the TRF of the 1st Region rejected the appeal presented by Samarco, Vale S.A. and BHPB against the interim order, and overruled the judicial decision that ratified the Framework Agreement. This decision of the TRF of the 1st Region, among other measures, confirmed a prior injunction that prohibited the defendants from transferring or conveying any of their interest in its Brazilian iron ore concessions, without, however, limiting their production and commercial activities and ordered a deposit with the court of US\$379 (R\$1.2 billion) by January 2017. This US\$379 (R\$1.2 billion) cash deposit was provisionally replaced by the guarantees provided for under the agreements with MPF, as detailed in the item (ii) below.

(ii) Public civil lawsuit filed by Federal Prosecution Office

On May 3, 2016, the Federal Prosecution Office (MPF) filed a public civil lawsuit against Samarco and its shareholders and presented several demands, including: (i) the adoption of measures for mitigating the social, economic and environmental impacts resulting from the Fundão dam failure and other emergency measures; (ii) the payment of compensation to the community; and (iii) payments for the collective moral damage. The estimated action value indicated by the Federal Prosecution Office (MPF) is US\$49 billion (R\$155 billion). The first conciliatory hearing was held on September 13, 2016. On November 21, 2016, the court ordered that the defendants be served, and the defendants submitted their defense.

In January 2017 Samarco, Vale S.A. and BHPB entered into two preliminary agreements with the Federal Prosecutor's Office in Brazil (MPF).

The first agreement (First Agreement) aims to outline the process and timeline for negotiations of a Final Agreement (Final Agreement), initially expected to occur by June 30, 2017 and now expected to occur by October 30, 2017. This First Agreement establishes a timeline and actions to set the ground for conciliation of two public civil lawsuits which aim to establish socio-economic and socio-environmental remediation and compensation programs for the impacts of the Fundão dam failure, respectively: claim n° 023863-07.2016.4.01.3800, filed by the Federal Prosecutors, as mentioned in this item, and claim n° 0069758-61.2015.4.01.3400, filed by the Federal Government, the states of Minas Gerais and Espírito Santo and other governmental authorities, as mentioned in the item (i) above. Both claims were filed with the 12th Judicial Federal Court of Belo Horizonte and are suspended as requested by the parties.

In addition, the First Agreement provides for: (i) the appointment of experts to give support the Federal Prosecutors and paid for by the companies to conduct a diagnosis and monitor the progress of the 41 programs under the Framework Agreement signed on March 2nd, 2016 by the companies and the Federal Government and the states of Minas Gerais and Espírito Santo and other governmental authorities, and (ii) holding at least eleven public hearings, five of which are to be held in Minas Gerais, three in Espírito Santo and the remainder in the indigenous territories of the Krenak, Comboios and Caieiras Velhas, in order to allow these communities to take part in the definition of the content of the Final Agreement.

Samarco, Vale S.A. and BHPB has agreed to provide the 12th Judicial Federal Court of Belo Horizonte with a guarantee for fulfillment of the obligations regarding the financing and payment of the socio-environmental and socio-economic remediation programs resulting from the Fundão dam failure, pursuant to the two public civil actions, until the signing of the Final Agreement, amounting

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to US\$694 (R\$2.2 billion), of which (i) US\$32 (R\$100 million) in financial investments; (ii) US\$410 (R\$1.3 billion) in insurance bonds; and (iii) US\$253 (R\$800 million) in assets of Samarco. In order to implement the First Agreement, it has been requested that the 12th Judicial Federal Court of Belo Horizonte accept such guarantees until the completion of the negotiations and the signing of the Final Agreement, or until the deadline set by the parties jointly postponed to October 30, 2017, whichever comes first; or until the parties reach a new agreement regarding the guarantees. If, by October 30th, the negotiations have not been completed, the Federal Prosecutor's Office may require that the 12th Judicial Federal Court of Belo Horizonte re-institute the order for the deposit of US\$379 (R\$1.2 billion) in relation to the US\$6.4 billion (R\$20.2 billion) public civil action, which is currently suspended. The parties requested the partial ratification of the First Agreement, excluding only the engagement of the socio-economic expert condition.

On March 16, 2017, the 12th Judicial Federal Court of Belo Horizonte partially ratified the First Agreement, being that this decision includes: (i) ratification of the engagement of experts to perform a socio-environmental impact assessment and assessment of programs under the Framework Agreement signed on March 2nd, 2016 and a period for the companies to engage an expert to perform the socio-economic impact assessment; (ii) the consolidation and suspension of related claims aiming to avoid contradictory or conflicting decisions and to establish a unified judicial procedure in order for the parties to be able to reach a final agreement; (iii) accepted the guarantees proposed by Samarco and its shareholders under the Preliminary Agreement on a temporary basis. Parties are still negotiating an agreement regarding the choice of the expert to perform the socio-economic impact assessment, and, alongside, are conducting the discussions regarding the Final Agreement.

In addition, the Second Agreement (Second Agreement) was signed on January 19, 2017, which establishes a timetable to make funds available to remediate the social, economic and environmental damages caused by the Fundão dam failure in the municipalities of Barra Longa, Rio Doce, Santa Cruz do Escalvado and Ponte Nova, amounting to US\$63 (R\$200 million). The 12th Judicial Federal Court of Belo Horizonte ratified this Second Agreement.

(iii) U.S. Securities class action suits

Related to the Vale's American Depositary Receipts

On May 2, 2016, Vale S.A. and certain of its officers were named as defendants in securities class action suits in the Federal Court in New York brought by holders of Vale's American Depositary Receipts under U.S. federal securities laws. The lawsuits allege that Vale S.A. made false and misleading statements or did not make disclosures concerning the risks and dangers of the operations of Samarco's Fundão dam and the adequacy of related programs and procedures. The plaintiffs have not specified an amount of alleged damages or indemnities in these actions.

In July 2016, Vale S.A. and the individual defendants filed a motion to dismiss the Amended Complaint.

On March 23, 2017 the judge issued a decision rejecting a significant portion of the claims against Vale S.A. and the individual defendants, and 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.

At the end of April 2017, it has started the Discovery phase, the plaintiffs have presented their Initial Disclosures, requesting the presentation of several sets of documents and listing and requesting names of persons that might be aware of the facts related to the action. On May 5, 2017 Vale S.A. has presented its Initial Disclosures. The Discovery is currently ongoing with the gathering of documents to be provided to the plaintiffs.

Vale S.A. continues to contest the lawsuit and the outstanding points.

Related to the Samarco bonds

In March 2017, holders of bonds issued by Samarco, filed a class action suit in the Federal Court in New York against Samarco, Vale S.A. and BHPB under U.S. federal securities laws demanding for indemnification for alleged violation of U.S. federal securities laws. The plaintiffs allege that false and misleading statements were made or disclosures omitted concerning the risks and dangers of the operations of Samarco's Fundão dam and the adequacy of related programs and procedures.

It is alleged that with the Fundão dam collapse, the securities have dramatically decreased, in order that the investors who have purchased such securities in a misleading way should be compensated, without, however, specifying an amount for the alleged damages or indemnities in this action.

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In June 2017, Vale S.A. and the other defendants have jointly filed a Motion to Dismiss the Complaint. The Motion to Dismiss was responded by the plaintiffs and jointly replied by Vale S.A. and other defendants on August 31, 2017. A decision ruling the Motion to Dismiss is expected by Vale S.A. and other defendants.

Vale S.A. continues to contest this lawsuit.

(iv) Criminal lawsuit

On October 20, 2016, the MPF brought a criminal lawsuit in the Brazilian Federal Justice Court against Vale S.A., BHPB, Samarco, VogBr Recursos Hídricos e Geotecnia Ltda. and 22 individuals for alleged crimes against the environment, urban planning and cultural heritage, flooding, landslide, as well as for alleged crimes against the victims of the Fundão dam failure.

On November 16, 2016, the judge received the Federal Prosecutors Office criminal lawsuit and determined the summons of all defendants, granting 30 days each to file their defenses, to count from the day they receive the summon. Vale has already been served and its defense was presented in March 3, 2017.

