

Vale S.A.  
Form 6-K  
July 28, 2016  
Table of Contents

**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**

**June, 2016**

**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.

Edgar Filing: Vale S.A. - Form 6-K

(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- .

---

Table of Contents

**Interim Financial Statements**

**June 30, 2016**

IFRS in US\$

Table of Contents

**Vale S.A. Interim Financial Statements**

**Contents**

|  | <b>Page</b> |
|--|-------------|
| <u>Report of independent registered public accounting firm</u>                                       | 3           |
| <u>Condensed Consolidated Income Statement</u>   | 4           |
| <u>Condensed Consolidated Statement of Comprehensive Income</u>                                      | 5           |
| <u>Condensed Consolidated Cash Flow Statement</u>  | 6           |
| <u>Condensed Consolidated Balance Sheet</u>  | 7           |
| <u>Condensed Consolidated Statement of Changes in Equity</u>   | 8           |
| <u>Selected Notes to the Interim Financial Statements</u>  | 9           |
| <u>1. Corporate information</u>  | 9           |
| <u>2. Basis for preparation of the interim financial statements</u>                                  | 9           |
| <u>3. Information by business segment</u>  | 10          |
| <u>4. Relevant Event</u>   | 15          |
| <u>5. Assets held for sale</u>   | 17          |
| <u>6. Acquisitions and divestitures</u>  | 17          |
| <u>7. Cash and cash equivalents</u>  | 18          |
| <u>8. Accounts receivable</u>  | 18          |
| <u>9. Inventories</u>  | 18          |
| <u>10. Investments in associates and joint ventures</u>  | 19          |
| <u>11. Intangibles</u>   | 19          |
| <u>12. Property, plant and equipment</u>   | 20          |
| <u>13. Loans and borrowings</u>  | 22          |
| <u>14. Litigation</u>  | 24          |
| <u>15. Income taxes</u>  | 26          |
| <u>16. Employee postretirement obligations</u>   | 27          |
| <u>17. Financial instruments classification</u>  | 27          |
| <u>18. Fair value estimate</u>   | 28          |
| <u>19. Derivative financial instruments</u>  | 28          |
| <u>20. Stockholders' equity</u>  | 38          |
| <u>21. Costs and expenses by nature</u>  | 39          |
| <u>22. Financial results</u>   | 40          |
| <u>23. Commitments</u>   | 40          |
| <u>24. Related parties</u>   | 41          |
| <u>Members of the Board of Directors, Fiscal Council, Advisory Committees and Executive Officers</u> | 43          |

Table of Contents

**KPMG Auditores Independentes**  
Av. Almirante Barroso, 52 - 4º  
20031-000 - Rio de Janeiro, RJ - Brasil  
Caixa Postal 2888  
20001-970 - Rio de Janeiro, RJ - Brasil

Central Tel 55 (21) 3515-9400  
Fax 55 (21) 3515-9000  
Internet [www.kpmg.com.br](http://www.kpmg.com.br)

**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 its subsidiaries as of June 30, 2016 and the related condensed consolidated statements of income, comprehensive income and cash flows for the three and six months periods ended June 30, 2016 and 2015 and the condensed consolidated statements of changes in equity for the six-month periods ended on June 30, 2016 and 2015. 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 its subsidiaries as of December 31, 2015 and the related consolidated statements of income, comprehensive income, stockholders equity and cash flows for the year then ended, and in our report dated February 24, 2016, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in th accompanying condensed consolidated balance sheet as of December 31, 2015, 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

July 26, 2016

KPMG Auditores Independentes, uma sociedade simples brasileira e firma-membro da rede KPMG de firmas-membro independentes e afiliadas à KPMG International Cooperative ( KPMG International ), uma entidade suíça.

*KPMG Auditores Independentes, a Brazilian entity and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ( KPMG International ), a Swiss entity.*

Table of Contents**Condensed Consolidated Income Statement**

In millions of United States dollars, except as otherwise stated

|  | Notes   | Three-months period ended June 30 |              | Six-months period ended June 30 |                |
|--|---------|-----------------------------------|--------------|---------------------------------|----------------|
|  |         | 2016                              | 2015         | 2016                            | 2015           |
| Net operating revenue  | 3(c)    | 6,626                             | 6,965        | 12,345                          | 13,205         |
| Cost of goods sold and services rendered                       | 21(a)   | (4,795)                           | (5,186)      | (9,044)                         | (10,354)       |
| <b>Gross profit</b>  |         | <b>1,831</b>                      | <b>1,779</b> | <b>3,301</b>                    | <b>2,851</b>   |
| <b>Operating (expenses) income</b>                             |         |                                   |              |                                 |                |
| Selling and administrative expenses                            | 21(b)   | (140)                             | (159)        | (259)                           | (354)          |
| Research and evaluation expenses                               |         | (78)                              | (118)        | (138)                           | (237)          |
| Pre operating and operational stoppage                         |         | (114)                             | (259)        | (216)                           | (523)          |
| Other operating income (expenses), net                         | 21(c)   | (160)                             | (203)        | (195)                           | (157)          |
|  |         | <b>(492)</b>                      | <b>(739)</b> | <b>(808)</b>                    | <b>(1,271)</b> |
| Results on measurement or sale of non-current assets           | 5 and 6 | (66)                              | (55)         | (66)                            | 138            |
| <b>Operating income</b>  |         | <b>1,273</b>                      | <b>985</b>   | <b>2,427</b>                    | <b>1,718</b>   |
| Financial income   | 22      | 3,923                             | 1,471        | 7,206                           | 3,819          |
| Financial expenses   | 22      | (1,832)                           | (939)        | (3,690)                         | (7,797)        |
| Equity results in associates and joint ventures                | 10      | 190                               | 218          | 346                             | (53)           |
| Others results in associates and joint ventures                | 4 and 6 | (1,113)                           | 79           | (1,113)                         | 97             |
| <b>Net income (loss) before income taxes</b>                   |         | <b>2,441</b>                      | <b>1,814</b> | <b>5,176</b>                    | <b>(2,216)</b> |
| <b>Income taxes</b>  |         |                                   |              |                                 |                |
|  | 15      |                                   |              |                                 |                |
| Current tax  |         | (413)                             | (67)         | (758)                           | (137)          |
| Deferred tax   |         | (907)                             | (118)        | (1,517)                         | 812            |
|  |         | <b>(1,320)</b>                    | <b>(185)</b> | <b>(2,275)</b>                  | <b>675</b>     |
| <b>Net income (loss)</b>                                       |         | <b>1,121</b>                      | <b>1,629</b> | <b>2,901</b>                    | <b>(1,541)</b> |
| Income (loss) attributable to noncontrolling interests         |         | 15                                | (46)         | 19                              | (98)           |
| <b>Net income (loss) attributable to Vale's stockholders</b>   |         | <b>1,106</b>                      | <b>1,675</b> | <b>2,882</b>                    | <b>(1,443)</b> |
| <b>Earnings per share attributable to Vale's stockholders:</b> |         |                                   |              |                                 |                |
| <b>Basic and diluted earnings per share:</b>                   |         |                                   |              |                                 |                |
|  | 20(b)   |                                   |              |                                 |                |
| Preferred share (US\$)   |         | 0.21                              | 0.33         | 0.56                            | (0.28)         |
| Common share (US\$)  |         | 0.21                              | 0.33         | 0.56                            | (0.28)         |

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

See report of independent registered public accounting firm.





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

In millions of United States dollars

|   | Three-months period ended June 30 |              | Six-months period ended June 30 |                |
|---|-----------------------------------|--------------|---------------------------------|----------------|
|   | 2016                              | 2015         | 2016                            | 2015           |
| <b>Net income (loss)</b>  | <b>1,121</b>                      | <b>1,629</b> | <b>2,901</b>                    | <b>(1,541)</b> |
| <b>Other comprehensive income (loss):</b>   |                                   |              |                                 |                |
| <b>Items that will not be reclassified subsequently to the income statement</b>       |                                   |              |                                 |                |
| <b>Cumulative translation adjustments</b>   | <b>3,861</b>                      | <b>1,591</b> | <b>7,107</b>                    | <b>(7,903)</b> |
| <b>Retirement benefit obligations</b>   |                                   |              |                                 |                |
| Gross balance for the period  | (183)                             | 94           | (268)                           | (7)            |
| Effect of taxes   | 55                                | (27)         | 82                              | 23             |
|   | <b>(128)</b>                      | <b>67</b>    | <b>(186)</b>                    | <b>16</b>      |
| <b>Total items that will not be reclassified subsequently to the income statement</b> | <b>3,733</b>                      | <b>1,658</b> | <b>6,921</b>                    | <b>(7,887)</b> |
| <b>Items that may be reclassified subsequently to the income statement</b>            |                                   |              |                                 |                |
| <b>Cumulative translation adjustments</b>   |                                   |              |                                 |                |
| Gross balance for the period  | (2,077)                           | (880)        | (3,678)                         | 3,713          |
| Effect of taxes   | 7                                 |              | (141)                           |                |
| Transfer of realized results to net income, net of taxes                              | (75)                              |              | (75)                            |                |
|   | <b>(2,145)</b>                    | <b>(880)</b> | <b>(3,894)</b>                  | <b>3,713</b>   |
| <b>Cash flow hedge</b>  |                                   |              |                                 |                |
| Gross balance for the period  |                                   | 281          | 6                               | 541            |
| Effect of taxes   |                                   | (3)          | (1)                             | (3)            |
| Equity results in associates and joint ventures                                       | 5                                 |              | 5                               | (2)            |
| Transfer of realized results to net income, net of taxes                              |                                   | (98)         | (3)                             | (243)          |
|   | <b>5</b>                          | <b>180</b>   | <b>7</b>                        | <b>293</b>     |
| <b>Total of items that may be reclassified subsequently to the income statement</b>   | <b>(2,140)</b>                    | <b>(700)</b> | <b>(3,887)</b>                  | <b>4,006</b>   |
| <b>Total comprehensive income (loss)</b>  | <b>2,714</b>                      | <b>2,587</b> | <b>5,935</b>                    | <b>(5,422)</b> |
| Comprehensive income (loss) attributable to noncontrolling interests                  | 85                                | (48)         | 153                             | (104)          |
| <b>Comprehensive income (loss) attributable to Vale's stockholders</b>                | <b>2,629</b>                      | <b>2,635</b> | <b>5,782</b>                    | <b>(5,318)</b> |

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

See report of independent registered public accounting firm.



Table of Contents**Condensed Consolidated Cash Flow Statement**

In millions of United States dollars

|   | Three-months period ended June 30 |                | Six-months period ended June 30 |                |
|---|-----------------------------------|----------------|---------------------------------|----------------|
|   | 2016                              | 2015           | 2016                            | 2015           |
| <b>Cash flow from operating activities:</b>                                   |                                   |                |                                 |                |
| Net income (loss) before income taxes   | 2,441                             | 1,814          | 5,176                           | (2,216)        |
| <b>Adjustments for:</b>   |                                   |                |                                 |                |
| Equity results from associates and joint ventures                             | (190)                             | (218)          | (346)                           | 53             |
| Results on measurement or sale of non-current assets                          | 66                                | 55             | 66                              | (138)          |
| Others results in associates and joint ventures                               | 1,113                             | (79)           | 1,113                           | (97)           |
| Results on disposal of property, plant and equipment and intangibles          | 30                                | (15)           | 39                              | (230)          |
| Depreciation, amortization and depletion                                      | 927                               | 988            | 1,777                           | 2,023          |
| Financial results, net  | (2,091)                           | (532)          | (3,516)                         | 3,978          |
| <b>Changes in assets and liabilities:</b>                                     |                                   |                |                                 |                |
| Accounts receivable   | 108                               | (474)          | (908)                           | 343            |
| Inventories   | 78                                | (89)           | 16                              | 100            |
| Suppliers and contractors   | 364                               | 214            | (19)                            | (173)          |
| Payroll and related charges   | 45                                | (10)           | 45                              | (577)          |
| Other taxes assets and liabilities, net                                       | (4)                               | (379)          | (51)                            | (206)          |
| Deferred revenue - Gold stream  |                                   |                |                                 | 532            |
| Other assets and liabilities, net   | 228                               | 305            | 419                             | 236            |
| <b>Cash provided from operations</b>  | <b>3,115</b>                      | <b>1,580</b>   | <b>3,811</b>                    | <b>3,628</b>   |
| Interest on loans and borrowings paid   | (362)                             | (305)          | (822)                           | (776)          |
| Derivatives received (paid), net (note 19)                                    | (353)                             | (102)          | (863)                           | (759)          |
| Interest on participative stockholders debentures paid                        | (37)                              |                | (37)                            | (39)           |
| Income taxes  | (113)                             | (74)           | (259)                           | (318)          |
| Income taxes - Settlement program   | (100)                             | (103)          | (188)                           | (209)          |
| <b>Net cash provided by operating activities</b>                              | <b>2,150</b>                      | <b>996</b>     | <b>1,642</b>                    | <b>1,527</b>   |
| <b>Cash flow from investing activities:</b>                                   |                                   |                |                                 |                |
| Financial investments redeemed (invested)                                     | (112)                             | 107            | (23)                            | 252            |
| Loans and advances granted  |                                   | (13)           | (3)                             | (18)           |
| Guarantees and deposits granted   | (14)                              | (22)           | (52)                            | (48)           |
| Additions to investments  | (136)                             | (36)           | (226)                           | (46)           |
| Acquisition of subsidiary, net of cash acquired                               |                                   |                | 5                               | (90)           |
| Additions to property, plant and equipment and intangible (note 3(b))         | (1,232)                           | (2,111)        | (2,598)                         | (4,311)        |
| Dividends and interest on capital received from associates and joint ventures | 117                               | 185            | 118                             | 212            |
| Proceeds from disposal of assets and investments                              | 12                                | 454            | 24                              | 561            |
| Proceeds from gold stream transaction   |                                   |                |                                 | 368            |
| <b>Net cash used in investing activities</b>                                  | <b>(1,365)</b>                    | <b>(1,436)</b> | <b>(2,755)</b>                  | <b>(3,120)</b> |
| <b>Cash flow from financing activities:</b>                                   |                                   |                |                                 |                |
| <b>Loans and borrowings (i)</b>   |                                   |                |                                 |                |

Edgar Filing: Vale S.A. - Form 6-K

|  |              |              |              |              |
|--|--------------|--------------|--------------|--------------|
| Additions  | 1,433        | 1,542        | 4,633        | 2,884        |
| Repayments   | (1,808)      | (585)        | (2,966)      | (886)        |
| <b>Transactions with stockholders:</b>   |              |              |              |              |
| Dividends and interest on capital paid to Vale s stockholders                      |              | (1,000)      |              | (1,000)      |
| Dividends and interest on capital paid to noncontrolling interest                  | (71)         | (9)          | (75)         | (12)         |
| Transactions with noncontrolling stockholders                                      |              | (40)         | (17)         | (40)         |
| <b>Net cash provided by (used in) financing activities</b>                         | <b>(446)</b> | <b>(92)</b>  | <b>1,575</b> | <b>946</b>   |
| <b>Increase (decrease) in cash and cash equivalents</b>                            |              |              |              |              |
| Cash and cash equivalents in the beginning of the period                           | 3,782        | 3,684        | 3,591        | 3,974        |
| Effect of exchange rate changes on cash and cash equivalents                       | 47           | 6            | 115          | (169)        |
| <b>Cash and cash equivalents at end of the period</b>                              | <b>4,168</b> | <b>3,158</b> | <b>4,168</b> | <b>3,158</b> |
| <b>Non-cash transactions:</b>  |              |              |              |              |
| Additions to property, plant and equipment - capitalized loans and borrowing costs | 213          | 177          | 390          | 373          |

(i) Includes transactions with related parties: Bradesco, Banco do Brasil and Banco Nacional do Desenvolvimento Econômico e Social - BNDES.