On May 8, 2017, Vale presented its manifestation against the Federal Prosecutors Office dismemberment requests and on June 6, 2017, the Federal Prosecutors Office presented its reply to the defenses, where it requested for the action to be regularly processed.

On July 5, 2017, the judge decided to suspend the criminal lawsuit.

(v) Other lawsuits

In addition, Samarco and its shareholders were named as a defendant in several other lawsuits brought by individuals, corporations, governmental entities or public prosecutor seeking personal and property damages.

These lawsuits and petitions are at early stages, so it is not possible to determine a range of outcomes or reliable estimates of the potential exposure at this time. No contingent liability has been quantified and no provision was recognized for lawsuits related to Samarco's dam failure.

19. Financial instruments classification

| | September 30, 2017 | | | December 31, 2016 | | |
|--|---|--|---------------|---|--|---------------|
| | Loans and receivables or amortized cost | At fair value through profit or loss | Total | Loans and receivables or amortized cost | At fair value through profit or loss | Total |
| Financial assets | | | | | | |
| Current | | | | | | |
| Cash and cash equivalents | 4,719 | | 4,719 | 4,262 | | 4,262 |
| Financial investments | 5 | | 5 | 18 | | 18 |
| Derivative financial instruments | | 136 | 136 | | 274 | 274 |
| Accounts receivable | 2,712 | | 2,712 | 3,663 | | 3,663 |
| Related parties | 2,114 | | 2,114 | 71 | | 71 |
| | 9,550 | 136 | 9,686 | 8,014 | 274 | 8,288 |
| Non-current | | | | | | |
| Derivative financial instruments | | 438 | 438 | | 446 | 446 |
| Loans | 154 | | 154 | 180 | | 180 |
| Related parties | 2,670 | | 2,670 | 2 | | 2 |
| | 2,824 | 438 | 3,262 | 182 | 446 | 628 |
| Total of financial assets | 12,374 | 574 | 12,948 | 8,196 | 720 | 8,916 |
| Financial liabilities | | | | | | |
| Current | | | | | | |
| Suppliers and contractors | 4,013 | | 4,013 | 3,630 | | 3,630 |
| Derivative financial instruments | | 126 | 126 | | 414 | 414 |
| Loans and borrowings | 1,838 | | 1,838 | 1,660 | | 1,660 |
| Related parties | 508 | | 508 | 672 | | 672 |
| | 6,359 | 126 | 6,485 | 5,962 | 414 | 6,376 |
| Non-current | | | | | | |
| Derivative financial instruments | | 680 | 680 | | 1,225 | 1,225 |
| Loans and borrowings | 23,952 | | 23,952 | 27,662 | | 27,662 |
| Related parties | 983 | | 983 | 127 | | 127 |
| Participative stockholders debentures | | 1,300 | 1,300 | | 775 | 775 |
| | 24,935 | 1,980 | 26,915 | 27,789 | 2,000 | 29,789 |
| Total of financial liabilities | 31,294 | 2,106 | 33,400 | 33,751 | 2,414 | 36,165 |

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| | September 30, 2017 | | | December 31, 2016 | | |
|---------------------------------------|--------------------|------------|--------------|-------------------|------------|--------------|
| | Level 2 | Level 3 | Total | Level 2 | Level 3 | Total |
| Financial assets | | | | | | |
| Derivative financial instruments | 313 | 261 | 574 | 405 | 315 | 720 |
| Total | 313 | 261 | 574 | 405 | 315 | 720 |
| Financial liabilities | | | | | | |
| Derivative financial instruments | 549 | 257 | 806 | 1,190 | 449 | 1,639 |
| Participative stockholders debentures | 1,300 | | 1,300 | 775 | | 775 |
| Total | 1,849 | 257 | 2,106 | 1,965 | 449 | 2,414 |

For the three-month period ended in September 30, 2017, the Company recognized in the financial results, the amount of US\$(128) and US\$207 related to the measurement of the fair value and US\$17 and US\$(21) related to cumulative translation adjustment of derivative financial instruments assets and liabilities classified as level 3, respectively. For the nine-month period ended in September 30, 2017, the Company recognized in the financial results, the amount of US\$(65) and US\$204 related to the measurement of the fair value and US\$11 and US\$(12) related to cumulative translation adjustment of derivative financial instruments assets and liabilities classified as level 3, respectively.

There were no transfers between Level 1 and Level 2, or between Level 2 and Level 3 in the period ended September 30, 2017.

Methods and techniques of evaluation**i) Derivative financial instruments**

Financial instruments are evaluated by calculating their present value through the use of instrument yield curves at the closing dates. The curves and prices used in the calculation for each group of instruments are detailed in the market curves .

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The pricing method used for European options is the Black & Scholes model. In this model, the fair value of the derivative is a function of the volatility in the price of the underlying asset, the exercise price of the option, the interest rate and period to maturity. In the case of options which income is a function of the average price of the underlying asset over the period 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 assets and liability are estimated by discounting the cash flow by the interest rate of the currency in which the swap is denominated. The difference between the present value of assets and liability of the swap generates its fair value.

For the TJLP swaps, the calculation of the fair value assumes that TJLP is constant, that is the projections of future cash flow in Brazilian Reais are made on the basis of the last TJLP disclosed.

Contracts for the purchase or sale of products, inputs and costs of selling with future settlement are priced using the forward yield curves for each product. Typically, these curves are obtained on the stock exchanges where the products 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.

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

The fair values and carrying amounts of loans and borrowings (net of interest) are as follows:

| Financial liabilities | Balance | Fair value | Level 1 | Level 2 |
|---------------------------|---------|------------|---------|---------|
| September 30, 2017 | | | | |
| Debt principal | 25,201 | 26,344 | 14,906 | 11,438 |
| December 31, 2016 | | | | |
| Debt principal | 28,691 | 27,375 | 13,874 | 13,501 |

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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.

21. Derivative financial instruments

a) Derivatives effects on statement of financial position

| | September 30, 2017 | | December 31, 2016 | |
|---|--------------------|-------------|-------------------|-------------|
| | Current | Non-current | Current | Non-current |
| Assets | | | | |
| Derivatives not designated as hedge accounting | | | | |
| Foreign exchange and interest rate risk | | | | |
| CDI & TJLP vs. US\$ fixed and floating rate swap | 76 | 1 | 132 | 1 |
| IPCA swap | 9 | 84 | 7 | 61 |
| Eurobonds swap | | 14 | | |
| Pré-dolar swap | 24 | 44 | 1 | 23 |
| | 109 | 143 | 140 | 85 |
| Commodities price risk | | | | |
| Nickel | 8 | 1 | 4 | 2 |
| Bunker oil | 19 | | 130 | |
| | 27 | 1 | 134 | 2 |
| Others | | 294 | | 359 |
| | | 294 | | 359 |
| Total | 136 | 438 | 274 | 446 |

| | September 30, 2017 | | December 31, 2016 | |
|---|--------------------|-------------|-------------------|-------------|
| | Current | Non-current | Current | Non-current |
| Liabilities | | | | |
| Derivatives not designated as hedge accounting | | | | |
| Foreign exchange and interest rate risk | | | | |
| CDI & TJLP vs. US\$ fixed and floating rate swap | 115 | 368 | 293 | 638 |
| IPCA swap | | 29 | 20 | 57 |
| Eurobonds swap | 4 | | 7 | 45 |
| Euro Forward | | | 46 | |
| Pré-dolar swap | 5 | 23 | 5 | 32 |
| | 124 | 420 | 371 | 772 |
| Commodities price risk | | | | |

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| | | | | |
|---------------|------------|------------|------------|--------------|
| Nickel | 2 | | 5 | 2 |
| Bunker oil | | | 38 | |
| | 2 | | 43 | 2 |
| Others | | 260 | | 451 |
| | | 260 | | 451 |
| Total | 126 | 680 | 414 | 1,225 |

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

| | Gain (loss) recognized in the income statement | | Three-month period ended September 30, Financial settlement inflows (outflows) | | Gain (loss) recognized in other comprehensive income | |
|---|---|-------------|--|--------------|---|------|
| | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| Derivatives not designated as hedge accounting | | | | | | |
| Foreign exchange and interest rate risk | | | | | | |
| CDI & TJLP vs. US\$ fixed and floating rate swap | 186 | (57) | (97) | 4 | | |
| IPCA swap | 48 | 1 | (20) | (26) | | |
| Eurobonds swap | 21 | 9 | | | | |
| Euro forward | | 5 | | | | |
| Pré-dolar swap | 40 | (7) | | | | |
| | 295 | (49) | (117) | (22) | | |
| Commodities price risk | | | | | | |
| Nickel | 10 | (3) | 4 | (3) | | |
| Bunker oil | (6) | (7) | | (166) | | |
| | 4 | (10) | 4 | (169) | | |
| Others | 66 | 20 | | | | |
| Total | 365 | (39) | (113) | (191) | | |

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| | Gain (loss) recognized in the income statement | | Nine-month period ended September 30, Financial settlement inflows (outflows) | | Gain (loss) recognized in other comprehensive income | |
|---|---|--------------|---|----------------|---|----------|
| | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| Derivatives not designated as hedge accounting | | | | | | |
| Foreign exchange and interest rate risk | | | | | | |
| CDI & TJLP vs. US\$ fixed and floating rate swap | 273 | 781 | (138) | (88) | | |
| IPCA swap | 54 | 74 | (20) | (25) | | |
| Eurobonds swap | 23 | 3 | (39) | (142) | | |
| Euro forward | 46 | (7) | | | | |
| Pré-dolar swap | 50 | 69 | (1) | (74) | | |
| | 446 | 920 | (198) | (329) | | |
| Commodities price risk | | | | | | |
| Nickel | 6 | (40) | (2) | (29) | | |
| Bunker oil | (96) | 127 | (23) | (642) | | |
| | (90) | 87 | (25) | (671) | | |
| Others | 127 | 156 | | | | |
| Derivatives designated as cash flow hedge accounting | | | | | | |
| Bunker oil | | | | (51) | | |
| Foreign exchange | | (3) | | (3) | | 2 |
| | | (3) | | (54) | | 2 |
| Total | 483 | 1,160 | (223) | (1,054) | | 2 |

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

| | Last maturity dates |
|-------------------------------|---------------------|
| Currencies and interest rates | January 2024 |
| Bunker oil | December 2017 |
| Nickel | August 2019 |
| Others | December 2027 |

Additional information about derivatives financial instruments

In millions of United States dollars, except as otherwise stated

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.

There was no cash amount deposited as margin call regarding derivative positions on September 30, 2017. The derivative positions described in this document did not have initial costs associated.

The following tables detail the derivatives positions for Vale and its controlled companies as of September 30, 2017, 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

In order to reduce cash flow volatility, swap transactions were implemented to convert into US\$ the cash flows from certain debt instruments 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 debt instruments.

The swap transactions were negotiated over-the-counter and the protected items are the cash flows from debt instruments 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.

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| Flow | Notional | | Index | Average rate | Fair value | | Financial Settlement | Value at Risk | Fair value by year | | |
|--|--------------------|-------------------|---------|--------------|--------------------|-------------------|---------------------------------------|--------------------|--------------------|------|-------|
| | September 30, 2017 | December 31, 2016 | | | September 30, 2017 | December 31, 2016 | Inflows (Outflows) September 30, 2017 | September 30, 2017 | 2017 | 2018 | 2019+ |
| CDI vs. US\$ fixed rate swap | | | | | | | | | | | |
| | | | | | 2 | (121) | 44 | 21 | 3 | 35 | (36) |
| Receivable | R\$ 4,295 | R\$ 6,289 | CDI | 107.87% | | | | | | | |
| Payable | US\$ 1,367 | US\$ 2,105 | Fix | 3.82% | | | | | | | |
| TJLP vs. US\$ fixed rate swap | | | | | | | | | | | |
| | | | | | (357) | (622) | (180) | 45 | (7) | (72) | (278) |
| Receivable | R\$ 3,140 | R\$ 4,360 | TJLP + | 1.25% | | | | | | | |
| Payable | US\$ 1,398 | US\$ 2,030 | Fix | 1.56% | | | | | | | |
| TJLP vs. US\$ floating rate swap | | | | | | | | | | | |
| | | | | | (51) | (55) | (2) | 4 | (1) | (4) | (46) |
| Receivable | R\$ 227 | R\$ 242 | TJLP + | 0.88% | | | | | | | |
| Payable | US\$ 130 | US\$ 140 | Libor + | -1.22% | | | | | | | |
| R\$ fixed rate vs. US\$ fixed rate swap | | | | | | | | | | | |
| | | | | | 40 | (13) | (1) | 30 | (0) | 19 | 21 |
| Receivable | R\$ 1,178 | R\$ 1,031 | Fix | 7.98% | | | | | | | |
| Payable | US\$ 394 | US\$ 343 | Fix | -0.28% | | | | | | | |
| IPCA vs. US\$ fixed rate swap | | | | | | | | | | | |
| | | | | | (22) | (51) | (0) | 9 | | 7.8 | (30) |
| Receivable | R\$ 1,000 | R\$ 1,000 | IPCA + | 6.55% | | | | | | | |
| Payable | US\$ 434 | US\$ 434 | Fix | 3.98% | | | | | | | |
| IPCA vs. CDI swap | | | | | | | | | | | |
| | | | | | 86 | 42 | (20) | 0 | | 2 | 84 |
| Receivable | R\$ 1,350 | R\$ 1,350 | IPCA + | 6.62% | | | | | | | |
| Payable | R\$ 1,350 | R\$ 1,350 | CDI | 98.58% | | | | | | | |

(ii) Protection program for EUR denominated debt instruments

In order to reduce the cash flow volatility, swap and forward 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\$. In those forwards only the principal amount of the debt is converted from EUR to US\$.

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The swap and forward 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 | Value at Risk | Fair value by year | | |
|--|--------------------|-------------------|-------|--------------|--------------------|-------------------|---------------------------------------|--------------------|--------------------|------|-------|
| | September 30, 2017 | December 31, 2016 | Index | | September 30, 2017 | December 31, 2016 | Inflows (Outflows) September 30, 2017 | September 30, 2017 | 2017 | 2018 | 2019+ |
| EUR fixed rate vs. US\$ fixed rate swap | | | | | | | | | | | |
| | | | | | | | | | | | |
| Receivable | 500 | 500 | Fix | 3.75% | 10 | (52) | (7) | 6 | (4) | 15 | |
| Payable | US\$ 613 | US\$ 613 | Fix | 4.29% | | | | | | | |

| Flow | Notional | | | Average rate (USD/EUR) | Fair value | | Financial Settlement | Value at Risk | Fair value |
|----------|--------------------|-------------------|---------------|------------------------|--------------------|-------------------|---------------------------------------|--------------------|--------------|
| | September 30, 2017 | December 31, 2016 | Bought / Sold | | September 30, 2017 | December 31, 2016 | Inflows (Outflows) September 30, 2017 | September 30, 2017 | by year 2017 |
| Forwards | 0 | 500 | B | 1.143 | | | (46) | (32) | |

b) Commodities derivative positions

(i) Bunker Oil purchase cash flows protection program

In order to reduce the impact of bunker oil price fluctuation on maritime freight hiring/supply and, consequently, reducing the company's cash flow volatility, bunker oil derivatives were implemented, through zero cost-collars.

The derivative transactions were negotiated over-the-counter and the protected item is part of the Vale's costs linked to bunker oil prices. The financial settlement inflows/outflows are offset by the protected items' losses/gains due to bunker oil prices changes.

| Flow | Notional (ton) | | | Bought / Sold | Average strike (US\$/ton) | Fair value | | Financial settlement | Value at Risk | Fair value |
|------------------------------|--------------------|-------------------|---|---------------|---------------------------|--------------------|-------------------|---------------------------------------|--------------------|--------------|
| | September 30, 2017 | December 31, 2016 | | | | September 30, 2017 | December 31, 2016 | Inflows (Outflows) September 30, 2017 | September 30, 2017 | by year 2017 |
| Bunker Oil protection | | | | | | | | | | |
| Call options | 1,249,998 | 2,856,000 | B | 327 | 19 | 130 | 2 | 7 | 20 | |
| Put options | 1,249,998 | 2,856,000 | S | 220 | (0) | (14) | | 0 | (0) | |
| Total | | | | | 18 | 116 | 2 | 7 | 19 | |

As at December 31, 2016, excludes US\$24, of transactions in which the financial settlement occurs subsequently of the closing month.