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

See report of independent registered public accounting firm.

Table of Contents**Condensed Consolidated Balance Sheet**

In millions of United States dollars

|  | Notes | June 30, 2016  | December 31, 2015 |
|--|-------|----------------|-------------------|
| <b>Assets</b>                                |       |                |                   |
| <b>Current assets</b>                        |       |                |                   |
| Cash and cash equivalents                    | 7     | 4,168          | 3,591             |
| Financial investments                        |       | 138            | 28                |
| Derivative financial instruments             | 19    | 136            | 121               |
| Accounts receivable                          | 8     | 2,452          | 1,476             |
| Inventories                                  | 9     | 3,866          | 3,528             |
| Recoverable income taxes                     |       | 299            | 900               |
| Recoverable taxes                            |       | 1,781          | 1,404             |
| Related parties                              | 24    | 68             | 70                |
| Others                                       |       | 708            | 311               |
|  |       | <b>13,616</b>  | <b>11,429</b>     |
| Assets held for sale                         | 5     | 4,658          | 4,044             |
|  |       | <b>18,274</b>  | <b>15,473</b>     |
| <b>Non-current assets</b>                    |       |                |                   |
| Derivative financial instruments             | 19    | 497            | 93                |
| Loans  |       | 179            | 188               |
| Recoverable income taxes                     |       | 513            | 471               |
| Recoverable taxes                            |       | 619            | 501               |
| Deferred income taxes                        | 15(a) | 7,289          | 7,904             |
| Judicial deposits                            | 14(c) | 1,090          | 882               |
| Related parties                              | 24    | 3              | 1                 |
| Others                                       |       | 671            | 613               |
|  |       | <b>10,861</b>  | <b>10,653</b>     |
| Investments in associates and joint ventures | 10    | 3,963          | 2,940             |
| Intangibles                                  | 11    | 6,913          | 5,324             |
| Property, plant and equipment                | 12    | 60,959         | 54,102            |
|  |       | <b>82,696</b>  | <b>73,019</b>     |
| <b>Total assets</b>                          |       | <b>100,970</b> | <b>88,492</b>     |
| <b>Liabilities</b>                           |       |                |                   |
| <b>Current liabilities</b>                   |       |                |                   |
| Suppliers and contractors                    |       | 3,891          | 3,365             |
| Payroll and related charges                  |       | 493            | 375               |
| Derivative financial instruments             | 19    | 1,010          | 2,076             |
| Loans and borrowings                         | 13    | 3,153          | 2,506             |
| Related parties                              | 24    | 600            | 475               |
| Income taxes - Settlement program            | 15(c) | 442            | 345               |
| Taxes payable                                |       | 262            | 250               |
| Provision for income taxes                   |       | 120            | 241               |
| Employee postretirement obligations          | 16    | 77             | 68                |
| Asset retirement obligations                 |       | 81             | 89                |

Edgar Filing: Vale S.A. - Form 6-K

|  |       |                |               |
|--|-------|----------------|---------------|
| Liabilities related to associates and joint ventures |       | 289            |               |
| Others   |       | 1,048          | 648           |
|  |       | <b>11,466</b>  | <b>10,438</b> |
| Liabilities associated with assets held for sale     | 5     | 80             | 107           |
|  |       | <b>11,546</b>  | <b>10,545</b> |
| <b>Non-current liabilities</b>                       |       |                |               |
| Derivative financial instruments                     | 19    | 1,201          | 1,429         |
| Loans and borrowings                                 | 13    | 28,661         | 26,347        |
| Related parties                                      | 24    | 144            | 213           |
| Employee postretirement obligations                  | 16    | 2,150          | 1,750         |
| Provisions for litigation                            | 14(a) | 924            | 822           |
| Income taxes - Settlement program                    | 15(c) | 5,013          | 4,085         |
| Deferred income taxes                                | 15(a) | 1,739          | 1,670         |
| Asset retirement obligations                         |       | 2,759          | 2,385         |
| Participative stockholders' debentures               |       | 617            | 342           |
| Deferred revenue - Gold stream                       |       | 1,666          | 1,749         |
| Liabilities related to associates and joint ventures |       | 874            |               |
| Others   |       | 2,193          | 1,451         |
|  |       | <b>47,941</b>  | <b>42,243</b> |
| <b>Total liabilities</b>                             |       | <b>59,487</b>  | <b>52,788</b> |
| <b>Stockholders' equity</b>                          |       |                |               |
| Equity attributable to Vale's stockholders           | 20    | 39,371         | 33,589        |
| Equity attributable to noncontrolling interests      |       | 2,112          | 2,115         |
| <b>Total stockholders' equity</b>                    |       | <b>41,483</b>  | <b>35,704</b> |
| <b>Total liabilities and stockholders' equity</b>    |       | <b>100,970</b> | <b>88,492</b> |

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

See report of independent registered public accounting firm.

Table of Contents**Condensed Consolidated Statement of Changes in Equity**

In millions of United States dollars

|  | Share capital | Results on conversion of shares | 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 | Equity attributable to noncontrolling interests | Total stockholder equity |
|--|---------------|---------------------------------|---|-----------------|-----------------|-------------------------------------|------------------------------------|--------------------------|--|---|--------------------------|
| <b>Balance at December 31, 2015</b>                | <b>61,614</b> | <b>(152)</b>                    | <b>(702)</b>  | <b>985</b>      | <b>(1,477)</b>  | <b>(992)</b>                        | <b>(25,687)</b>                    |                          | <b>33,589</b>                              | <b>2,115</b>                                    | <b>35,704</b>            |
| <b>Net income</b>                                  |               |                                 |   |                 |                 |                                     |                                    | <b>2,882</b>             | <b>2,882</b>                               | <b>19</b>                                       | <b>2,901</b>             |
| <b>Other comprehensive income:</b>                 |               |                                 |   |                 |                 |                                     |                                    |                          |  |   |                          |
| Retirement benefit obligations                     |               |                                 |   |                 |                 | (186)                               |                                    |                          | (186)                                      |   | (186)                    |
| Cash flow hedge                                    |               |                                 |   |                 |                 | 7                                   |                                    |                          | 7  |   | 7                        |
| Translation adjustments                            |               |                                 |   | 213             |                 | (97)                                | 2,762                              | 201                      | 3,079                                      | 134   | 3,213                    |
| <b>Transactions with stockholders:</b>             |               |                                 |   |                 |                 |                                     |                                    |                          |  |   |                          |
| Dividends of noncontrolling interest               |               |                                 |   |                 |                 |                                     |                                    |                          |  | (172)   | (172)                    |
| Capitalization of noncontrolling interest advances |               |                                 |   |                 |                 |                                     |                                    |                          |  | 16  | 16                       |
| <b>Balance at June 30, 2016</b>                    | <b>61,614</b> | <b>(152)</b>                    | <b>(702)</b>  | <b>1,198</b>    | <b>(1,477)</b>  | <b>(1,268)</b>                      | <b>(22,925)</b>                    | <b>3,083</b>             | <b>39,371</b>                              | <b>2,112</b>                                    | <b>41,483</b>            |
|  | Share capital | Results on conversion of shares | Results from operation with noncontrolling interest | Profit reserves | Treasury stocks | Unrealized fair value gain (losses) | Cumulative translation adjustments | Retained earnings (loss) | Equity attributable to Vale's stockholders | Equity attributable to noncontrolling interests | Total stockholder equity |
| <b>Balance at December 31, 2014</b>                | <b>61,614</b> | <b>(152)</b>                    | <b>(449)</b>  | <b>19,985</b>   | <b>(1,477)</b>  | <b>(1,713)</b>                      | <b>(22,686)</b>                    |                          | <b>55,122</b>                              | <b>1,199</b>                                    | <b>56,321</b>            |
| <b>Loss</b>  |               |                                 |   |                 |                 |                                     |                                    | <b>(1,443)</b>           | <b>(1,443)</b>                             | <b>(98)</b>                                     | <b>(1,541)</b>           |
| <b>Other comprehensive income:</b>                 |               |                                 |   |                 |                 |                                     |                                    |                          |  |   |                          |
| Retirement benefit obligations                     |               |                                 |   |                 |                 | 16                                  |                                    |                          | 16   |   | 16                       |

Edgar Filing: Vale S.A. - Form 6-K

|   |               |              |              |               |                |                |                 |                |               |              |               |
|---|---------------|--------------|--------------|---------------|----------------|----------------|-----------------|----------------|---------------|--------------|---------------|
| Cash flow hedge   |               |              |              | 293           |                |                |                 |                | 293           |              | 293           |
| Translation adjustments   |               | (2,875)      |              | 88            | (1,424)        | 27             |                 | (4,184)        | (6)           |              | (4,190)       |
| <b>Transactions with stockholders:</b>                                |               |              |              |               |                |                |                 |                |               |              |               |
| Dividends and interest on capital of Vale's stockholders              |               | (1,000)      |              |               |                |                |                 | (1,000)        |               |              | (1,000)       |
| Dividends of noncontrolling interest                                  |               |              |              |               |                |                |                 |                | (5)           |              | (5)           |
| Acquisitions and disposal of participation of noncontrolling interest |               | (4)          |              |               |                |                |                 | (4)            | (35)          |              | (39)          |
| Capitalization of noncontrolling interest advances                    |               |              |              |               |                |                |                 |                | 16            |              | 16            |
| <b>Balance at June 30, 2015</b>                                       | <b>61,614</b> | <b>(152)</b> | <b>(453)</b> | <b>16,110</b> | <b>(1,477)</b> | <b>(1,316)</b> | <b>(24,110)</b> | <b>(1,416)</b> | <b>48,800</b> | <b>1,071</b> | <b>49,871</b> |

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

See report of independent registered public accounting firm.



Table of Contents

**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 at 700, Avenida das Américas, Rio de Janeiro, Brazil with securities traded on the stock exchanges of São Paulo - BM&F BOVESPA (Vale3 and Vale5), New York - NYSE (VALE and VALE.P) and Paris - NYSE Euronext (Vale3 and Vale5).

Vale and its direct and indirect subsidiaries ( Vale , Group or Company ) are 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 Group also produces copper, metallurgical and thermal coal, potash, phosphates and other fertilizer nutrients, 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 Group, and have been prepared in accordance with IAS 34 Interim Financial Reporting of the International Financial Reporting Standards ( IFRS ) as adopted 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 income statement or available-for-sale financial instruments measured at fair value through the statement of comprehensive income; and (ii) impairment of assets.

## Edgar Filing: Vale S.A. - Form 6-K

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, 2015. 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, 2015.

The interim financial statements of the Group and its associates and joint ventures are measured using the currency of the primary economic environment in which each entity operates ( functional currency ). In the case of the Parent Company the functional currency 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 financial statements.

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

|                              | Closing rate  |                   | Average rate for the      |               | Average rate for the    |               |
|------------------------------|---------------|-------------------|---------------------------|---------------|-------------------------|---------------|
|                              | June 30, 2016 | December 31, 2015 | Three-months period ended |               | Six-months period ended |               |
|                              | June 30, 2016 | December 31, 2015 | June 30, 2016             | June 30, 2015 | June 30, 2016           | June 30, 2015 |
| Brazilian Reais ( R\$ )      | 3.2098        | 3.9048            | 3.5076                    | 3.0729        | 3.7017                  | 2.9715        |
| Canadian dollar<br>( CAD )   | 2.4670        | 2.8171            | 2.7217                    | 2.4999        | 2.7809                  | 2.4060        |
| Australian dollar<br>( AUD ) | 2.3855        | 2.8532            | 2.6153                    | 2.3913        | 2.7142                  | 2.3228        |
| Euro ( EUR or )              | 3.5414        | 4.2504            | 3.9624                    | 3.4011        | 4.1288                  | 3.3111        |

Subsequent events were evaluated through July 27, 2016, which is the date the interim financial statements were approved by the Board of Directors.

### 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 disclosed in the notes to the financial statements for the year ended December 31, 2015.