Table of Contents**(ii) Protection programs for base metals raw materials and products**

In the operational protection program for nickel sales at fixed prices, derivatives transactions were implemented to convert into floating prices the contracts with clients that required a fixed price, in order to keep nickel revenues exposed to nickel price fluctuations. Those operations are usually implemented through the purchase of nickel forwards.

In the operational protection program for the purchase of raw materials and products, derivatives transactions were implemented, usually through the sale of nickel and copper forward or futures, in order to reduce the mismatch between the pricing period of purchases (concentrate, cathode, sinter, scrap and others) and the pricing period of the final product sales to the clients.

The derivative transactions are negotiated at London Metal Exchange or over-the-counter and the protected item is part of Vale's revenues and costs linked to nickel and copper prices. The financial settlement inflows/outflows are offset by the protected items' losses/gains due to nickel and copper prices changes.

| Flow | Notional (ton) | | Bought / Sold | Average strike (US\$/ton) | Fair value | | Financial settlement Inflows (Outflows) September 30, 2017 | Value at Risk September 30, 2017 | Fair value by year | |
|---|--------------------------|-------------------------|---------------------|---------------------------------|--------------------------|-------------------------|---|--|-----------------------|----------|
| | September 30, 2017 | December 31, 2016 | | | September 30, 2017 | December 31, 2016 | | | 2017 | 2018 |
| Fixed price sales protection | | | | | | | | | | |
| Nickel forwards | 9,832 | 11,615 | B | 9,665 | (0) | (1) | (2) | 3 | (0) | |
| Raw material purchase protection | | | | | | | | | | |
| Nickel forwards | 171 | 134 | S | 10,224 | 9 | 0 | 0 | 0 | 2 | 7 |
| Copper forwards | 57 | 441 | S | 6,461 | (0) | (0) | (0) | 0 | (0) | |
| Total | | | | | 9 | (0) | 0 | 0 | 2 | 7 |

c) Silver Wheaton Corp. warrants

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The company owns warrants of Silver Wheaton Corp. (SLW), a Canadian company with stocks negotiated in Toronto Stock Exchange and New York Stock Exchange. Such warrants configure American call options 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.

| Flow | Notional (quantity) | | Bought / Sold | Average strike (US\$/share) | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk September 30, 2017 | Fair value by year 2023 |
|--------------|---------------------|-------------------|---------------|-----------------------------|--------------------|-------------------|---|----------------------------------|-------------------------|
| | September 30, 2017 | December 31, 2016 | | | September 30, 2017 | December 31, 2016 | | | |
| Call options | 10,000,000 | 10,000,000 | B | 44 | 33 | 44 | | 3 | 33 |

d) **Debentures convertible into shares of Valor da Logística Integrada (VLI)**

The company has debentures in which lenders have the option to convert the outstanding debt into a specified quantity of shares of VLI owned by the company.

| Flow | Notional (quantity) | | Bought / Sold | Average strike (R\$/share) | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk September 30, 2017 | Fair value by year 2027 |
|--------------------|---------------------|-------------------|---------------|----------------------------|--------------------|-------------------|---|----------------------------------|-------------------------|
| | September 30, 2017 | December 31, 2016 | | | September 30, 2017 | December 31, 2016 | | | |
| Conversion options | 140,239 | 140,239 | S | 8,489 | (67) | (72) | | 5 | (66) |

e) **Options related to Minerações Brasileiras Reunidas S.A. (MBR) shares**

The Company entered into a stock sale and purchase agreement that has options related to MBR shares. Under certain restrict and contingent conditions, which are beyond the buyer's control, such as illegality due to changes in the law, the contract has a clause that gives the buyer the right to sell back its stake to the Company. In this case, the Company could settle through cash or shares. On the other hand, the Company has the right to buy back this non-controlling interest in the subsidiary.

| Flow | Notional (quantity, in millions) | | Bought / Sold | Average strike (R\$/share) | Fair value | | Financial settlement Inflows (Outflows) | Value at Risk September 30, 2017 | Fair value by year 2017+ |
|---------|----------------------------------|-------------------|---------------|----------------------------|--------------------|-------------------|---|----------------------------------|--------------------------|
| | September 30, 2017 | December 31, 2016 | | | September 30, 2017 | December 31, 2016 | | | |
| Options | 2,139 | 2,139 | B/S | 1.8 | 229 | 121 | | 14 | 229 |

Table of Contentsf) **Embedded derivatives in contracts**

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) September 30, 2017 | Value at Risk September 30, 2017 | Fair value by year 2017 |
|-----------------|--------------------|-------------------|---------------|---------------------------|--------------------|-------------------|--|----------------------------------|-------------------------|
| | September 30, 2017 | December 31, 2016 | | | September 30, 2017 | December 31, 2016 | | | |
| Nickel forwards | 4,623 | 5,626 | S | 10,905 | (2) | 0 | | 2 | (2) |
| Copper forwards | 2,583 | 3,684 | S | 6,440 | (0) | 2 | | 0 | (0) |
| Total | | | | | (2) | 2 | | 2 | (2) |

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) September 30, 2017 | Value at Risk September 30, 2017 | Fair value by year | |
|--------------|-------------------------|-------------------|---------------|---------------------------|--------------------|-------------------|--|----------------------------------|--------------------|-------|
| | September 30, 2017 | December 31, 2016 | | | September 30, 2017 | December 31, 2016 | | | 2017 | 2018+ |
| Call options | 746,667 | 746,667 | S | 233 | (3) | (2) | | 2 | (0) | (3) |

In August 2014 the Company sold part of its stake in Valor da Logística Integrada (VLI) to an investment fund managed by Brookfield Asset Management (Brookfield). The sales contract includes a clause that establishes, under certain conditions, a minimum return guarantee on Brookfield's investment. This clause is considered an embedded derivative, with payoff equivalent to that of a put option.

| Flow | Notional (quantity) | | Bought / Sold | Average strike (R\$/share) | Fair value | | Financial settlement Inflows (Outflows) September 30, 2017 | Value at Risk September 30, 2017 | Fair value by year 2027 |
|------|---------------------|-------------------|---------------|----------------------------|--------------------|-------------------|--|----------------------------------|-------------------------|
| | September 30, 2017 | December 31, 2016 | | | September 30, 2017 | December 31, 2016 | | | |
| | | | | | | | | | |

| | | | | | | | | |
|------------|---------------|---------------|---|------|-------|-------|----|-------|
| Put option | 1,105,070,863 | 1,105,070,863 | S | 3.07 | (158) | (182) | 17 | (158) |
|------------|---------------|---------------|---|------|-------|-------|----|-------|

For sensitivity analysis of derivative financial instruments, Financial counterparties ratings and market curves, see note 28.

22. Provisions

| | Current liabilities | | Non-current liabilities | |
|--|---------------------|-------------------|-------------------------|-------------------|
| | September 30, 2017 | December 31, 2016 | September 30, 2017 | December 31, 2016 |
| Payroll, related charges and other remunerations | 928 | 725 | | |
| Onerous contracts | 55 | 101 | 420 | 473 |
| Environment Restoration | 93 | 10 | 95 | 111 |
| Asset retirement obligations | 40 | 47 | 2,672 | 2,472 |
| Provisions for litigation (note 23(a)) | | | 1,461 | 839 |
| Employee postretirement obligations (note 24) | 81 | 69 | 2,229 | 1,853 |
| Provisions | 1,197 | 952 | 6,877 | 5,748 |

Table of Contents**23. Litigation****a) Provision for litigation**

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 litigation are as follows:

| | | | | | |
|--|------------|-----------|------------|-----------|------------|
| Balance at December 31, 2016 | 214 | 84 | 534 | 7 | 839 |
| Reversals | (17) | (32) | (90) | (1) | (140) |
| Merger of Valepar (note 4) (i) | 631 | | | | 631 |
| Translation adjustment | 19 | 3 | 16 | | 38 |
| Balance at December 31, 2015 | 269 | 79 | 454 | 20 | 822 |
| Reversals | (40) | (50) | (83) | (8) | (181) |
| Indexation and interest | 27 | 16 | 22 | (1) | 64 |
| Additions and reversals of discontinued operations | | | 9 | | 9 |

(i) refers to litigations of PIS/COFINS of interest on capital.

b) Contingent liabilities

Contingent liabilities of administrative and judicial claims, with expectation of loss classified as possible, and for which the recognition of a provision is not considered necessary by the Company, based on legal advice are as follows:

| | September 30, 2017 | December 31, 2016 |
|--------------------------|--------------------|-------------------|
| Tax litigation (i) | 10,392 | 7,636 |
| Civil litigation | 1,697 | 1,502 |
| Labor litigation | 2,055 | 2,418 |
| Environmental litigation | 2,244 | 1,871 |
| Total | 16,388 | 13,427 |

(i) US\$193 from merger of Valepar S.A.

i - Tax litigation - Our most significant tax-related contingent liabilities result from disputes related to (i) the deductibility of our payments of social security contributions on the net income (CSLL) from our taxable income, (ii) challenges of certain tax credits we deducted from our PIS and COFINS payments, (iii) assessments of CFEM (royalties), and (iv) charges of value-added tax on services and circulation of goods (ICMS), especially relating to certain tax credits we claimed from the sale and transmission of energy, ICMS charges to anticipate the payment in the entrance of goods to Pará State, ICMS charges on our own transportation costs and challenges to other tax credits we claimed. The changes reported in the period resulted, mainly, from new proceedings related to PIS, COFINS, ICMS, CFEM; as well as the inclusion of Valepar S.A. proceedings and the application interest and inflation adjustments to the disputed amounts.

ii - Civil litigation - Most of those claims have been filed by suppliers for indemnification under construction contracts, primarily relating to certain alleged damages, payments and contractual penalties. A number of other claims related to contractual disputes regarding inflation index.

iii - Labor litigation - Represents individual claims by employees and service providers, primarily involving demands for additional compensation for overtime work, time spent commuting or health and safety conditions; and the Brazilian federal social security administration (INSS) regarding contributions on compensation programs based on profits.

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iv - Environmental litigation - The most significant claims concern alleged procedural deficiencies in licensing processes, non-compliance with existing environmental licenses or damage to the environment.

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.

| | September 30, 2017 | December 31, 2016 |
|--------------------------|--------------------|-------------------|
| Tax litigation (i) | 1,237 | 193 |
| Civil litigation | 41 | 62 |
| Labor litigation | 714 | 691 |
| Environmental litigation | 13 | 16 |
| Total | 2,005 | 962 |

(i) Includes US\$951 related to the merger of Valepar (note 4).

d) Others

For contingencies related to Samarco Mineração S.A., see note 18.

24. Employee postretirement obligations

Reconciliation of net liabilities recognized in the statement of financial position

| | 2017 | | 2016 | |
|-----------------------------|------------------------------|----------------|-----------------------------|------------------------------|
| Overfunded pension plans | Underfunded pension plans | Other benefits | Overfunded pension plans | Underfunded pension plans |
| | | | | Other benefits |

| Movements of assets ceiling | |
|--|--------------|
| Balance at June 30, | 1,447 |
| Interest income | 38 |
| Changes on asset ceiling and onerous liability | (135) |
| Translation adjustment | 64 |
| Balance at September 30, | 1,414 |

Amount recognized in the statement of financial position

| | | | | | | |
|--|---------|--------------|----------------|---------|--------------|----------------|
| Present value of actuarial liabilities | (3,451) | (4,580) | (1,491) | (3,069) | (4,300) | (1,382) |
| Fair value of assets | 4,865 | 3,761 | | 4,937 | 3,497 | |
| Effect of the asset ceiling | (1,414) | | | (1,868) | | |
| Liabilities | | (819) | (1,491) | | (803) | (1,382) |
| Current liabilities | | (19) | (62) | | (20) | (52) |
| Non-current liabilities | | (800) | (1,429) | | (783) | (1,330) |
| Liabilities | | (819) | (1,491) | | (803) | (1,382) |

| | Overfunded pension plans | 2017 Underfunded pension plans | Other benefits | Overfunded pension plans | 2016 Underfunded pension plans | Other benefits |
|--|--------------------------|--------------------------------|----------------|--------------------------|--------------------------------|----------------|
| Movements of assets ceiling | | | | | | |
| Balance at January 1st, | 1,351 | | | 961 | | |
| Interest income | 115 | | | 115 | | |
| Changes on asset ceiling and onerous liability | (86) | | | 530 | | |
| Translation adjustment | 34 | | | 262 | | |
| Balance at September 30, | 1,414 | | | 1,868 | | |

Amount recognized in the statement of financial position

| | | | | | | |
|--|---------|--------------|----------------|---------|--------------|----------------|
| Present value of actuarial liabilities | (3,451) | (4,580) | (1,491) | (3,069) | (4,300) | (1,382) |
| Fair value of assets | 4,865 | 3,761 | | 4,937 | 3,497 | |
| Effect of the asset ceiling | (1,414) | | | (1,868) | | |
| Liabilities | | (819) | (1,491) | | (803) | (1,382) |
| Current liabilities | | (19) | (62) | | (20) | (52) |
| Non-current liabilities | | (800) | (1,429) | | (783) | (1,330) |
| Liabilities | | (819) | (1,491) | | (803) | (1,382) |

Table of Contents**25. Stockholders equity****a) Share capital**

As mentioned in note 4, at September 30, 2017, the share capital was US\$61,614 corresponding to 5,304,684,600 shares issued and fully paid without par value.

| Stockholders | September 30, 2017 | | | December 31, 2016 | | |
|--|----------------------|--------------------|----------------------|----------------------|----------------------|-----------------------|
| | ON | PNA | Total | ON | PNA | Total |
| Litel/Litela | 1,108,483,410 | | 1,108,483,410 | | | |
| BNDESPar | 438,127,230 | | 438,127,230 | 206,378,882 | 66,185,272 | 272,564,154 |
| Bradespar | 332,965,266 | | 332,965,266 | | | |
| Mitsui&co | 286,347,055 | | 286,347,055 | | | |
| Valepar S.A. | | | | 1,716,435,045 | 20,340,000 | 1,736,775,045 |
| Brazilian Government (Golden Share) | | 12 | 12 | | 12 | 12 |
| Foreign investors - ADRs | 1,256,447,940 | 43,682,854 | 1,300,130,794 | 786,067,634 | 610,880,671 | 1,396,948,305 |
| FMP - FGTS | 64,540,376 | | 64,540,376 | 70,662,746 | | 70,662,746 |
| PIBB - Fund | 1,804,258 | | 1,804,258 | 741,730 | 1,171,101 | 1,912,831 |
| Foreign institutional investors in local market | 943,976,894 | 178,500,682 | 1,122,477,576 | 262,868,264 | 825,753,408 | 1,088,621,672 |
| Institutional investors | 206,456,577 | 24,298,897 | 230,755,474 | 104,510,549 | 133,496,260 | 238,006,809 |
| Retail investors in Brazil | 271,363,206 | 60,657,651 | 332,020,857 | 37,988,150 | 309,895,202 | 347,883,352 |
| Shares outstanding | 4,910,512,212 | 307,140,096 | 5,217,652,308 | 3,185,653,000 | 1,967,721,926 | 5,153,374,926 |
| Shares in treasury | 87,032,292 | | 87,032,292 | 31,535,402 | 59,405,792 | 90,941,194 |
| Total issued shares | 4,997,544,504 | 307,140,096 | 5,304,684,600 | 3,217,188,402 | 2,027,127,718 | 5,244,316,120 |
| Share capital - Amounts per class of shares (in millions) | 58,116 | 3,498 | 61,614 | 38,525 | 23,089 | 61,614 |
| Total authorized shares | 7,000,000,000 | | 7,000,000,000 | 3,600,000,000 | 7,200,000,000 | 10,800,000,000 |

PNA - Preferred shares

ON - Common shares

26. Related parties

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Transactions with related parties are made by the Company at arm's-length, observing the price and usual market conditions and therefore do not generate any undue benefit to their counterparties or loss to the Company. The definition of related party is based on applicable accounting standards and our internal policies, which may be more restrictive than applicable laws and regulations under certain circumstances.