Table of Contents**3. Information by business segment****a) Operating income and 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 adjusted by: excluding (i) the depreciation, depletion and amortization, (ii) results on measurement or sales of non-current assets, (iii) impairment, (iv) onerous contracts and (v) adding of dividends received from associates and joint ventures.

|                                     | Three-months period ended June 30, 2016 |  |  |                                  |  |                         | Adjusted by                              |  |   |                 |
|-------------------------------------|---|--|--|----------------------------------|--|-------------------------|--|--|---|-----------------|
|                                     | Net operating revenue                   | Cost of goods sold and services rendered | Income statement Selling, administrative and other operating expenses, net | Research and evaluation expenses | Pre operating and operational stoppage | Operating income (loss) | Depreciation, depletion and amortization | Results on measurement or sale of non-current assets | Dividends received from associates and joint ventures | Adjusted EBITDA |
| <b>Ferrous minerals</b>             |   |  |  |                                  |  |                         |  |  |   |                 |
| Iron ore                            | 3,508                                   | (1,902)                                  | (235)  | (16)                             | (39)                                   | 1,316                   | 274                                      | 66   |   | 1,316           |
| Pellets                             | 868                                     | (539)                                    | (22)   | (4)                              | (12)                                   | 291                     | 86                                       |  | 60  | 377             |
| Ferroalloys and manganese           | 61                                      | (58)                                     | 2  |                                  | (4)                                    | 1                       | 5  |  |   | 1               |
| Other ferrous products and services | 104                                     | (79)                                     | (3)  |                                  | (1)                                    | 21                      | 16                                       |  |   | 21              |
|                                     | <b>4,541</b>                            | <b>(2,578)</b>                           | <b>(258)</b>   | <b>(20)</b>                      | <b>(56)</b>                            | <b>1,629</b>            | <b>381</b>                               | <b>66</b>  | <b>60</b>   | <b>2,036</b>    |
| <b>Coal</b>                         | <b>145</b>                              | <b>(250)</b>                             | <b>(8)</b>   | <b>(3)</b>                       | <b>(9)</b>                             | <b>(125)</b>            | <b>15</b>                                |  |   | <b>(118)</b>    |
| <b>Base metals</b>                  |   |  |  |                                  |  |                         |  |  |   |                 |
| Nickel and other products           | 1,050                                   | (1,128)                                  | (9)  | (21)                             | (44)                                   | (152)                   | 378                                      |  |   | 212             |
| Copper                              | 397                                     | (296)                                    | (10)   | (1)                              |  | 90                      | 60                                       |  |   | 140             |
|                                     | <b>1,447</b>                            | <b>(1,424)</b>                           | <b>(19)</b>  | <b>(22)</b>                      | <b>(44)</b>                            | <b>(62)</b>             | <b>438</b>                               |  |   | <b>252</b>      |
| <b>Fertilizers</b>                  |   |  |  |                                  |  |                         |  |  |   |                 |

Edgar Filing: Vale S.A. - Form 6-K

|                            |              |                |              |             |              |              |            |           |            |
|----------------------------|--------------|----------------|--------------|-------------|--------------|--------------|------------|-----------|------------|
| Potash                     | 22           | (30)           | (1)          | (1)         | (3)          | (13)         | 7          |           |            |
| Phosphates                 | 363          | (403)          | (25)         | (4)         | (2)          | (71)         | 76         |           |            |
| Nitrogen                   | 60           | (49)           | (4)          | (1)         |              | 6            | 5          |           |            |
| Other fertilizers products | 19           |                |              |             |              | 19           |            |           | 3          |
|                            | <b>464</b>   | <b>(482)</b>   | <b>(30)</b>  | <b>(6)</b>  | <b>(5)</b>   | <b>(59)</b>  | <b>88</b>  |           | <b>3</b>   |
| <b>Others</b>              | <b>29</b>    | <b>(61)</b>    | <b>(51)</b>  | <b>(27)</b> |              | <b>(110)</b> | <b>5</b>   |           | <b>54</b>  |
| <b>Total</b>               | <b>6,626</b> | <b>(4,795)</b> | <b>(366)</b> | <b>(78)</b> | <b>(114)</b> | <b>1,273</b> | <b>927</b> | <b>66</b> | <b>117</b> |

Table of Contents

|                                     | Three-months period ended June 30, 2015 |  |   |                                  |  |                         |  | Adjusted by  |   |                 |
|-------------------------------------|---|--|---|----------------------------------|--|-------------------------|--|--|---|-----------------|
|                                     | Net operating revenue                   | Cost of goods sold and services rendered | Selling, administrative and other operating expenses, net | Research and evaluation expenses | Pre operating and operational stoppage | Operating income (loss) | Depreciation, depletion and amortization | Results on measurement or sale of non-current assets | Dividends received from associates and joint ventures | Adjusted EBITDA |
| <b>Ferrous minerals</b>             |   |  |   |                                  |  |                         |  |  |   |                 |
| Iron ore                            | 3,391                                   | (2,207)                                  | (272)   | (36)                             | (25)                                   | 851                     | 293                                      | 55   |   | 1,192           |
| Pellets                             | 972                                     | (655)                                    | (1)   | (1)                              | (10)                                   | 305                     | 88                                       |  | 177   | 571             |
| Ferroalloys and manganese           | 53                                      | (55)                                     |   |                                  | (6)                                    | (8)                     | 5  |  |   | (1)             |
| Other ferrous products and services | 136                                     | (117)                                    | (3)   | (1)                              | (1)                                    | 14                      | 23                                       |  | 8   | 42              |
|                                     | <b>4,552</b>                            | <b>(3,034)</b>                           | <b>(276)</b>  | <b>(38)</b>                      | <b>(42)</b>                            | <b>1,162</b>            | <b>409</b>                               | <b>55</b>  | <b>185</b>  | <b>1,811</b>    |
| <b>Coal</b>                         | <b>146</b>                              | <b>(233)</b>                             | <b>(45)</b>   | <b>(6)</b>                       | <b>(12)</b>                            | <b>(150)</b>            | <b>48</b>                                |  |   | <b>(10)</b>     |
| <b>Base metals</b>                  |   |  |   |                                  |  |                         |  |  |   |                 |
| Nickel and other products           | 1,240                                   | (1,167)                                  | (29)  | (23)                             | (183)                                  | (162)                   | 398                                      |  |   | 23              |
| Copper                              | 408                                     | (274)                                    | (14)  | (2)                              |  | 118                     | 52                                       |  |   | 17              |
|                                     | <b>1,648</b>                            | <b>(1,441)</b>                           | <b>(43)</b>   | <b>(25)</b>                      | <b>(183)</b>                           | <b>(44)</b>             | <b>450</b>                               |  |   | <b>40</b>       |
| <b>Fertilizers</b>                  |   |  |   |                                  |  |                         |  |  |   |                 |
| Potash                              | 31                                      | (28)                                     | 7   | (13)                             | (4)                                    | (7)                     | 7  |  |   |                 |
| Phosphates                          | 445                                     | (358)                                    | (5)   | (7)                              | (17)                                   | 58                      | 65                                       |  |   | 12              |
| Nitrogen                            | 78                                      | (56)                                     |   |                                  | (1)                                    | 21                      | 5  |  |   | 2               |
| Other fertilizers products          | 14                                      |  |   |                                  |  | 14                      |  |  |   | 1               |
|                                     | <b>568</b>                              | <b>(442)</b>                             | <b>2</b>  | <b>(20)</b>                      | <b>(22)</b>                            | <b>86</b>               | <b>77</b>                                |  |   | <b>16</b>       |
| <b>Others</b>                       | <b>51</b>                               | <b>(36)</b>                              | <b>(55)</b>   | <b>(29)</b>                      |  | <b>(69)</b>             | <b>4</b>                                 |  |   | <b>(6)</b>      |
| <b>Total</b>                        | <b>6,965</b>                            | <b>(5,186)</b>                           | <b>(417)</b>  | <b>(118)</b>                     | <b>(259)</b>                           | <b>985</b>              | <b>988</b>                               | <b>55</b>  | <b>185</b>  | <b>2,211</b>    |



Table of Contents

|                                     | Six-months period ended June 30, 2015 |  |   |                                  |  |                         |  | Adjusted by  |   | Adjusted EBITDA |
|-------------------------------------|---------------------------------------|--|---|----------------------------------|--|-------------------------|--|--|---|-----------------|
|                                     | Net operating revenue                 | Cost of goods sold and services rendered | Selling, administrative and other operating expenses, net | Research and evaluation expenses | Pre operating and operational stoppage | Operating income (loss) | Depreciation, depletion and amortization | Results on measurement or sale of non-current assets | Dividends received from associates and joint ventures |                 |
| <b>Ferrous minerals</b>             |                                       |  |   |                                  |  |                         |  |  |   |                 |
| Iron ore                            | 6,107                                 | (4,430)                                  | (472)   | (69)                             | (55)                                   | 1,081                   | 652                                      | 55   |   | 1,781           |
| Pellets                             | 1,937                                 | (1,327)                                  | 2   | (2)                              | (19)                                   | 591                     | 173                                      |  | 203   | 967             |
| Ferroalloys and manganese           | 123                                   | (106)                                    | (1)   |                                  | (13)                                   | 3                       | 11                                       |  |   | 11              |
| Other ferrous products and services | 253                                   | (236)                                    | 4   | (2)                              | (1)                                    | 18                      | 43                                       |  | 8   | 61              |
|                                     | <b>8,420</b>                          | <b>(6,099)</b>                           | <b>(467)</b>  | <b>(73)</b>                      | <b>(88)</b>                            | <b>1,693</b>            | <b>879</b>                               | <b>55</b>  | <b>211</b>  | <b>2,832</b>    |
| <b>Coal</b>                         | <b>291</b>                            | <b>(442)</b>                             | <b>(115)</b>  | <b>(11)</b>                      | <b>(24)</b>                            | <b>(301)</b>            | <b>71</b>                                |  |   | <b>(23)</b>     |
| <b>Base metals</b>                  |                                       |  |   |                                  |  |                         |  |  |   |                 |
| Nickel and other products           | 2,575                                 | (2,360)                                  | (84)  | (50)                             | (370)                                  | (289)                   | 820                                      |  |   | 532             |
| Copper                              | 783                                   | (546)                                    | (10)  | (3)                              | (1)                                    | 223                     | 100                                      |  |   | 327             |
| Other base metals products          |                                       |  | 230   |                                  |  | 230                     |  |  |   | 230             |
|                                     | <b>3,358</b>                          | <b>(2,906)</b>                           | <b>136</b>  | <b>(53)</b>                      | <b>(371)</b>                           | <b>164</b>              | <b>920</b>                               |  |   | <b>1,089</b>    |
| <b>Fertilizers</b>                  |                                       |  |   |                                  |  |                         |  |  |   |                 |
| Potash                              | 61                                    | (54)                                     | 5   | (23)                             | (8)                                    | (19)                    | 13                                       |  |   | 6               |
| Phosphates                          | 802                                   | (670)                                    | (21)  | (13)                             | (30)                                   | 68                      | 120                                      |  |   | 182             |
| Nitrogen                            | 157                                   | (117)                                    | (3)   | (1)                              | (2)                                    | 34                      | 11                                       |  |   | 42              |
| Other fertilizers products          | 26                                    |  |   |                                  |  | 26                      |  |  |   | 26              |
|                                     | <b>1,046</b>                          | <b>(841)</b>                             | <b>(19)</b>   | <b>(37)</b>                      | <b>(40)</b>                            | <b>109</b>              | <b>144</b>                               |  |   | <b>253</b>      |
| <b>Others</b>                       | <b>90</b>                             | <b>(66)</b>                              | <b>92</b>   | <b>(63)</b>                      |  | <b>53</b>               | <b>9</b>                                 | <b>(193)</b>   | <b>1</b>  | <b>(13)</b>     |
| <b>Total</b>                        | <b>13,205</b>                         | <b>(10,354)</b>                          | <b>(373)</b>  | <b>(237)</b>                     | <b>(523)</b>                           | <b>1,718</b>            | <b>2,023</b>                             | <b>(138)</b>   | <b>212</b>  | <b>3,811</b>    |

Table of Contents**b) Assets by segment**

|                  | As at June 30, 2016 |                   |  |   | Three-months   | Six-months   |
|------------------|---------------------|-------------------|--|---|--|--|
|                  | Trade receivables   | Product inventory | Investments in associates and joint ventures | Property, plant and equipment and intangible assets | period ended June 30, 2016 Additions to property, plant and equipment and intangible (i) | period ended June 30, 2016 Additions to property, plant and equipment and intangible (i) |
| Ferrous minerals | 1,582               | 1,134             | 1,790  | 34,078  | 766  | 1,683  |
| Coal             | 62                  | 31                | 291  | 1,968   | 157  | 290  |
| Base metals      | 660                 | 1,199             | 16   | 24,946  | 233  | 502  |
| Fertilizers      | 100                 | 379               | 90   | 4,543   | 68   | 107  |
| Others           | 48                  | 3                 | 1,776  | 2,337   | 8  | 16   |
| <b>Total</b>     | <b>2,452</b>        | <b>2,746</b>      | <b>3,963</b>                                 | <b>67,872</b>                                       | <b>1,232</b>   | <b>2,598</b>   |

---

(i) Includes only cash effect.

|                  | Year ended December 31, 2015 |                   |  |   | Three-months   | Six-months   |
|------------------|------------------------------|-------------------|--|---|--|--|
|                  | Trade receivables            | Product inventory | Investments in associates and joint ventures | Property, plant and equipment and intangible assets | period ended June 30, 2015 Additions to property, plant and equipment and intangible (i) | period ended June 30, 2015 Additions to property, plant and equipment and intangible (i) |
| Ferrous minerals | 873                          | 1,036             | 1,479  | 28,202  | 1,283  | 2,759  |
| Coal             | 44                           | 53                | 306  | 1,812   | 392  | 746  |
| Base metals      | 428                          | 1,166             | 17   | 23,522  | 365  | 653  |
| Fertilizers      | 94                           | 295               | 75   | 3,866   | 50   | 106  |
| Others           | 37                           | 3                 | 1,063  | 2,024   | 21   | 47   |
| <b>Total</b>     | <b>1,476</b>                 | <b>2,553</b>      | <b>2,940</b>                                 | <b>59,426</b>                                       | <b>2,111</b>   | <b>4,311</b>   |

---

(i) Includes only cash effect.

**c) Revenues by geographic area**

|  | Three-months period ended June 30, 2016 |             |             |        | Total |
|--|---|-------------|-------------|--------|-------|
|  | Coal                                    | Base metals | Fertilizers | Others |       |



Edgar Filing: Vale S.A. - Form 6-K

**Ferrous  
minerals**

|   |              |            |              |            |           |              |
|---|--------------|------------|--------------|------------|-----------|--------------|
| Americas, except United States and Brazil | 74           | 11         | 280          | 7          |           | 372          |
| United States of America                  | 53           |            | 177          |            |           | 230          |
| Europe                                    | 593          | 22         | 495          | 27         |           | 1,137        |
| Middle East/Africa/Oceania                | 287          | 22         | 4            | 3          |           | 316          |
| Japan                                     | 300          | 31         | 74           |            |           | 405          |
| China                                     | 2,581        | 6          | 113          |            |           | 2,700        |
| Asia, except Japan and China              | 229          | 53         | 262          | 19         |           | 563          |
| Brazil                                    | 424          |            | 42           | 408        | 29        | 903          |
| <b>Net operating revenue</b>              | <b>4,541</b> | <b>145</b> | <b>1,447</b> | <b>464</b> | <b>29</b> | <b>6,626</b> |

**Three-months period ended June 30, 2015**

|   | <b>Ferrous<br/>minerals</b> | <b>Coal</b> | <b>Base metals</b> | <b>Fertilizers</b> | <b>Others</b> | <b>Total</b> |
|---|-----------------------------|-------------|--------------------|--------------------|---------------|--------------|
| Americas, except United States and Brazil | 102                         | 4           | 332                | 18                 |               | 456          |
| United States of America                  | 5                           |             | 229                |                    | 7             | 241          |
| Europe                                    | 632                         | 38          | 573                | 34                 |               | 1,277        |
| Middle East/Africa/Oceania                | 283                         | 33          | 17                 |                    |               | 333          |
| Japan                                     | 358                         | 10          | 49                 |                    |               | 417          |
| China                                     | 2,392                       | 12          | 180                |                    |               | 2,584        |
| Asia, except Japan and China              | 330                         | 43          | 218                | 26                 |               | 617          |
| Brazil                                    | 450                         | 6           | 50                 | 490                | 44            | 1,040        |
| <b>Net operating revenue</b>              | <b>4,552</b>                | <b>146</b>  | <b>1,648</b>       | <b>568</b>         | <b>51</b>     | <b>6,965</b> |