In the normal course of operations, Vale enters into contracts with related parties (associates, joint ventures and stockholders), related to the sale and purchase of products and services, loans, derivatives, leasing of assets, sale of raw material and railway transportation services.

The balances of these related party transactions and their effects on the interim financial statements are as follows.

| | September 30, 2017 | | | Assets | | | | |
|--|---------------------------|----------------------------------|---------------------|-----------------|---------------------------|----------------------------------|---------------------|-----------------|
| | Cash and cash equivalents | Derivative financial instruments | Accounts receivable | Related parties | Cash and cash equivalents | Derivative financial instruments | Accounts receivable | Related parties |
| Previous Valepar shareholders | 800 | 283 | 2 | | 579 | 358 | 4 | |
| Companhia Coreano-Brasileira de Pelotização | | | | 19 | | | | 5 |
| Companhia Hispano-Brasileira de Pelotização | | | | | | | 1 | |
| Companhia Ítalo-Brasileira de Pelotização | | | | | | | | 8 |
| Companhia Nipo-Brasileira de Pelotização | | | | 15 | | | | 15 |
| Companhia Siderúrgica do Pecém | | | 55 | | | | 37 | |
| Consórcio de Rebocadores da Baía de São Marcos | | | 8 | | | | 10 | |
| MRS Logística S.A. | | | | 40 | | | | 24 |
| Nacala BV (i) | | | | 4,662 | | | | |
| VLI | | | 7 | 8 | | | 9 | 12 |
| Others | | | 69 | 40 | | | 46 | 9 |
| Total | 800 | 283 | 141 | 4,784 | 579 | 358 | 107 | 73 |

(i) Refers to the balances after the sale of Nacala Corridor business (note 13).

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| | Liabilities | | | | | | | |
|---|--|-----------------------|--------------------|-------------------------|--|-----------------------|--------------------|-------------------------|
| | September 30, 2017 | | | December 31, 2016 | | | | |
| | Derivative financial instruments | Others liabilities | Related parties | Loans and borrowings | Derivative financial instruments | Others liabilities | Related parties | Loans and borrowings |
| Aliança Geração de Energia S.A. | | 31 | | | | 16 | 38 | |
| Previous Valepar shareholders | 133 | 39 | 17 | 6,504 | 367 | 17 | | 7,420 |
| Companhia Coreano-Brasileira de Pelotização | | 114 | 31 | | | 3 | 59 | |
| Companhia Hispano-Brasileira de Pelotização | | 80 | 47 | | | 39 | 14 | |
| Companhia Ítalo-Brasileira de Pelotização | | 75 | 53 | | | | 99 | |
| Companhia Nipo-Brasileira de Pelotização | | 205 | 70 | | | 3 | 146 | |
| Ferrovia Centro-Atlântica S.A. | | 1 | 86 | | | | 83 | |
| MRS Logística S.A. | | 18 | | | | 25 | | |
| Nacala BV (i) | | 210 | | | | | | |
| Pangea Emirates Ltd Mitsui (i) | | | 1,149 | | | | | |
| Sumic Nickel Netherland B.V | | | | | | | 353 | |
| VLI | | 3 | 37 | | | 3 | | |
| Others | | 89 | 1 | | | 38 | 7 | |
| Total | 133 | 865 | 1,491 | 6,504 | 367 | 144 | 799 | 7,420 |

(i) Refers to the balances after the sale of Nacala Corridor business (note 13).

| | Three-month period ended September 30, | | | | | |
|---|--|-------------------------------|---------------------|--------------------------|-------------------------------|---------------------|
| | Net operating revenue | 2017 Costs and expenses | Financial result | Net operating revenue | 2016 Costs and expenses | Financial result |
| Aliança Geração de Energia S.A. | 7 | (39) | | | (32) | |
| Previous Valepar shareholders | 31 | | (130) | 41 | | (677) |
| Baovale Mineração S.A. | | (4) | | | (4) | |
| Companhia Coreano-Brasileira de Pelotização | | (37) | (1) | | (6) | (5) |
| Companhia Hispano-Brasileira de Pelotização | | (29) | | | (12) | (3) |
| Companhia Ítalo-Brasileira de Pelotização | | (28) | (1) | | (13) | (6) |
| Companhia Nipo-Brasileira de Pelotização | | (72) | (2) | | (27) | (9) |
| Companhia Siderúrgica do Pecém | 118 | (14) | | 59 | | |
| Ferrovia Centro-Atlântica S.A. | 11 | (7) | (1) | 11 | (9) | (1) |
| Ferrovia Norte Sul S.A. | 6 | | | 3 | | |

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| | | | | | | |
|--------------------------------|------------|--------------|--------------|------------|--------------|--------------|
| MRS Logística S.A. | | (142) | | | (133) | |
| Nacala BV (i) | | (187) | 67 | | | |
| Pangea Emirates Ltd Mitsui (i) | | | (16) | | | |
| Samarco Mineração S.A. | | | (11) | 9 | | |
| VLI | 61 | | 1 | 65 | (7) | |
| Others | 6 | | (6) | 2 | (9) | 3 |
| Total | 240 | (559) | (100) | 190 | (252) | (698) |

Nine-month period ended September 30,

| | Net operating revenue | 2017 Costs and expenses | Financial result | Net operating revenue | 2016 Costs and expenses | Financial result |
|---|-----------------------|-------------------------|------------------|-----------------------|-------------------------|------------------|
| Aliança Geração de Energia S.A. | 18 | (101) | | | (94) | |
| Previous Valepar shareholders | 96 | | (443) | 103 | | (796) |
| Baovale Mineração S.A. | | (12) | | | (12) | |
| California Steel Industries, Inc. | 36 | | | | | |
| Companhia Coreano-Brasileira de Pelotização | | (111) | (4) | | (42) | (5) |
| Companhia Hispano-Brasileira de Pelotização | | (88) | (3) | | (31) | (3) |
| Companhia Ítalo-Brasileira de Pelotização | | (82) | (6) | | (35) | (6) |
| Companhia Nipo-Brasileira de Pelotização | | (200) | (9) | | (80) | (9) |
| Companhia Siderúrgica do Atlântico | | | | | (6) | |
| Companhia Siderúrgica do Pecém | 246 | (102) | | 91 | | |
| Ferrovia Centro-Atlântica S.A. | 31 | (22) | (1) | 30 | (22) | (2) |
| Ferrovia Norte Sul S.A. | 18 | | | 14 | | |
| MRS Logística S.A. | | (401) | | | (335) | |
| Nacala BV (i) | | (281) | 134 | | | |
| Pangea Emirates Ltd Mitsui (i) | | | (64) | | | |
| Samarco Mineração S.A. | 14 | | 1 | 9 | | |
| VLI | 192 | | 1 | 192 | (11) | |
| Others | 19 | (2) | (15) | 12 | (24) | 1 |
| Total | 670 | (1,402) | (409) | 451 | (692) | (820) |

(i) Does not include exchange rate variation.

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27. Commitments

a) Participative stockholders debentures

At October 2, 2017 (subsequently event), the Company has paid the semiannual remuneration to its stockholders debentures amounting to R\$226 million (US\$72).

b) Guarantees provided

As of September 30, 2017, corporate guarantees provided by Vale (within the limit of its direct or indirect interest) for the companies Norte Energia S.A. and Companhia Siderúrgica do Pecém S.A. totaled US\$390 and US\$1,505, respectively and on December 31, 2016 totaled US\$361 and US\$1,450, respectively.