Table of Contents

|   | Six-months period ended June 30, 2016 |            |              |             |           | Total         |
|---|---------------------------------------|------------|--------------|-------------|-----------|---------------|
|   | Ferrous minerals                      | Coal       | Base metals  | Fertilizers | Others    |               |
| Americas, except United States and Brazil | 165                                   | 14         | 558          | 17          |           | 754           |
| United States of America                  | 87                                    |            | 348          |             | 4         | 439           |
| Europe                                    | 1,078                                 | 29         | 918          | 48          |           | 2,073         |
| Middle East/Africa/Oceania                | 451                                   | 41         | 13           | 3           |           | 508           |
| Japan                                     | 554                                   | 65         | 126          |             |           | 745           |
| China                                     | 4,853                                 | 31         | 270          |             |           | 5,154         |
| Asia, except Japan and China              | 385                                   | 119        | 507          | 39          |           | 1,050         |
| Brazil                                    | 772                                   |            | 60           | 741         | 49        | 1,622         |
| <b>Net operating revenue</b>              | <b>8,345</b>                          | <b>299</b> | <b>2,800</b> | <b>848</b>  | <b>53</b> | <b>12,345</b> |

|   | Six-months period ended June 30, 2015 |            |              |              |           | Total         |
|---|---------------------------------------|------------|--------------|--------------|-----------|---------------|
|   | Ferrous minerals                      | Coal       | Base metals  | Fertilizers  | Others    |               |
| Americas, except United States and Brazil | 197                                   | 4          | 637          | 33           |           | 871           |
| United States of America                  | 15                                    |            | 468          |              | 15        | 498           |
| Europe                                    | 1,281                                 | 51         | 1,010        | 62           |           | 2,404         |
| Middle East/Africa/Oceania                | 578                                   | 67         | 56           | 3            |           | 704           |
| Japan                                     | 766                                   | 39         | 194          |              |           | 999           |
| China                                     | 4,026                                 | 12         | 322          |              |           | 4,360         |
| Asia, except Japan and China              | 639                                   | 102        | 494          | 37           |           | 1,272         |
| Brazil                                    | 918                                   | 16         | 177          | 911          | 75        | 2,097         |
| <b>Net operating revenue</b>              | <b>8,420</b>                          | <b>291</b> | <b>3,358</b> | <b>1,046</b> | <b>90</b> | <b>13,205</b> |

#### 4. Relevant event Dam failure at Samarco

##### a) Historical events

On November 5, 2015, Samarco experienced the failure of an iron ore tailings dam (Fundão) in the state of Minas Gerais - Brazil which caused impacts on communities and environment, including the Rio Doce river.

## Edgar Filing: Vale S.A. - Form 6-K

Following the dam failure, the Brazilian mining authority (DNPM) and the Minas Gerais State Environmental Secretary (SEMAD), ordered the suspension of Samarco's operations.

Samarco and its shareholders, Vale S.A. and BHP Billiton Brasil Ltda. ( BHPB ), entered into an Agreement in connection with the R\$20.2 billion (US\$6.3 billion) lawsuit ( Agreement ) on March 2, 2016 with the federal government, the two Brazilian states affected by the failure (Espírito Santo and Minas Gerais) and other governmental authorities in order to establish the necessary programs for remediation and compensation of the areas and communities affected by Samarco's dam failures.

The term of the Agreement is 15 years, renewable for successive one-year periods until all the obligations under the Agreement have been fulfilled.

Under the Agreement, Samarco, Vale S.A. and BHPB agreed to establish a foundation to develop and implement social and economic remediation and compensation, to be funded by Samarco as follows: R\$2.0 billion (US\$623) in 2016, R\$1.2 billion (US\$374) in 2017 and R\$1.2 billion (US\$374) in 2018. Amounts that Samarco already spent on remediation and compensation will be considered within its funding obligations. From 2019 to 2021, Samarco agreed to provide funding based on the amounts needed to implement the projects approved for the relevant year, subject to an annual minimum of R\$800 (US\$249) and an annual maximum of R\$1.6 billion (US\$498). From 2022 onwards, Samarco will provide the necessary funding in order to complete remaining remediation and compensation programs approved for each relevant year. The foundation will allocate an annual amount of R\$240 (US\$75) over 15 years to the implementation of compensation programs, and these annual amounts are included in the annual contributions described above for the first six years. Through the end of 2018, the foundation will also set aside R\$500 (US\$156) for basic sanitation programs in the affected areas.

To the extent that Samarco does not meet its funding obligations in the foundation, each of Vale S.A. and BHPB will provide, under the terms of the Agreement, funds to the Foundation in proportion to its 50% equity interest in Samarco.

Table of Contents

**b) New facts occurred in the second quarter of 2016**

According to the analyses prepared by independent experts engaged by Samarco, the amount to comply with the obligations under the Agreement to remediate and compensate the impacts of the dam failure, was estimated at R\$11,121 (US\$3,465), of which R\$656 (US\$204) has already been disbursed by Samarco until June 30, 2016. The Company's proportional estimated share of the remaining balance discounted at a free-risk rate, amounts R\$3,733 (US\$1,163) at June 30, 2016.

Samarco is currently unable to resume its mining and processing operations. Samarco's original estimate was to resume its operations in the last quarter of 2016. That estimate was based on studies of technical solutions available, combined with the progress of the repair works on the remaining dam structures after the incident and the formal scope defined under the Agreement to remediate and compensate the communities impacted by the incident.

However, in view of the current stage of the necessary procedures to resume operations and the uncertainties related to the licensing approval by the governmental authorities, Samarco cannot make a reliable estimate of how and when its operations will resume.

Accordingly, the Company recognized a provision of R\$3,733 (US\$1,163) as a liability on the interim financial statements as of June 30, 2016, which represents its best estimate of the obligation under the Agreement reflected in the income statement as Other results in associates and joint ventures

At each reporting period, the Company will reassess the key assumptions used by Samarco in the preparation of the projected future estimated cash flows, as well as the assumptions for defining the scope and assessing the respective provision, in order to timely reflect in the financial statements any changes in judgment used by management and/or any occurrence of new facts and circumstances.

**c) Contingencies related to Samarco dam failure**

On May 5, 2016, the Agreement was ratified by the Federal Regional Court (TRF), 1st Region signed in March 2, 2016. In July, 2016 the Superior Court of Justice (STJ) in Brazil issued an interim order, suspending the decision of the Federal Regional Court (TRF), 1st Region, which ratified the Agreement. With this interim order, the public civil claim with the amount of R\$20.2 billion (US\$6.3 billion) indicated by plaintiffs, filed by the Brazilian Authorities, was reinstated.

Only the judicial decision that ratified the Agreement was suspended and, therefore, the Agreement between the parties remains valid, and the parties will continue fulfilling their obligations under the Agreement

Vale S.A. and certain of its officers have been named as defendants in putative securities class action suits in 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 omitted to 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 in these actions. Vale S.A. intends to vigorously mount a full defense against the allegations. The litigation is at a very early stage. On March 7, 2016, the judge overseeing the putative securities class actions issued an order consolidating these actions and designating lead plaintiffs and counsel. On April 29, 2016, lead plaintiffs filed a Consolidated Amended Complaint that will serve as the operative complaint in the litigation. In July 2016, Vale S.A. and the individual defendants filed a motion to dismiss the Amended Complaint.

On May 3, 2016, the Federal Prosecution Office (MPF) filed a public civil action 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 initial action value claimed by the Federal Prosecution Office (MPF) is R\$155 billion (US\$48 billion).

In addition, Samarco and its shareholders were named as a defendant in several other lawsuits brought by individuals, corporations and governmental entities seeking damages for material or personnel damages.

All lawsuits and petitions are at very early stages, thus it not possible to determine a range of outcomes and/or reliable estimates of the potential exposure at this time. No contingent liability was quantified and no provision was recognized.

Table of Contents**d) Other subjects**

On June 28, 2016, the Foundation was established by Samarco and its shareholders, with a commencement date estimated to occur on August 1, 2016.

Vale S.A. intends to make short-term facilities of up to US\$100 to Samarco to support its operations, without undertaking an obligation to Samarco. Funds will be released on an as-needed basis and will be subject to achieving certain milestones. Likewise, BHPB will make available a similar short-term facility.

**5. Assets held for sale**

|   | Shipping assets | June 30, 2016<br>Nacala | Total        | December 31, 2015<br>Nacala |
|---|-----------------|-------------------------|--------------|-----------------------------|
| <b>Assets held for sale</b>                             |                 |                         |              |                             |
| Accounts receivable                                     |                 | 2                       | 2            | 3                           |
| Other current assets                                    |                 | 56                      | 56           | 134                         |
| Property, plant and equipment and Intangible, net       | 497             | 4,103                   | 4,600        | 3,907                       |
| <b>Total assets</b>                                     | <b>497</b>      | <b>4,161</b>            | <b>4,658</b> | <b>4,044</b>                |
| <b>Liabilities associated with assets held for sale</b> |                 |                         |              |                             |
| Suppliers and contractors                               |                 | 64                      | 64           | 93                          |
| Other current liabilities                               |                 | 16                      | 16           | 14                          |
| <b>Total liabilities</b>                                |                 | <b>80</b>               | <b>80</b>    | <b>107</b>                  |
| <b>Net assets held for sale</b>                         | <b>497</b>      | <b>4,081</b>            | <b>4,578</b> | <b>3,937</b>                |

**a) Shipping assets**

In June 2016, Vale approved a plan to dispose its fleet of ships. As a consequence, the referred assets were reclassified to non-current assets held for sale and a loss of US\$58 was recorded in the income statement as Results on measurement or sale of non-current assets .

**b) Coal - Nacala logistic corridor ( Nacala )**

In December 2014, the Company signed an agreement with Mitsui & Co., Ltd. ( Mitsui ) to sell 50% of its stake of 70% in the Nacala corridor. Nacala is a combination of railroad and port concessions under construction located in Mozambique and Malawi. After completion of the transaction, Vale will share control of Nacala with Mitsui and therefore will not consolidate the assets, liabilities and results of those entities. The assets and liabilities were classified as assets held for sale with no impact in the income statement. As at June 2016, completion of the transaction remains dependent upon certain conditions. The Company remains committed to its plan to sell its 50% interest.

## 6. Acquisitions and divestitures

### 2016

**Shipping assets** In June 2016, the Company concluded the sale of three vessels VLOC s of 400,000 tons for the consortium led by ICBC *International* (ICBC). The Company will receive US\$269 upon delivery of the vessels, which is expected to happen by August, 2016. A loss of US\$8 was recognized in the income statement as Results on measurement or sales of non-current assets .

**Thyssenkrupp Companhia Siderúrgica do Atlântico Ltd ( CSA )** In April 2016, the Company sold 100% of its interest at CSA (26.87%) for a symbolic amount. The transaction resulted in US\$75 loss on recycling the Cumulative translation adjustments recognized in the income statement as Others results in associates and joint ventures .

**Minas da Serra Geral S.A. ( MSG )** In March 2016, the Company completed the purchase option on additional 50% participation at MSG which was owned by JFE Steel Corporation ( JFE ) in the amount of US\$17. Vale now holds 100% of MSG s total stockholder s equity.

### 2015

**Energy generation assets** - In December 2013, the Company signed agreements with CEMIG Geração e Transmissão S.A. ( CEMIG GT ) to incorporate two joint ventures, Aliança Norte Participações S.A. and Aliança Geração de Energia S.A. and exchange of assets and shares. The transaction was completed in the first quarter of 2015, in which Vale received cash proceeds of US\$97 and recognized a gain of US\$18 as Result on sale or disposal of investments in associates and joint ventures and a gain of US\$193 as Results on measurement or sales of non-current assets .

**Shandong Yankuang International Coking Co., Ltd. ( Yankuang )** - In the second quarter of 2015, the Company concluded the sale of its participation in Yankuang, a producer of coke, methanol and other products. In this transaction, Vale recognized a gain of US\$79 as others results in associates and joint ventures .





Table of Contents

**Shipping assets** - In the second quarter of 2015, the Company and China Ocean Shipping Company ( Cosco ), completed the sale of four very large ore carriers. The Company recognized a loss of US\$55 as Results on measurement or sale of non-current assets .

## 7. Cash and cash equivalents

|                        | June 30, 2016 | December 31, 2015 |
|------------------------|---------------|-------------------|
| Cash and bank deposits | 2,581         | 2,018             |
| Short-term investments | 1,587         | 1,573             |
|                        | <b>4,168</b>  | <b>3,591</b>      |

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.

## 8. Accounts receivable

|   | June 30, 2016 | December 31, 2015 |
|---|---------------|-------------------|
| Trade receivables                                 | 2,515         | 1,534             |
| Provision for doubtful debts                      | (63)          | (58)              |
|   | <b>2,452</b>  | <b>1,476</b>      |
| Trade receivables related to the steel sector - % | 76.52%        | 75.32%            |

|   | Three-months period ended June 30 |      | Six-months period ended June 30 |      |
|---|-----------------------------------|------|---------------------------------|------|
|   | 2016                              | 2015 | 2016                            | 2015 |
| Provision for doubtful debts recorded in the income statement | (5)                               | (1)  | (7)                             | (1)  |
| Trade receivables write-offs recorded in the income statement | 3                                 |      | 4                               | (7)  |

Trade receivables by segments are presented in note 3(b). No individual customer represents over 10% of receivables or revenues.

**9. Inventories**

|                                 | June 30, 2016 | December 31, 2015 |
|---------------------------------|---------------|-------------------|
| Product inventory               | 3,084         | 3,071             |
| Impairment of product inventory | (338)         | (518)             |
|                                 | <b>2,746</b>  | <b>2,553</b>      |
| Consumable inventory            | 1,120         | 975               |
| <b>Total</b>                    | <b>3,866</b>  | <b>3,528</b>      |

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

Table of Contents**10. Investments in associates and joint ventures**

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

|                                    | 2016         | 2015         |
|------------------------------------|--------------|--------------|
| <b>Balance at March 31,</b>        | <b>3,397</b> | <b>3,812</b> |
| Additions (i)                      | 136          | 8            |
| Disposals (ii)                     |              | 79           |
| Translation adjustment             | 327          | 110          |
| Equity results in income statement | 190          | 218          |
| Dividends declared                 | (87)         | (56)         |
| Others                             |              | 37           |
| <b>Balance at June 30,</b>         | <b>3,963</b> | <b>4,208</b> |

(i) Refers to capital contribution of US\$124 to CSP - Companhia Siderúrgica do Pecém and US\$12 to Aliança Geração de Energia, with no change in the company's interest in associates equity.

(ii) Refers to Shandong Yankuang International Coking Co., Ltd.

|                                    | 2016         | 2015         |
|------------------------------------|--------------|--------------|
| <b>Balance at January 1st,</b>     | <b>2,940</b> | <b>4,133</b> |
| Acquisitions (i)                   |              | 579          |
| Additions (ii)                     | 219          | 18           |
| Disposals (iii)                    |              | 79           |
| Translation adjustment             | 586          | (495)        |
| Equity results in income statement | 346          | (53)         |
| Dividends declared                 | (116)        | (83)         |
| Others                             | (12)         | 30           |
| <b>Balance at June 30,</b>         | <b>3,963</b> | <b>4,208</b> |

(i) Refers to Aliança Geração transaction, see note 6.