28. Additional information about derivatives financial instruments

a) 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:

- *Scenario I*: fair value calculation considering market prices as of September 30, 2017
- *Scenario II*: fair value estimated considering a 25% deterioration in the associated risk variables
- *Scenario III*: fair value estimated considering a 50% deterioration in the associated risk variables

Sensitivity analysis for Derivatives Instruments (all amounts in US\$ million)

| Instrument | Instrument's main risk events | Scenario I | Scenario II | Scenario III |
|---|---|------------|-------------|--------------|
| CDI vs. US\$ fixed rate swap | R\$ depreciation | 2 | (345) | (693) |
| | US\$ interest rate inside Brazil decrease | 2 | (10) | (22) |
| | Brazilian interest rate increase | 2 | (1) | (4) |
| Protected item: R\$ denominated debt | R\$ depreciation | n.a. | | |
| TJLP vs. US\$ fixed rate swap | R\$ depreciation | (357) | (700) | (1,042) |
| | US\$ interest rate inside Brazil decrease | (357) | (372) | (387) |
| | Brazilian interest rate increase | (357) | (385) | (412) |
| | TJLP interest rate decrease | (357) | (383) | (409) |
| Protected item: R\$ denominated debt | R\$ depreciation | n.a. | | |
| TJLP vs. US\$ floating rate swap | R\$ depreciation | (51) | (82) | (114) |
| | US\$ interest rate inside Brazil decrease | (51) | (53) | (54) |
| | Brazilian interest rate increase | (51) | (53) | (55) |
| | TJLP interest rate decrease | (51) | (53) | (55) |
| Protected item: R\$ denominated debt | R\$ depreciation | n.a. | | |
| R\$ fixed rate vs. US\$ fixed rate swap | R\$ depreciation | 40 | (42) | (124) |
| | US\$ interest rate inside Brazil decrease | 40 | 28 | 15 |
| | Brazilian interest rate increase | 40 | 12 | (13) |
| Protected item: R\$ denominated debt | R\$ depreciation | n.a. | | |
| IPCA vs. US\$ fixed rate swap | R\$ depreciation | (21) | (137) | (252) |
| | US\$ interest rate inside Brazil decrease | (21) | (27) | (32) |
| | Brazilian interest rate increase | (21) | (39) | (56) |
| | IPCA index decrease | (21) | (32) | (42) |
| Protected item: R\$ denominated debt | R\$ depreciation | n.a. | | |
| IPCA vs. CDI swap | Brazilian interest rate increase | 86 | 52 | 21 |
| | IPCA index decrease | 86 | 67 | 49 |
| Protected item: R\$ denominated debt linked to IPCA | IPCA index decrease | n.a. | (67) | (49) |
| EUR fixed rate vs. US\$ fixed rate swap | EUR depreciation | 10 | (168) | (346) |
| | Euribor increase | 10 | 2 | (6) |
| | US\$ Libor decrease | 10 | (7) | (24) |
| Protected item: EUR denominated debt | EUR depreciation | n.a. | 168 | 346 |

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| Instrument | Instrument's main risk events | Scenario I | Scenario II | Scenario III |
|---|-------------------------------|------------|-------------|--------------|
| Bunker Oil protection | | | | |
| Forwards and options | Bunker Oil price decrease | 18 | (2) | (68) |
| Protected item: Part of costs linked to bunker oil prices | Bunker Oil price decrease | n.a. | 2 | 68 |
| Nickel sales fixed price protection | | | | |
| Forwards | Nickel price decrease | (0) | (26) | (52) |
| Protected item: Part of nickel revenues with fixed prices | Nickel price fluctuation | n.a. | 26 | 52 |
| Purchase protection program | | | | |
| Nickel forwards | Nickel price increase | 9 | 8 | 8 |
| Protected item: Part of costs linked to nickel prices | Nickel price increase | n.a. | (8) | (8) |
| Copper forwards | Copper price increase | (0.0) | (0.1) | (0.2) |
| Protected item: Part of costs linked to copper prices | Copper price increase | n.a. | 0.1 | 0.2 |
| WPM warrants | WPM stock price decrease | 33 | 17 | 5 |
| Conversion options - VLI | VLI stock value increase | (67) | (103) | (147) |
| Options - MBR | MBR stock value decrease | 230 | 136 | 36 |

| Instrument | Main risks | Scenario I | Scenario II | Scenario III |
|--|--------------------------|------------|-------------|--------------|
| Embedded derivatives - Raw material purchase (nickel) | Nickel price increase | (2) | (15) | (27) |
| Embedded derivatives - Raw material purchase (copper) | Copper price increase | (0) | (5) | (9) |
| Embedded derivatives - Gas purchase | Pellet price increase | (3) | (6) | (10) |
| Embedded derivatives - Guaranteed minimum return (VLI) | VLI stock value decrease | (158) | (314) | (528) |

b) Financial counterparties ratings

The transactions of derivative instruments, cash and cash equivalents as well as 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.

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The table below presents the ratings in foreign currency published by agencies Moody's and S&P regarding the main financial institutions that we had outstanding positions as of September 30, 2017.

| Long term ratings by counterparty | Moody's | S&P |
|---------------------------------------|---------|------|
| ANZ Australia and New Zealand Banking | Aa3 | AA- |
| Banco ABC | Ba3 | BB |
| Banco Bradesco | Ba3 | BB |
| Banco do Brasil | Ba3 | BB |
| Banco de Credito del Peru | Baa1 | BBB |
| Banco do Nordeste | Ba3 | BB |
| Banco Safra | Ba3 | BB |
| Banco Santander | A3 | A- |
| Banco Votorantim | Ba3 | BB |
| Bank of America | Baa1 | BBB+ |
| Bank of China | A1 | A |
| Bank of Mandiri | Baa3 | BB+ |
| Bank of Nova Scotia | A1 | A+ |
| Bank Rakyat | Baa3 | BB+ |
| Bank of Tokyo Mitsubishi UFJ | A1 | A |
| Banpará | | BB- |
| Barclays | Baa2 | BBB |
| BBVA | A3 | BBB+ |
| BNP Paribas | A2 | A |
| BTG Pactual | Ba3 | BB- |
| Caixa Economica Federal | Ba3 | BB |
| Canadian Imperial Bank | A1 | A+ |
| China Construction Bank | A1 | A |
| Citigroup | Baa1 | BBB+ |
| Credit Agricole | A1 | A |
| Credit Suisse | Baa2 | BBB+ |
| Deutsche Bank | A3 | A- |
| Goldman Sachs | A3 | BBB+ |
| HSBC | A2 | A |
| Intesa Sanpaolo Spa | A3 | BBB- |
| Itaú Unibanco | Ba3 | BB |
| JP Morgan Chase & Co | A3 | A- |
| Macquarie Group Ltd | A3 | BBB |
| Mizuho Financial | A1 | A- |
| Morgan Stanley | A3 | BBB+ |
| National Australia Bank NAB | Aa3 | AA- |
| National Bank of Oman | Baa3 | - |
| Rabobank | Aa2 | A+ |
| Royal Bank of Canada | A1 | AA- |
| Societe Generale | A2 | A |
| Standard Bank Group | Ba1 | - |
| Standard Chartered | A2 | BBB+ |
| Sumitomo Mitsui Financial | A1 | A- |
| UBS | A1 | A- |
| Unicredit | Baa1 | BBB- |

Table of Contents**c) Market curves**

The curves used on the pricing of derivatives instruments were developed based on data from B3 S.A., Central Bank of Brazil, London Metals Exchange and Bloomberg.