(ii) Refers to capital contribution of US\$187 to CSP - Companhia Siderúrgica do Pecém and US\$32 to Aliança Geração de Energia, with no change in the company's interest in associates equity.

(iii) Refers to Shandong Yankuang International Coking Co., Ltd.

The Company indirectly holds a 4.6 % interest in Norte Energia S.A. (through Aliança Norte Energia Participações S.A.), and the Company's investment and equity results as of June 30, 2016, are respectively US\$133 and US\$(3). The independent auditor's opinion on the Norte Energia financial statements for the year ended December 31, 2015, was qualified due to an investigation related to possible breaches of law and regulation that had not been completed when the mentioned opinion was issued. Vale believes that the auditor's qualification has no quantitative or qualitative impact on its interim financial information as of June 30, 2016.

## 11. Intangibles

Changes in intangibles are as follows:

|                                  | Goodwill (i) | Concessions (ii) | Right of use (ii) | Software (ii) | Total        |
|----------------------------------|--------------|------------------|-------------------|---------------|--------------|
| <b>Balance at March 31, 2016</b> | <b>3,095</b> | <b>2,354</b>     | <b>149</b>        | <b>420</b>    | <b>6,018</b> |
| Additions                        |              | 444              |                   | 4             | 448          |
| Disposals                        |              | (5)              |                   |               | (5)          |
| Amortization                     |              | (42)             |                   | (40)          | (82)         |
| Translation adjustment           | 124          | 295              | (9)               | 47            | 457          |
| Transfers                        |              | 77               |                   |               | 77           |
| <b>Balance at June 30, 2016</b>  | <b>3,219</b> | <b>3,123</b>     | <b>140</b>        | <b>431</b>    | <b>6,913</b> |
| Cost                             | 3,219        | 4,230            | 222               | 1,580         | 9,251        |
| Accumulated amortization         |              | (1,107)          | (82)              | (1,149)       | (2,338)      |
|                                  | <b>3,219</b> | <b>3,123</b>     | <b>140</b>        | <b>431</b>    | <b>6,913</b> |

|                                  | Goodwill (i) | Concessions (ii) | Right of use (ii) | Software (ii) | Total        |
|----------------------------------|--------------|------------------|-------------------|---------------|--------------|
| <b>Balance at March 31, 2015</b> | <b>3,394</b> | <b>1,892</b>     | <b>257</b>        | <b>483</b>    | <b>6,026</b> |
| Additions                        |              | 236              |                   | 17            | 253          |
| Disposals                        |              | (4)              |                   |               | (4)          |
| Amortization                     |              | (40)             | (11)              | (42)          | (93)         |
| Translation adjustment           | 70           | 62               | 8                 | 18            | 158          |
| <b>Balance at June 30, 2015</b>  | <b>3,464</b> | <b>2,146</b>     | <b>254</b>        | <b>476</b>    | <b>6,340</b> |
| Cost                             | 3,464        | 3,248            | 517               | 1,247         | 8,476        |
| Accumulated amortization         |              | (1,102)          | (263)             | (771)         | (2,136)      |
|                                  | <b>3,464</b> | <b>2,146</b>     | <b>254</b>        | <b>476</b>    | <b>6,340</b> |

Table of Contents

|                                     | Goodwill (i) | Concessions (ii) | Right of use (ii) | Software (ii) | Total        |
|-------------------------------------|--------------|------------------|-------------------|---------------|--------------|
| <b>Balance at December 31, 2015</b> | <b>2,956</b> | <b>1,814</b>     | <b>207</b>        | <b>347</b>    | <b>5,324</b> |
| Additions                           |              | 808              | 1                 | 5             | 814          |
| Disposals                           |              | (5)              |                   |               | (5)          |
| Amortization                        |              | (73)             | (1)               | (77)          | (151)        |
| Translation adjustment              | 263          | 502              |                   | 82            | 847          |
| Transfers                           |              | 77               | (67)              | 74            | 84           |
| <b>Balance at June 30, 2016</b>     | <b>3,219</b> | <b>3,123</b>     | <b>140</b>        | <b>431</b>    | <b>6,913</b> |
| Cost                                | 3,219        | 4,230            | 222               | 1,580         | 9,251        |
| Accumulated amortization            |              | (1,107)          | (82)              | (1,149)       | (2,338)      |
|                                     | <b>3,219</b> | <b>3,123</b>     | <b>140</b>        | <b>431</b>    | <b>6,913</b> |

|                                     | Goodwill (i) | Concessions (ii) | Right of use (ii) | Software (ii) | Total        |
|-------------------------------------|--------------|------------------|-------------------|---------------|--------------|
| <b>Balance at December 31, 2014</b> | <b>3,760</b> | <b>2,213</b>     | <b>297</b>        | <b>550</b>    | <b>6,820</b> |
| Additions                           |              | 358              |                   | 91            | 449          |
| Disposals                           |              | (17)             |                   |               | (17)         |
| Amortization                        |              | (82)             | (22)              | (86)          | (190)        |
| Translation adjustment              | (335)        | (326)            | (21)              | (79)          | (761)        |
| Acquisition of subsidiary           | 39           |                  |                   |               | 39           |
| <b>Balance at June 30, 2015</b>     | <b>3,464</b> | <b>2,146</b>     | <b>254</b>        | <b>476</b>    | <b>6,340</b> |
| Cost                                | 3,464        | 3,248            | 517               | 1,247         | 8,476        |
| Accumulated amortization            |              | (1,102)          | (263)             | (771)         | (2,136)      |
|                                     | <b>3,464</b> | <b>2,146</b>     | <b>254</b>        | <b>476</b>    | <b>6,340</b> |

---

(i) Indefinite useful life.

(ii) Finite useful life.

## 12. Property, plant and equipment

Changes in property, plant and equipment are as follows:

|                                  | Land       | Building     | Facilities   | Equipment    | Mineral properties | Others       | Constructions in progress | Total         |
|----------------------------------|------------|--------------|--------------|--------------|--------------------|--------------|---------------------------|---------------|
| <b>Balance at March 31, 2016</b> | <b>821</b> | <b>9,841</b> | <b>8,712</b> | <b>7,684</b> | <b>10,938</b>      | <b>7,645</b> | <b>12,284</b>             | <b>57,925</b> |
| Additions (i)                    |            |              |              |              |                    |              | 1,096                     | 1,096         |
| Disposals                        |            |              |              | (2)          |                    | (335)        | (20)                      | (357)         |
| Depreciation and amortization    |            | (115)        | (149)        | (236)        | (228)              | (169)        |                           | (897)         |
|                                  |            |              |              |              |                    | (497)        |                           | (497)         |

Edgar Filing: Vale S.A. - Form 6-K

| Transfers to non-current assets held for sale |            |               |              |              |               |              |               |               |
|---|------------|---------------|--------------|--------------|---------------|--------------|---------------|---------------|
| Translation adjustment                        | 64         | 255           | 570          | 341          | 321           | 465          | 1,733         | 3,749         |
| Assets retirement obligations                 |            |               |              |              | 17            |              |               | 17            |
| Transfers                                     | 6          | 339           | 99           | 196          | 118           | (261)        | (574)         | (77)          |
| <b>Balance at June 30, 2016</b>               | <b>891</b> | <b>10,320</b> | <b>9,232</b> | <b>7,983</b> | <b>11,166</b> | <b>6,848</b> | <b>14,519</b> | <b>60,959</b> |
| Cost  | 891        | 16,082        | 15,013       | 14,050       | 18,876        | 10,450       | 14,519        | 89,881        |
| Accumulated depreciation                      |            | (5,762)       | (5,781)      | (6,067)      | (7,710)       | (3,602)      |               | (28,922)      |
|   | <b>891</b> | <b>10,320</b> | <b>9,232</b> | <b>7,983</b> | <b>11,166</b> | <b>6,848</b> | <b>14,519</b> | <b>60,959</b> |

|                                  | Land       | Building      | Facilities    | Equipment    | Mineral properties | Others        | Constructions in progress | Total         |
|----------------------------------|------------|---------------|---------------|--------------|--------------------|---------------|---------------------------|---------------|
| <b>Balance at March 31, 2015</b> | <b>923</b> | <b>11,342</b> | <b>9,820</b>  | <b>8,966</b> | <b>12,675</b>      | <b>9,981</b>  | <b>16,001</b>             | <b>69,708</b> |
| Additions (i)                    |            |               |               |              |                    |               | 1,710                     | 1,710         |
| Disposals                        |            |               | (6)           | (15)         |                    | (512)         |                           | (533)         |
| Depreciation and amortization    |            | (142)         | (186)         | (268)        | (243)              | (181)         |                           | (1,020)       |
| Translation adjustment           | 24         | 94            | 198           | 66           | 268                | 173           | 589                       | 1,412         |
| Transfers                        | 52         | 770           | 261           | 630          | 443                | 869           | (3,025)                   |               |
| <b>Balance at June 30, 2015</b>  | <b>999</b> | <b>12,064</b> | <b>10,087</b> | <b>9,379</b> | <b>13,143</b>      | <b>10,330</b> | <b>15,275</b>             | <b>71,277</b> |
| Cost                             | 999        | 14,663        | 15,135        | 14,461       | 19,091             | 14,549        | 15,275                    | 94,173        |
| Accumulated depreciation         |            | (2,599)       | (5,048)       | (5,082)      | (5,948)            | (4,219)       |                           | (22,896)      |
|                                  | <b>999</b> | <b>12,064</b> | <b>10,087</b> | <b>9,379</b> | <b>13,143</b>      | <b>10,330</b> | <b>15,275</b>             | <b>71,277</b> |

Table of Contents

|   | Land       | Building      | Facilities   | Equipment    | Mineral properties | Others       | Constructions in progress | Total         |
|---|------------|---------------|--------------|--------------|--------------------|--------------|---------------------------|---------------|
| <b>Balance at December 31, 2015</b>           | <b>766</b> | <b>9,101</b>  | <b>8,292</b> | <b>7,307</b> | <b>10,304</b>      | <b>7,206</b> | <b>11,126</b>             | <b>54,102</b> |
| Additions (i)                                 |            |               |              |              |                    |              | 1,895                     | 1,895         |
| Disposals                                     |            | (1)           | (1)          | (13)         | (3)                | (343)        | (21)                      | (382)         |
| Depreciation and amortization                 |            | (229)         | (289)        | (450)        | (405)              | (310)        |                           | (1,683)       |
| Transfers to non-current assets held for sale |            |               |              |              |                    | (497)        |                           | (497)         |
| Translation adjustment                        | 122        | 882           | 1,083        | 713          | 1,003              | 1,024        | 2,726                     | 7,553         |
| Assets retirement obligations                 |            |               |              |              | 55                 |              |                           | 55            |
| Transfers                                     | 3          | 567           | 147          | 426          | 212                | (232)        | (1,207)                   | (84)          |
| <b>Balance at June 30, 2016</b>               | <b>891</b> | <b>10,320</b> | <b>9,232</b> | <b>7,983</b> | <b>11,166</b>      | <b>6,848</b> | <b>14,519</b>             | <b>60,959</b> |
| Cost  | 891        | 16,082        | 15,013       | 14,050       | 18,876             | 10,450       | 14,519                    | 89,881        |
| Accumulated depreciation                      |            | (5,762)       | (5,781)      | (6,067)      | (7,710)            | (3,602)      |                           | (28,922)      |
|   | <b>891</b> | <b>10,320</b> | <b>9,232</b> | <b>7,983</b> | <b>11,166</b>      | <b>6,848</b> | <b>14,519</b>             | <b>60,959</b> |

  

|                                     | Land         | Building      | Facilities    | Equipment    | Mineral properties | Others        | Constructions in progress | Total         |
|-------------------------------------|--------------|---------------|---------------|--------------|--------------------|---------------|---------------------------|---------------|
| <b>Balance at December 31, 2014</b> | <b>1,069</b> | <b>11,654</b> | <b>10,813</b> | <b>9,287</b> | <b>14,929</b>      | <b>10,954</b> | <b>19,416</b>             | <b>78,122</b> |
| Additions (i)                       |              |               |               |              |                    |               | 3,807                     | 3,807         |
| Disposals                           |              | (5)           | (7)           | (20)         | (151)              | (518)         | (2)                       | (703)         |
| Depreciation and amortization       |              | (277)         | (394)         | (576)        | (460)              | (379)         |                           | (2,086)       |
| Translation adjustment              | (132)        | (1,529)       | (1,360)       | (869)        | (1,161)            | (1,112)       | (1,820)                   | (7,983)       |
| Transfers                           | 62           | 2,221         | 1,035         | 1,556        | (14)               | 1,266         | (6,126)                   |               |
| Acquisition of subsidiary           |              |               |               | 1            |                    | 119           |                           | 120           |
| <b>Balance at June 30, 2015</b>     | <b>999</b>   | <b>12,064</b> | <b>10,087</b> | <b>9,379</b> | <b>13,143</b>      | <b>10,330</b> | <b>15,275</b>             | <b>71,277</b> |
| Cost                                | 999          | 14,663        | 15,135        | 14,461       | 19,091             | 14,549        | 15,275                    | 94,173        |
| Accumulated depreciation            |              | (2,599)       | (5,048)       | (5,082)      | (5,948)            | (4,219)       |                           | (22,896)      |
|                                     | <b>999</b>   | <b>12,064</b> | <b>10,087</b> | <b>9,379</b> | <b>13,143</b>      | <b>10,330</b> | <b>15,275</b>             | <b>71,277</b> |

(i) Includes capitalized borrowing costs, see cash flow.

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 13(d)) compared to those disclosed in the financial statements as at December 31, 2015.

Table of Contents**13. Loans and borrowings****a) Total debt**

|  | Current liabilities |                   | Non-current liabilities |                   |
|--|---------------------|-------------------|-------------------------|-------------------|
|  | June 30, 2016       | December 31, 2015 | June 30, 2016           | December 31, 2015 |
| <b>Debt contracts in the international markets</b> |                     |                   |                         |                   |
| <b>Floating rates in:</b>                          |                     |                   |                         |                   |
| US\$   | 234                 | 241               | 6,956                   | 5,174             |
| <b>Fixed rates in:</b>                             |                     |                   |                         |                   |
| US\$   | 1,612               | 1,191             | 12,496                  | 12,923            |
| EUR  |                     |                   | 1,655                   | 1,633             |
| Other currencies                                   | 14                  | 14                | 172                     | 169               |
| <b>Accrued charges</b>                             | <b>285</b>          | <b>326</b>        |                         |                   |
|  | <b>2,145</b>        | <b>1,772</b>      | <b>21,279</b>           | <b>19,899</b>     |
| <b>Debt contracts in Brazil</b>                    |                     |                   |                         |                   |
| <b>Floating rates in:</b>                          |                     |                   |                         |                   |
| R\$, indexed to TJLP, TR, IPCA, IGP-M and CDI      | 305                 | 212               | 5,678                   | 4,709             |
| Basket of currencies and US\$ indexed to LIBOR     | 319                 | 290               | 1,281                   | 1,342             |
| <b>Fixed rates in:</b>                             |                     |                   |                         |                   |
| R\$  | 77                  | 63                | 288                     | 268               |
| <b>Accrued charges</b>                             | <b>307</b>          | <b>169</b>        | <b>135</b>              | <b>129</b>        |
|  | <b>1,008</b>        | <b>734</b>        | <b>7,382</b>            | <b>6,448</b>      |
|  | <b>3,153</b>        | <b>2,506</b>      | <b>28,661</b>           | <b>26,347</b>     |

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

|                       | Bank loans (i) | Capital markets (i) | Development agencies (i) | Debt principal (i) | Estimated future payments of interest (ii) |
|-----------------------|----------------|---------------------|--------------------------|--------------------|--|
| 2016                  | 35             |                     | 424                      | 459                | 1,628                                      |
| 2017                  | 972            | 1,212               | 977                      | 3,161              | 1,690                                      |
| 2018                  | 2,153          | 827                 | 1,054                    | 4,034              | 1,524                                      |
| 2019                  | 716            | 1,000               | 1,231                    | 2,947              | 1,308                                      |
| 2020                  | 3,436          | 1,343               | 830                      | 5,609              | 1,158                                      |
| 2021                  | 303            | 1,343               | 893                      | 2,539              | 948  |
| Between 2022 and 2025 | 1,260          | 3,332               | 1,017                    | 5,609              | 2,380                                      |
| 2026 onwards          | 85             | 6,491               | 153                      | 6,729              | 5,809                                      |



|  |       |        |       |        |        |
|--|-------|--------|-------|--------|--------|
|  | 8,960 | 15,548 | 6,579 | 31,087 | 16,445 |
|--|-------|--------|-------|--------|--------|

---

(i) Does not include accrued charges.

(ii) Consists of estimated future payments of interest, calculated based on interest rate curves and foreign exchange rates applicable as at June 30, 2016 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 June 30, 2016, the average annual interest rates by currency are as follows:

|                                | Average interest rate (i) | Total debt    |
|--------------------------------|---------------------------|---------------|
| <b>Loans and borrowings in</b> |                           |               |
| US\$                           | 4.46%                     | 23,163        |
| R\$ (ii)                       | 11.13%                    | 6,782         |
| EUR (iii)                      | 4.06%                     | 1,683         |
| Other currencies               | 4.35%                     | 186           |
|                                |                           | <b>31,814</b> |

---

(i) In order to determine the average interest rate for debt contracts with floating rates, the Company used the last renegotiated rate at June 30, 2016.

(ii) R\$ denominated debt that bears interest at IPCA, CDI, TR or TJLP, plus spread. For a total of US\$4,656, 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 2.21% 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\$.

Table of Contents**b) Credit and financing lines**

| Type                          | Contractual currency | Date of agreement | Period of the agreement | Total amount | Available amount June 30, 2016 |
|-------------------------------|----------------------|-------------------|-------------------------|--------------|--------------------------------|
| <b>Credit lines</b>           |                      |                   |                         |              |                                |
| Revolving credit facilities   | US\$                 | May 2015          | 5 years                 | 3,000        | 1,200                          |
| Revolving credit facilities   | US\$                 | July 2013         | 5 years                 | 2,000        | 1,800                          |
| <b>Financing lines</b>        |                      |                   |                         |              |                                |
| BNDES (i)                     | R\$                  | April 2008        | 10 years                | 2,274        | 346                            |
| BNDES - CLN 150               | R\$                  | September 2012    | 10 years                | 1,210        | 6                              |
| BNDES - S11D e S11D Logística | R\$                  | May 2014          | 10 years                | 1,920        | 762                            |

(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 Usina VIII, Onça Puma, Salobo I and II and capital expenditure of Itabira projects.

**c) Funding**

During 2016, the Company drew down part of its revolving credit facilities of which US\$2,000 is outstanding at June 30, 2016.

In June 2016, the Company issued through its wholly owned subsidiary Vale Overseas Limited the guaranteed notes due 2021 in the amount of US\$1,250. The notes bears 5.875% coupon per year, payable semi-annually, and were sold at a price of 100% of the principal amount. These notes will mature in June 2021.

**d) Guarantees**

As at June 30, 2016 and December 31, 2015, loans and borrowings are secured by property, plant and equipment and receivables in the amount of US\$477 and US\$495, respectively.

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

**e) Covenants**

Some of the Company's debt agreements with lenders contain financial covenants. The main covenants in those agreements require maintaining certain ratios, such as debt to EBITDA (Earnings before Interest Taxes, Depreciation and Amortization) and interest coverage. The Company has not identified any instances of noncompliance as at June 30, 2016 and December 31, 2015.

Table of Contents**14. 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:

|                                  | Tax litigation | Civil litigation | Labor litigation | Environmental litigation | Total of litigation provision |
|----------------------------------|----------------|------------------|------------------|--------------------------|-------------------------------|
| <b>Balance at March 31, 2016</b> | <b>218</b>     | <b>103</b>       | <b>507</b>       | <b>23</b>                | <b>851</b>                    |
| Additions                        | 18             | 44               | 58               | 3                        | 123                           |
| Reversals                        | (9)            | (19)             | (30)             | (2)                      | (60)                          |
| Payments                         | (33)           | (26)             | (44)             |                          | (103)                         |
| Indexation and interest          | 26             | (1)              | 10               | (1)                      | 34                            |
| Translation adjustment           | 11             | 11               | 54               | 3                        | 79                            |
| <b>Balance at June 30, 2016</b>  | <b>231</b>     | <b>112</b>       | <b>555</b>       | <b>26</b>                | <b>924</b>                    |

|                                  | Tax litigation | Civil litigation | Labor litigation | Environmental litigation | Total of litigation provision |
|----------------------------------|----------------|------------------|------------------|--------------------------|-------------------------------|
| <b>Balance at March 31, 2015</b> | <b>305</b>     | <b>114</b>       | <b>596</b>       | <b>72</b>                | <b>1,087</b>                  |
| Additions                        | 13             | 31               | 37               |                          | 81                            |
| Reversals                        | (6)            | (19)             | (15)             |                          | (40)                          |
| Payments                         | (5)            | (1)              | (22)             | (5)                      | (33)                          |
| Indexation and interest          | 8              | 2                | 9                | 1                        | 20                            |
| Translation adjustment           | 7              | 4                | 20               | 1                        | 32                            |
| <b>Balance at June 30, 2015</b>  | <b>322</b>     | <b>131</b>       | <b>625</b>       | <b>69</b>                | <b>1,147</b>                  |

|                                     | Tax litigation | Civil litigation | Labor litigation | Environmental litigation | Total of litigation provision |
|-------------------------------------|----------------|------------------|------------------|--------------------------|-------------------------------|
| <b>Balance at December 31, 2015</b> | <b>269</b>     | <b>79</b>        | <b>454</b>       | <b>20</b>                | <b>822</b>                    |
| Additions                           | 21             | 56               | 105              | 5                        | 187                           |
| Reversals                           | (18)           | (23)             | (48)             | (4)                      | (93)                          |
| Payments                            | (95)           | (44)             | (68)             |                          | (207)                         |
| Indexation and interest             | 7              | 23               | 13               |                          | 43                            |
| Translation adjustment              | 47             | 21               | 99               | 5                        | 172                           |
| <b>Balance at June 30, 2016</b>     | <b>231</b>     | <b>112</b>       | <b>555</b>       | <b>26</b>                | <b>924</b>                    |

Edgar Filing: Vale S.A. - Form 6-K

|                                     | Tax litigation | Civil litigation | Labor litigation | Environmental litigation | Total of litigation provision |
|-------------------------------------|----------------|------------------|------------------|--------------------------|-------------------------------|
| <b>Balance at December 31, 2014</b> | <b>366</b>     | <b>118</b>       | <b>706</b>       | <b>92</b>                | <b>1,282</b>                  |
| Additions                           | 158            | 46               | 72               |                          | 276                           |
| Reversals                           | (180)          | (30)             | (42)             |                          | (252)                         |
| Payments                            | (3)            | (1)              | (26)             | (20)                     | (50)                          |
| Indexation and interest             | 17             | 15               | 16               | 4                        | 52                            |
| Translation adjustment              | (36)           | (17)             | (101)            | (7)                      | (161)                         |
| <b>Balance at June 30, 2015</b>     | <b>322</b>     | <b>131</b>       | <b>625</b>       | <b>69</b>                | <b>1,147</b>                  |

Table of Contents**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:

|                          | June 30, 2016 | December 31, 2015 |
|--------------------------|---------------|-------------------|
| Tax litigation           | 7,227         | 5,326             |
| Civil litigation         | 1,624         | 1,335             |
| Labor litigation         | 2,302         | 1,866             |
| Environmental litigation | 1,819         | 1,381             |
| <b>Total</b>             | <b>12,972</b> | <b>9,908</b>      |

**i - Tax litigation** - The most significant claims relate to pending challenges by the Brazilian federal tax authority concerning the deductibility of Brazilian social contribution payments for income tax purposes and demands by Brazilian state tax authorities for additional payments of the value-added tax on services and circulation of goods ( ICMS ) in relation to the use of ICMS credits from sales and energy transmission. The change in the period refers basically to income tax on tax incentive , and new tax enforcement on Brazilian federal contributions ( PIS/ COFINS ), circulation of goods ( ICMS ) and CFEM (Compensação Financeira pela Exploração de Recursos Minerais).

**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.

**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.

|                          | June 30, 2016 | December 31, 2015 |
|--------------------------|---------------|-------------------|
| Tax litigation           | 262           | 211               |
| Civil litigation         | 102           | 102               |
| Labor litigation         | 705           | 553               |
| Environmental litigation | 21            | 16                |
| <b>Total</b>             | <b>1,090</b>  | <b>882</b>        |

d) **Others**

In the third quarter of 2015, the Company filed an enforceable action in the amount of R\$524 (US\$147) referring to the final court decision in favor of the Company of the accrued interest of compulsory deposits from 1987 to 1993. Currently it is not possible to estimate the economic benefit inflow as the counterparty can appeal on the calculation. Consequently, the asset was not recognized in the financial statements.

For contingencies related to Samarco Mineração S.A., see note 4.

Table of Contents**15. Income taxes****a) Deferred income tax**

Changes in deferred tax are as follows:

|   | Assets       | Liabilities  | Total        |
|---|--------------|--------------|--------------|
| <b>Balance at March 31, 2016</b>        | <b>7,675</b> | <b>1,817</b> | <b>5,858</b> |
| Effect in income statement              | (918)        | (11)         | (907)        |
| Transfers between asset and liabilities | 59           | 59           |              |
| Translation adjustment                  | 462          | (75)         | 537          |
| Other comprehensive income              | 11           | (51)         | 62           |
| <b>Balance at June 30, 2016</b>         | <b>7,289</b> | <b>1,739</b> | <b>5,550</b> |

|                                  | Assets       | Liabilities  | Total        |
|----------------------------------|--------------|--------------|--------------|
| <b>Balance at March 31, 2015</b> | <b>4,374</b> | <b>3,099</b> | <b>1,275</b> |
| Effect in income statement       | (163)        | (45)         | (118)        |
| Translation adjustment           | 73           | (11)         | 84           |
| Other comprehensive income       | 16           | 46           | (30)         |
| <b>Balance at June 30, 2015</b>  | <b>4,300</b> | <b>3,089</b> | <b>1,211</b> |

|   | Assets       | Liabilities  | Total        |
|---|--------------|--------------|--------------|
| <b>Balance at December 31, 2015</b>     | <b>7,904</b> | <b>1,670</b> | <b>6,234</b> |
| Effect in income statement              | (1,572)      | (55)         | (1,517)      |
| Transfers between asset and liabilities | 144          | 144          |              |
| Translation adjustment                  | 942          | 49           | 893          |
| Other comprehensive income              | (129)        | (69)         | (60)         |
| <b>Balance at June 30, 2016</b>         | <b>7,289</b> | <b>1,739</b> | <b>5,550</b> |

|                                     | Assets       | Liabilities  | Total        |
|-------------------------------------|--------------|--------------|--------------|
| <b>Balance at December 31, 2014</b> | <b>3,976</b> | <b>3,341</b> | <b>635</b>   |
| Effect in income statement          | 760          | (52)         | 812          |
| Translation adjustment              | (442)        | (197)        | (245)        |
| Other comprehensive income          | 17           | (3)          | 20           |
| Acquisition of subsidiary           | (11)         |              | (11)         |
| <b>Balance at June 30, 2015</b>     | <b>4,300</b> | <b>3,089</b> | <b>1,211</b> |



**b) Income tax reconciliation**

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

|   | Three-months period ended |              | Six-months period ended |                |
|---|---------------------------|--------------|-------------------------|----------------|
|   | June 30                   |              | June 30                 |                |
|   | 2016                      | 2015         | 2016                    | 2015           |
| <b>Net income (loss) before income taxes</b>  | <b>2,441</b>              | <b>1,814</b> | <b>5,176</b>            | <b>(2,216)</b> |
| <b>Income taxes at statutory rates - 34%</b>  | <b>(830)</b>              | <b>(617)</b> | <b>(1,760)</b>          | <b>753</b>     |
| <b>Adjustments that affect the basis of taxes:</b>  |                           |              |                         |                |
| Income tax benefit from interest on stockholders' equity  |                           | 166          |                         | 356            |
| Tax incentives  | 95                        | 25           | 98                      | 25             |
| Results of overseas companies taxed by different rates which differs from the parent company rate |                           | 286          |                         | (63)           |
| Equity results  | 63                        | 74           | 120                     | (18)           |
| Additions (reversals) of tax loss carry forward   | (223)                     |              | (166)                   |                |
| Unrecognized tax losses of the period   | (164)                     |              | (349)                   |                |
| Others results in associates and joint ventures   | (353)                     |              | (353)                   |                |
| Others  | 92                        | (119)        | 135                     | (378)          |
| <b>Income taxes</b>   | <b>(1,320)</b>            | <b>(185)</b> | <b>(2,275)</b>          | <b>675</b>     |

**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 affiliates from 2003 to 2012.

At June 30, 2016, the balance of US\$5,455 (US\$442 as current and US\$5,013 as non-current) is due in 148 remaining monthly installments, bearing interest at the SELIC rate.