(i) Products**CURVAS INGLES****Nickel**

| Maturity | Price (US\$/ton) | Maturity | Price (US\$/ton) | Maturity | Price (US\$/ton) |
|-----------------|-------------------------|-----------------|-------------------------|-----------------|-------------------------|
| SPOT | 10,585 | MAR18 | 10,573 | SEP18 | 10,704 |
| OCT17 | 10,445 | APR18 | 10,599 | SEP19 | 10,939 |
| NOV17 | 10,473 | MAY18 | 10,625 | SEP20 | 11,135 |
| DEC17 | 10,500 | JUN18 | 10,646 | SEP21 | 11,306 |
| JAN18 | 10,527 | JUL18 | 10,667 | | |
| FEB18 | 10,548 | AUG18 | 10,686 | | |

Copper

| Maturity | Price (US\$/lb) | Maturity | Price (US\$/lb) | Maturity | Price (US\$/lb) |
|-----------------|------------------------|-----------------|------------------------|-----------------|------------------------|
| SPOT | 2.96 | MAR18 | 2.96 | SEP18 | 2.97 |
| OCT17 | 2.93 | APR18 | 2.96 | SEP19 | 2.99 |
| NOV17 | 2.94 | MAY18 | 2.96 | SEP20 | 3.00 |
| DEC17 | 2.94 | JUN18 | 2.97 | SEP21 | 2.99 |
| JAN18 | 2.95 | JUL18 | 2.97 | | |
| FEB18 | 2.95 | AUG18 | 2.97 | | |

Bunker Oil

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| Maturity | Price (US\$/ton) | Maturity | Price (US\$/ton) | Maturity | Price (US\$/ton) |
|-----------------|-------------------------|-----------------|-------------------------|-----------------|-------------------------|
| SPOT | 336 | MAR18 | 320 | SEP18 | 315 |
| OCT17 | 332 | APR18 | 319 | SEP19 | 308 |
| NOV17 | 328 | MAY18 | 318 | SEP20 | 293 |
| DEC17 | 325 | JUN18 | 317 | SEP21 | 281 |
| JAN18 | 323 | JUL18 | 316 | | |
| FEB18 | 321 | AUG18 | 316 | | |

Table of Contents**(ii) Foreign exchange and interest rates****US\$-Brazil Interest Rate**

| Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) |
|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| 11/01/17 | 2.59 | 09/03/18 | 2.33 | 01/04/21 | 3.17 |
| 12/01/17 | 2.36 | 10/01/18 | 2.38 | 04/01/21 | 3.26 |
| 01/02/18 | 2.28 | 01/02/19 | 2.52 | 07/01/21 | 3.34 |
| 02/01/18 | 2.26 | 04/01/19 | 2.63 | 10/01/21 | 3.38 |
| 03/01/18 | 2.25 | 07/01/19 | 2.71 | 01/03/22 | 3.42 |
| 04/02/18 | 2.24 | 10/01/19 | 2.76 | 04/01/22 | 3.51 |
| 05/02/18 | 2.26 | 01/02/20 | 2.85 | 07/01/22 | 3.59 |
| 06/01/18 | 2.30 | 04/01/20 | 2.93 | 01/02/23 | 3.64 |
| 07/02/18 | 2.31 | 07/01/20 | 3.03 | 07/03/23 | 3.76 |
| 08/01/18 | 2.34 | 10/01/20 | 3.09 | 01/02/24 | 3.88 |

US\$ Interest Rate

| Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) |
|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| 1M | 1.23 | 6M | 1.49 | 11M | 1.56 |
| 2M | 1.27 | 7M | 1.51 | 12M | 1.56 |
| 3M | 1.33 | 8M | 1.52 | 2Y | 1.76 |
| 4M | 1.41 | 9M | 1.54 | 3Y | 1.91 |
| 5M | 1.46 | 10M | 1.55 | 4Y | 2.01 |

TJLP

| Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) |
|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| 11/01/17 | 7.00 | 09/03/18 | 7.00 | 01/04/21 | 7.00 |
| 12/01/17 | 7.00 | 10/01/18 | 7.00 | 04/01/21 | 7.00 |
| 01/02/18 | 7.00 | 01/02/19 | 7.00 | 07/01/21 | 7.00 |
| 02/01/18 | 7.00 | 04/01/19 | 7.00 | 10/01/21 | 7.00 |
| 03/01/18 | 7.00 | 07/01/19 | 7.00 | 01/03/22 | 7.00 |
| 04/02/18 | 7.00 | 10/01/19 | 7.00 | 04/01/22 | 7.00 |
| 05/02/18 | 7.00 | 01/02/20 | 7.00 | 07/01/22 | 7.00 |
| 06/01/18 | 7.00 | 04/01/20 | 7.00 | 01/02/23 | 7.00 |
| 07/02/18 | 7.00 | 07/01/20 | 7.00 | 07/03/23 | 7.00 |
| 08/01/18 | 7.00 | 10/01/20 | 7.00 | 01/02/24 | 7.00 |

BRL Interest Rate

| Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) |
|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| 11/01/17 | 8.01 | 09/03/18 | 7.11 | 01/04/21 | 8.78 |
| 12/01/17 | 7.73 | 10/01/18 | 7.13 | 04/01/21 | 8.90 |
| 01/02/18 | 7.51 | 01/02/19 | 7.26 | 07/01/21 | 9.05 |
| 02/01/18 | 7.37 | 04/01/19 | 7.44 | 10/01/21 | 9.17 |
| 03/01/18 | 7.28 | 07/01/19 | 7.65 | 01/03/22 | 9.22 |
| 04/02/18 | 7.18 | 10/01/19 | 7.90 | 04/01/22 | 9.29 |
| 05/02/18 | 7.13 | 01/02/20 | 8.09 | 07/01/22 | 9.36 |
| 06/01/18 | 7.09 | 04/01/20 | 8.28 | 01/02/23 | 9.47 |
| 07/02/18 | 7.09 | 07/01/20 | 8.46 | 07/03/23 | 9.54 |
| 08/01/18 | 7.08 | 10/01/20 | 8.65 | 01/02/24 | 9.64 |

Table of Contents**Implicit Inflation (IPCA)**

| Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) |
|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| 11/01/17 | 4.91 | 09/03/18 | 4.03 | 01/04/21 | 4.61 |
| 12/01/17 | 4.63 | 10/01/18 | 4.05 | 04/01/21 | 4.63 |
| 01/02/18 | 4.42 | 01/02/19 | 4.14 | 07/01/21 | 4.68 |
| 02/01/18 | 4.28 | 04/01/19 | 4.30 | 10/01/21 | 4.72 |
| 03/01/18 | 4.19 | 07/01/19 | 4.35 | 01/03/22 | 4.70 |
| 04/02/18 | 4.10 | 10/01/19 | 4.45 | 04/01/22 | 4.70 |
| 05/02/18 | 4.04 | 01/02/20 | 4.46 | 07/01/22 | 4.71 |
| 06/01/18 | 4.01 | 04/01/20 | 4.51 | 01/02/23 | 4.73 |
| 07/02/18 | 4.01 | 07/01/20 | 4.54 | 07/03/23 | 4.72 |
| 08/01/18 | 4.00 | 10/01/20 | 4.60 | 01/02/24 | 4.75 |

EUR Interest Rate

| Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) |
|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| 1M | -0.40 | 6M | -0.30 | 11M | -0.26 |
| 2M | -0.39 | 7M | -0.28 | 12M | -0.25 |
| 3M | -0.38 | 8M | -0.27 | 2Y | -0.17 |
| 4M | -0.34 | 9M | -0.27 | 3Y | -0.04 |
| 5M | -0.31 | 10M | -0.26 | 4Y | 0.10 |

CAD Interest Rate

| Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) |
|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| 1M | 1.31 | 6M | 1.63 | 11M | 0.92 |
| 2M | 1.36 | 7M | 1.40 | 12M | 0.86 |
| 3M | 1.42 | 8M | 1.24 | 2Y | 1.91 |
| 4M | 1.53 | 9M | 1.11 | 3Y | 2.03 |
| 5M | 1.59 | 10M | 1.01 | 4Y | 2.13 |

Currencies - Ending rates

| | | | | | |
|----------|--------|----------|--------|----------|--------|
| CAD/US\$ | 0.7994 | US\$/BRL | 3.1680 | EUR/US\$ | 1.1784 |
|----------|--------|----------|--------|----------|--------|

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Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

| | | |
|------------------------|-----|--|
| | | Vale S.A. (Registrant) |
| Date: October 26, 2017 | By: | /s/ Andre Figueiredo Andre Figueiredo Director of Investor Relations |