Table of Contents**16. Employee postretirement obligations****Reconciliation of assets and liabilities recognized in the balance sheet**

|   | Overfunded<br>pension plans | June 30, 2016<br>Underfunded<br>pension plans | Others<br>benefits | Overfunded<br>pension plans | December 31, 2015<br>Underfunded<br>pension plans | Others<br>benefits |
|---|-----------------------------|---|--------------------|-----------------------------|---|--------------------|
| <b>Balance at beginning of the period</b>         | <b>961</b>                  |   |                    | <b>1,301</b>                |   |                    |
| Interest income                                   | 72                          |   |                    | 130                         |   |                    |
| Changes in asset ceiling and<br>onerous liability | 381                         |   |                    | (54)                        |   |                    |
| Translation adjustment                            | 281                         |   |                    | (416)                       |   |                    |
| <b>Balance at end of the period</b>               | <b>1,695</b>                |   |                    | <b>961</b>                  |   |                    |
| <b>Amount recognized in the balance sheet</b>     |                             |   |                    |                             |   |                    |
| Present value of actuarial liabilities            | (3,075)                     | (4,064)                                       | (1,398)            | (2,474)                     | (3,689)   | (1,223)            |
| Fair value of assets                              | 4,770                       | 3,235   |                    | 3,435                       | 3,094   |                    |
| Effect of the asset ceiling                       | (1,695)                     |   |                    | (961)                       |   |                    |
| <b>Liabilities</b>                                |                             | <b>(829)</b>                                  | <b>(1,398)</b>     |                             | <b>(595)</b>                                      | <b>(1,223)</b>     |
| Current liabilities                               |                             | (20)  | (57)               |                             | (17)  | (51)               |
| Non-current liabilities                           |                             | (809)   | (1,341)            |                             | (578)   | (1,172)            |
| <b>Liabilities</b>                                |                             | <b>(829)</b>                                  | <b>(1,398)</b>     |                             | <b>(595)</b>                                      | <b>(1,223)</b>     |

**17. Financial instruments classification**

| Financial assets                    | June 30, 2016                                 |  |              | December 31, 2015                             |  |   | Total        |
|-------------------------------------|---|--|--------------|---|--|---|--------------|
|                                     | Loans and<br>receivables or<br>amortized cost | At fair value<br>through net<br>income | Total        | Loans and<br>receivables or<br>amortized cost | At fair value<br>through net<br>income | Derivatives<br>designated as<br>hedge<br>accounting |              |
| <b>Current</b>                      |   |  |              |   |  |   |              |
| Cash and cash equivalents           | 4,168   |  | 4,168        | 3,591   |  |   | 3,591        |
| Financial investments               | 138   |  | 138          | 28  |  |   | 28           |
| Derivative financial<br>instruments |   | 136                                    | 136          |   | 121                                    |   | 121          |
| Accounts receivable                 | 2,452   |  | 2,452        | 1,476   |  |   | 1,476        |
| Related parties                     | 68  |  | 68           | 70  |  |   | 70           |
|                                     | <b>6,826</b>                                  | <b>136</b>                             | <b>6,962</b> | <b>5,165</b>                                  | <b>121</b>                             |   | <b>5,286</b> |

**Non-current**

|                                  |              |            |              |              |            |              |
|----------------------------------|--------------|------------|--------------|--------------|------------|--------------|
| Derivative financial instruments |              | 497        | 497          |              | 93         | 93           |
| Loans                            | 179          |            | 179          | 188          |            | 188          |
| Related parties                  | 3            |            | 3            | 1            |            | 1            |
|                                  | <b>182</b>   | <b>497</b> | <b>679</b>   | <b>189</b>   | <b>93</b>  | <b>282</b>   |
| <b>Total of financial assets</b> | <b>7,008</b> | <b>633</b> | <b>7,641</b> | <b>5,354</b> | <b>214</b> | <b>5,568</b> |

**Financial liabilities****Current**

|                                  |              |              |              |              |              |           |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|-----------|
| Suppliers and contractors        | 3,891        |              | 3,891        | 3,365        |              | 3,365     |
| Derivative financial instruments |              | 1,010        | 1,010        |              | 2,023        | 53        |
| Loans and borrowings             | 3,153        |              | 3,153        | 2,506        |              | 2,506     |
| Related parties                  | 600          |              | 600          | 475          |              | 475       |
|                                  | <b>7,644</b> | <b>1,010</b> | <b>8,654</b> | <b>6,346</b> | <b>2,023</b> | <b>53</b> |

**Non-current**

|                                       |               |              |               |               |              |               |
|---------------------------------------|---------------|--------------|---------------|---------------|--------------|---------------|
| Derivative financial instruments      |               | 1,201        | 1,201         |               | 1,429        | 1,429         |
| Loans and borrowings                  | 28,661        |              | 28,661        | 26,347        |              | 26,347        |
| Related parties                       | 144           |              | 144           | 213           |              | 213           |
| Participative stockholders debentures |               | 617          | 617           |               | 342          | 342           |
| Others (i)                            |               | 220          | 220           |               | 141          | 141           |
|                                       | <b>28,805</b> | <b>2,038</b> | <b>30,843</b> | <b>26,560</b> | <b>1,912</b> | <b>28,472</b> |
| <b>Total of financial liabilities</b> | <b>36,449</b> | <b>3,048</b> | <b>39,497</b> | <b>32,906</b> | <b>3,935</b> | <b>53</b>     |

---

(i) See note 18(a).

Table of Contents**18. Fair value estimate****a) Assets and liabilities measured and recognized at fair value:**

|                                       | June 30, 2016 |            |              | December 31, 2015 |            |              |
|---------------------------------------|---------------|------------|--------------|-------------------|------------|--------------|
|                                       | Level 2       | Level 3    | Total        | Level 2           | Level 3    | Total        |
| <b>Financial assets</b>               |               |            |              |                   |            |              |
| Derivative financial instruments      | 308           | 325        | 633          | 214               |            | 214          |
| <b>Total</b>                          | <b>308</b>    | <b>325</b> | <b>633</b>   | <b>214</b>        |            | <b>214</b>   |
| <b>Financial liabilities</b>          |               |            |              |                   |            |              |
| Derivative financial instruments      | 1,968         | 243        | 2,211        | 3,505             |            | 3,505        |
| Participative stockholders debentures | 617           |            | 617          | 342               |            | 342          |
| Others (minimum return instrument)    |               | 220        | 220          |                   | 141        | 141          |
| <b>Total</b>                          | <b>2,585</b>  | <b>463</b> | <b>3,048</b> | <b>3,847</b>      | <b>141</b> | <b>3,988</b> |

There are no changes in the methods and techniques of evaluation of instruments above compared to disclosed in the financial statements as at December 31, 2015.

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

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

| Financial liabilities    | Balance | Fair value | Level 1 | Level 2 |
|--------------------------|---------|------------|---------|---------|
| <b>June 30, 2016</b>     |         |            |         |         |
| Debt principal           | 31,087  | 30,450     | 14,884  | 15,566  |
| <b>December 31, 2015</b> |         |            |         |         |
| Debt principal           | 28,229  | 26,233     | 12,297  | 13,936  |

**19. Derivative financial instruments**

## a) Derivatives effects on balance sheet

|   | June 30, 2016 |             | December 31, 2015 |             |
|---|---------------|-------------|-------------------|-------------|
|   | Current       | Non-current | Current           | Non-current |
| <b>Derivatives not designated as hedge accounting</b> |               |             |                   |             |
| <b>Foreign exchange and interest rate risk</b>        |               |             |                   |             |
| CDI & TJLP vs. US\$ fixed and floating rate swap      | 110           | 54          | 69                |             |
| IPCA swap   | 7             | 50          | 2                 | 16          |
| Pré-dolar swap  | 2             | 30          |                   |             |
|   | <b>119</b>    | <b>134</b>  | <b>71</b>         | <b>16</b>   |
| <b>Commodities price risk</b>                         |               |             |                   |             |
| Nickel  | 15            | 2           | 50                | 11          |
| Bunker oil  | 2             |             |                   |             |
|   | <b>17</b>     | <b>2</b>    | <b>50</b>         | <b>11</b>   |
| <b>Others</b>   |               | 361         |                   | 66          |
|   |               | <b>361</b>  |                   | <b>66</b>   |
| <b>Total</b>  | <b>136</b>    | <b>497</b>  | <b>121</b>        | <b>93</b>   |

Table of Contents

|   | June 30, 2016 |              | December 31, 2015 |              |
|---|---------------|--------------|-------------------|--------------|
|   | Current       | Non-current  | Current           | Non-current  |
| <b>Derivatives not designated as hedge accounting</b>       |               |              |                   |              |
| <b>Foreign exchange and interest rate risk</b>              |               |              |                   |              |
| CDI & TJLP vs. US\$ fixed and floating rate swap            | 615           | 809          | 799               | 1,131        |
| IPCA swap   | 26            | 71           | 21                | 101          |
| Eurobonds swap  | 6             | 33           | 146               | 29           |
| Euro Forward  | 12            |              |                   |              |
| Pre dollar swap   | 20            | 43           | 93                | 72           |
|   | <b>679</b>    | <b>956</b>   | <b>1,059</b>      | <b>1,333</b> |
| <b>Commodities price risk</b>                               |               |              |                   |              |
| Nickel  | 15            | 1            | 40                | 10           |
| Bunker oil  | 316           |              | 924               |              |
|   | <b>331</b>    | <b>1</b>     | <b>964</b>        | <b>10</b>    |
| <b>Others</b>   |               |              |                   |              |
|   |               | 244          |                   | 86           |
|   |               | <b>244</b>   |                   | <b>86</b>    |
| <b>Derivatives designated as cash flow hedge accounting</b> |               |              |                   |              |
| Bunker oil  |               |              | 50                |              |
| Foreign exchange  |               |              | 3                 |              |
|   |               |              | <b>53</b>         |              |
| <b>Total</b>  | <b>1,010</b>  | <b>1,201</b> | <b>2,076</b>      | <b>1,429</b> |

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

|   | Gain (loss) recognized in the income statement |            | Three-months period ended June 30           |            | Gain(loss) recognized in other comprehensive income |      |
|---|--|------------|---|------------|---|------|
|   | 2016   | 2015       | Financial settlement inflows(outflows) 2016 | 2015       | 2016  | 2015 |
| <b>Derivatives not designated as hedge accounting</b> |  |            |   |            |   |      |
| <b>Foreign exchange and interest rate risk</b>        |  |            |   |            |   |      |
| CDI & TJLP vs. US\$ fixed and floating rate swap      | 444  | 178        | (49)  | 9          |   |      |
| IPCA swap   | 31   | 24         |   | 3          |   |      |
| Eurobonds swap  | (20)   | 28         |   | (13)       |   |      |
| Euro forward  | (14)   |            |   |            |   |      |
| Pre dollar swap                                       | 42   | 13         | (1)   | (2)        |   |      |
|   | <b>483</b>                                     | <b>243</b> | <b>(50)</b>                                 | <b>(3)</b> |   |      |
| <b>Commodities price risk</b>                         |  |            |   |            |   |      |

Edgar Filing: Vale S.A. - Form 6-K

|  |            |             |              |              |            |
|--|------------|-------------|--------------|--------------|------------|
| Nickel                                     | (13)       | (11)        | (9)          | (11)         |            |
| Bunker oil                                 | 148        | 79          | (294)        | 10           |            |
|  | <b>135</b> | <b>68</b>   | <b>(303)</b> | <b>(1)</b>   |            |
| <b>Others</b>                              | <b>141</b> | <b>(66)</b> |              |              |            |
| <b>Derivatives designated as cash flow</b> |            |             |              |              |            |
| <b>hedge accounting</b>                    |            |             |              |              |            |
| Bunker oil                                 |            | (88)        |              | (88)         | 170        |
| Foreign exchange                           |            | (10)        |              | (10)         | 10         |
|  |            | <b>(98)</b> |              | <b>(98)</b>  | <b>180</b> |
| <b>Total</b>                               | <b>759</b> | <b>147</b>  | <b>(353)</b> | <b>(102)</b> | <b>180</b> |

Table of Contents

|   | Gain (loss) recognized in the<br>income statement |                | Six-months period ended June 30<br>Financial settlement<br>inflows(outflows) |              | Gain(loss) recognized in other<br>comprehensive income |            |
|---|---|----------------|--|--------------|--|------------|
|   | 2016  | 2015           | 2016   | 2015         | 2016   | 2015       |
| <b>Derivatives not designated as hedge<br/>accounting</b>       |   |                |  |              |  |            |
| <b>Foreign exchange and interest rate<br/>risk</b>              |   |                |  |              |  |            |
| CDI & TJLP vs. US\$ fixed and floating<br>rate swap             | 838   | (772)          | (92)   | (335)        |  |            |
| IPCA swap   | 73  | (49)           | 1  | 7            |  |            |
| Eurobonds swap  | (6)   | (123)          | (142)  | (13)         |  |            |
| Euro forward  | (12)  |                |  |              |  |            |
| Pre dollar swap   | 76  | (76)           | (74)   | (4)          |  |            |
|   | <b>969</b>  | <b>(1,020)</b> | <b>(307)</b>   | <b>(345)</b> |  |            |
| <b>Commodities price risk</b>                                   |   |                |  |              |  |            |
| Nickel  | (37)  | (19)           | (26)   | (26)         |  |            |
| Bunker oil  | 134   | 30             | (476)  | (145)        |  |            |
|   | <b>97</b>   | <b>11</b>      | <b>(502)</b>   | <b>(171)</b> |  |            |
| <b>Others</b>   | <b>136</b>  | <b>(71)</b>    |  |              |  |            |
| <b>Derivatives designated as cash flow<br/>hedge accounting</b> |   |                |  |              |  |            |
| Bunker oil  |   | (208)          | (51)   | (218)        | 288  |            |
| Foreign exchange  | (3)   | (25)           | (3)  | (25)         | 2  | 7          |
|   | <b>(3)</b>  | <b>(233)</b>   | <b>(54)</b>  | <b>(243)</b> | <b>2</b>   | <b>295</b> |
| <b>Total</b>  | <b>1,199</b>                                      | <b>(1,313)</b> | <b>(863)</b>   | <b>(759)</b> | <b>2</b>   | <b>295</b> |

The Company recognized as operating income and financial results the loss of US\$88 and gain of US\$235 for the three-months period ended June 30, 2015, and US\$208 and US\$1,105 of losses for the six-month ended June 30, 2015. In 2016, all derivatives impacts were charged to financial results.

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

|                               | <b>Last maturity dates</b> |
|-------------------------------|----------------------------|
| Currencies and interest rates | July 2023                  |
| Bunker oil                    | December 2016              |
| Nickel                        | August 2018                |
| Others                        | December 2027              |

**Additional information about derivatives financial instruments**



## Edgar Filing: Vale S.A. - Form 6-K

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 June 30, 2016. 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 June 30, 2016, 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.

Table of Contentsa) **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.

| Flow                                    | Notional      |                   | Index | Average rate | Fair value                          |               | Financial Settlement | Value at Risk |       | Fair value by year |       |       |  |
|---|---------------|-------------------|-------|--------------|-------------------------------------|---------------|----------------------|---------------|-------|--------------------|-------|-------|--|
|   | June 30, 2016 | December 31, 2015 |       |              | Inflows (Outflows)<br>June 30, 2016 | June 30, 2016 | 2016                 | 2017          | 2018  | 2019+              |       |       |  |
| <b>CDI vs. US\$ fixed rate swap</b>     |               |                   |       |              | (540)                               | (783)         | 61                   | 49            | (382) | 15                 | (173) |       |  |
| Receivable                              | R\$ 5,739     | R\$ 5,239         | CDI   | 107.41%      |                                     |               |                      |               |       |                    |       |       |  |
| Payable                                 | US\$ 2,427    | US\$ 2,288        | Fix   | 3.47%        |                                     |               |                      |               |       |                    |       |       |  |
| <b>TJLP vs. US\$ fixed rate swap</b>    |               |                   |       |              | (669)                               | (1,015)       | (153)                | 68            | (51)  | (215)              | (104) | (298) |  |
| Receivable                              |               |                   | TJLP  |              |                                     |               |                      |               |       |                    |       |       |  |
|   | R\$ 5,096     | R\$ 5,484         | +     | 1.33%        |                                     |               |                      |               |       |                    |       |       |  |
| Payable                                 | US\$ 2,251    | US\$ 2,611        | Fix   | 1.72%        |                                     |               |                      |               |       |                    |       |       |  |
| <b>TJLP vs. US\$ floating rate swap</b> |               |                   |       |              | (51)                                | (63)          | (1)                  | 5             | (1)   | (3)                | (4)   | (43)  |  |
| Receivable                              |               |                   | TJLP  |              |                                     |               |                      |               |       |                    |       |       |  |
|   | R\$ 256       | R\$ 267           | +     | 0.92%        |                                     |               |                      |               |       |                    |       |       |  |
| Payable                                 |               |                   | Libor |              |                                     |               |                      |               |       |                    |       |       |  |
|   | US\$ 148      | US\$ 156          | +     | -1.21%       |                                     |               |                      |               |       |                    |       |       |  |
| <b>R\$ fixed rate vs. US\$ fixed</b>    |               |                   |       |              | (31)                                | (165)         | (74)                 | 24            | (16)  | (4)                | 11    | (21)  |  |

| <b>rate swap</b>                     |            |            |      |        |      |       |   |     |                   |
|--------------------------------------|------------|------------|------|--------|------|-------|---|-----|-------------------|
| Receivable                           | R\$ 1,128  | R\$ 1,356  | Fix  | 7.32%  |      |       |   |     |                   |
| Payable                              | US\$ 391   | US\$ 528   | Fix  | -0.83% |      |       |   |     |                   |
| <b>IPCA vs. US\$ fixed rate swap</b> |            |            |      |        | (56) | (105) | 1 | 11  | 6 4.9 (67)        |
| Receivable                           |            |            | IPCA |        |      |       |   |     |                   |
|                                      | R\$ 1,000  | R\$ 1,000  | +    | 6.55%  |      |       |   |     |                   |
| Payable                              | US\$ 434   | US\$ 434   | Fix  | 3.98%  |      |       |   |     |                   |
| <b>IPCA vs. CDI swap</b>             |            |            |      |        | 16   | 2     |   | 0.4 | (25) (18) (11) 70 |
| Receivable                           |            |            | IPCA |        |      |       |   |     |                   |
|                                      | R\$ 1,350  | R\$ 1,350  | +    | 6.62%  |      |       |   |     |                   |
| Payable                              | US\$ 1,350 | US\$ 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\$. And in those forwards only the principal amount of the debt is converted from EUR to US\$.

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      |                   |     |              | Fair value    |                   | Financial Settlement             | Value at Risk | Fair value by year |      |      |       |
|--|---------------|-------------------|-----|--------------|---------------|-------------------|----------------------------------|---------------|--------------------|------|------|-------|
|  | June 30, 2016 | December 31, 2015 | Fix | Average rate | June 30, 2016 | December 31, 2015 | Inflows (Outflows) June 30, 2016 | June 30, 2016 | 2016               | 2017 | 2018 | 2019+ |
| <b>EUR fixed rate vs. US\$ fixed rate swap</b> |               |                   |     |              |               |                   |                                  |               |                    |      |      |       |
|  |               |                   |     |              | (39)          | (175)             | (141)                            | 10            | (5)                | (5)  | (28) |       |
| Receivable                                     | 500           | 1,000             | Fix | 3.75%        |               |                   |                                  |               |                    |      |      |       |
| Payable  | US\$3         | US\$302           | Fix | 4.29%        |               |                   |                                  |               |                    |      |      |       |

| Flow     | Notional      |                   | Bought / Sold | Average rate (USD/EUR) | Fair value    |                   | Financial Settlement             | Value at Risk | Fair value by year |      |
|----------|---------------|-------------------|---------------|------------------------|---------------|-------------------|----------------------------------|---------------|--------------------|------|
|          | June 30, 2016 | December 31, 2015 |               |                        | June 30, 2016 | December 31, 2015 | Inflows (Outflows) June 30, 2016 | June 30, 2016 | 2016               | 2017 |
| Forwards | 500           |                   | B             | 1.143                  | (12)          |                   |                                  |               | 6.3                | (12) |

Table of Contents**(iii) Foreign exchange hedging program for disbursements in CAD**

In order to reduce the cash flow volatility, forward transactions were implemented to mitigate the foreign exchange exposure that arises from the currency mismatch between revenues denominated in US\$ and disbursements denominated in CAD.

The forward transactions were negotiated over-the-counter and the protected item is part of the CAD denominated disbursements. The financial settlement inflows/outflows are offset by the protected items losses/gains due to CAD/US\$ exchange rate. This program is classified under the hedge accounting requirements, and it was settled in this quarter.

| Flow     | Notional      |                   | Bought /<br>Sold | Average rate<br>(CAD / USD) | Fair value    |                   | Financial Settlement                |                                | Fair value<br>by year<br>2016 |
|----------|---------------|-------------------|------------------|-----------------------------|---------------|-------------------|-------------------------------------|--------------------------------|-------------------------------|
|          | June 30, 2016 | December 31, 2015 |                  |                             | June 30, 2016 | December 31, 2015 | Inflows (Outflows)<br>June 30, 2016 | Value at Risk<br>June 30, 2016 |                               |
| Forwards |               | CAD 10            | B                | 1.028                       |               |                   |                                     | (2)                            |                               |

**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. These transactions are usually executed through forward purchases and 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 /<br>Sold | Average strike<br>(US\$/ton) | Fair value    |                   | Financial settlement                |                                | Fair value<br>by year<br>2016 |
|------|----------------|-------------------|------------------|------------------------------|---------------|-------------------|-------------------------------------|--------------------------------|-------------------------------|
|      | June 30, 2016  | December 31, 2015 |                  |                              | June 30, 2016 | December 31, 2015 | Inflows (Outflows)<br>June 30, 2016 | Value at Risk<br>June 30, 2016 |                               |

Edgar Filing: Vale S.A. - Form 6-K

| <b>Bunker Oil protection</b> |           |           |   |     |              |              |       |      |              |
|------------------------------|-----------|-----------|---|-----|--------------|--------------|-------|------|--------------|
| Forwards                     | 705,000   | 1,867,500 | B | 511 | (180)        | (577)        | (331) | 8    | (180)        |
| Call options                 | 1,080,000 | 2,041,500 | B | 380 | 1.86         | 0.02         |       | 0.77 | 1.86         |
| Put options                  | 1,080,000 | 2,041,500 | S | 300 | (57)         | (297)        | (145) | 9    | (57)         |
| <b>Total</b>                 |           |           |   |     | <b>(235)</b> | <b>(873)</b> |       |      | <b>(235)</b> |

As at June 30, 2016 and December 31, 2015, excludes US\$79 and US\$102, respectively, of transactions in which the financial

settlement occurs subsequently of the closing month.

**(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 | Value at Risk Fair value by year |        |               |   |
|---|----------------|-------------------|---------------|---------------------------|----------------------------------|---------------|----------------------|----------------------------------|--------|---------------|---|
|   | June 30, 2016  | December 31, 2015 |               |                           | Inflows (Outflows) June 30, 2016 | June 30, 2016 | June 30, 2016        | 2016                             | 2017   | 2018          |   |
| <b>Fixed price sales protection</b>     |                |                   |               |                           |                                  |               |                      |                                  |        |               |   |
| Nickel forwards                         | 14,545         | 16,917            | B             | 10,429                    | (13)                             | (46)          | (28)                 | 4                                | (9)    | (5)           | 1 |
| <b>Raw material purchase protection</b> |                |                   |               |                           |                                  |               |                      |                                  |        |               |   |
| Nickel forwards                         | 178            | 118               | S             | 8,813                     | (0.11)                           | 0.10          | 0.10                 | 0.05                             | (0.11) |               |   |
| Copper forwards                         | 581            | 385               | S             | 4,774                     | (0.04)                           | 0.09          | 0.08                 | 0.06                             | (0.04) |               |   |
| <b>Total</b>                            |                |                   |               |                           | <b>(0.15)</b>                    | <b>0.19</b>   |                      |                                  |        | <b>(0.15)</b> |   |



Table of Contents**c) Silver Wheaton Corp. warrants**

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 /<br>Sold | Average strike<br>(US\$/share) | Fair value    |                   | Financial settlement<br>Inflows (Outflows)<br>June 30, 2016 | Value at Risk<br>June 30, 2016 | Fair value<br>by year<br>2023 |
|--------------|---------------------|-------------------|------------------|--------------------------------|---------------|-------------------|---|--------------------------------|-------------------------------|
|              | June 30, 2016       | December 31, 2015 |                  |                                | June 30, 2016 | December 31, 2015 |   |                                |                               |
| Call options | 10,000,000          | 10,000,000        | B                | 65                             | 36            | 7                 |   | 6                              | 36                            |

**d) Call options from debentures**

The company has debentures in which lenders (related parties) have call options of a specified quantity of Ferrovia Norte Sul ordinary shares, later changed to VLI SA shares. The call options strike price is given by the debentures remaining notional in each exercise date.

| Flow         | Notional (quantity) |                   | Bought /<br>Sold | Average strike<br>(R\$/share) | Fair value    |                   | Financial settlement<br>Inflows (Outflows)<br>June 30, 2016 | Value at Risk<br>June 30, 2016 | Fair value<br>by year<br>2027 |
|--------------|---------------------|-------------------|------------------|-------------------------------|---------------|-------------------|---|--------------------------------|-------------------------------|
|              | June 30, 2016       | December 31, 2015 |                  |                               | June 30, 2016 | December 31, 2015 |   |                                |                               |
| Call options | 140,239             | 140,239           | S                | 8,570                         | (43)          | (39)              |   | 3                              | (43)                          |

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

The Company entered into a contract that has options related to MBR shares. Under certain restrictions and contingent conditions, which are beyond the holder's control, such as illegality due to changes in the law, the contract has a clause that gives the holders (related parties) 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.

Edgar Filing: Vale S.A. - Form 6-K

| Flow    | Notional (quantity, in millions) |                   | Bought /<br>Sold | Average strike<br>(R\$/share) | Fair value                          |               | Financial settlement | Value at Risk<br>June 30, 2016 | Fair value<br>by year<br>2016+ |
|---------|----------------------------------|-------------------|------------------|-------------------------------|-------------------------------------|---------------|----------------------|--------------------------------|--------------------------------|
|         | June 30, 2016                    | December 31, 2015 |                  |                               | Inflows (Outflows)<br>June 30, 2016 | June 30, 2016 | December 31, 2015    |                                |                                |
| Options | 2,139                            | 2,139             | B/S              | 1.9                           | 125                                 | 15            |                      | 9                              | 125                            |

f) **Embedded derivatives in commercial 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 /<br>Sold | Average strike<br>(US\$/ton) | Fair value                          |               | Financial settlement | Value at Risk<br>June 30, 2016 | Fair value<br>by year<br>2016 |
|-----------------|----------------|-------------------|------------------|------------------------------|-------------------------------------|---------------|----------------------|--------------------------------|-------------------------------|
|                 | June 30, 2016  | December 31, 2015 |                  |                              | Inflows (Outflows)<br>June 30, 2016 | June 30, 2016 | December 31, 2015    |                                |                               |
| Nickel forwards | 4,983          | 3,877             | S                | 8,543                        | (0.3)                               | 3.0           |                      |                                | (0.7)                         |
| Copper forwards | 3,937          | 5,939             | S                | 4,653                        | (0.4)                               | 2.0           |                      |                                | 0.3                           |
| <b>Total</b>    |                |                   |                  |                              | <b>(0.7)</b>                        | <b>5.0</b>    |                      | <b>1.8</b>                     | <b>(0.3)</b>                  |

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 /<br>Sold | Average strike<br>(US\$/ton) | Fair value                          |               | Financial settlement | Value at Risk<br>June 30, 2016 | Fair value by year |       |       |
|--------------|-------------------------|-------------------|------------------|------------------------------|-------------------------------------|---------------|----------------------|--------------------------------|--------------------|-------|-------|
|              | June 30, 2016           | December 31, 2015 |                  |                              | Inflows (Outflows)<br>June 30, 2016 | June 30, 2016 | 2016                 |                                | 2017               | 2018+ |       |
| Call options | 746,667                 | 746,667           | S                | 179                          | (1.3)                               |               |                      | 0.8                            | (0.0)              | (0.0) | (1.3) |



Table of Contentsg) **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 June 30, 2016
- *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

| Instrument                                     | Instrument's main risk events             | Scenario I | Scenario II | Scenario III |
|--|---|------------|-------------|--------------|
| <b>CDI vs. US\$ fixed rate swap</b>            | R\$ depreciation                          | (540)      | (1.158)     | (1.776)      |
|  | US\$ interest rate inside Brazil decrease | (540)      | (551)       | (563)        |
|  | Brazilian interest rate increase          | (540)      | (543)       | (545)        |
|  | Protected item: R\$ denominated debt      | n.a.       |             |              |
| <b>TJLP vs. US\$ fixed rate swap</b>           | R\$ depreciation                          | (669)      | (1.214)     | (1.758)      |
|  | US\$ interest rate inside Brazil decrease | (669)      | (703)       | (740)        |
|  | Brazilian interest rate increase          | (669)      | (741)       | (805)        |
|  | TJLP interest rate decrease               | (669)      | (717)       | (766)        |
| Protected item: R\$ denominated debt           | R\$ depreciation                          | n.a.       |             |              |
| <b>TJLP vs. US\$ floating rate swap</b>        | R\$ depreciation                          | (51)       | (84)        | (118)        |
|  | US\$ interest rate inside Brazil decrease | (51)       | (54)        | (57)         |
|  | Brazilian interest rate increase          | (51)       | (56)        | (60)         |
|  | TJLP interest rate decrease               | (51)       | (54)        | (58)         |
| Protected item: R\$ denominated debt           | R\$ depreciation                          | n.a.       |             |              |
| <b>R\$ fixed rate vs. US\$ fixed rate swap</b> | R\$ depreciation                          | (31)       | (130)       | (229)        |
|  | US\$ interest rate inside Brazil decrease | (31)       | (45)        | (61)         |
|  | Brazilian interest rate increase          | (31)       | (63)        | (90)         |
| Protected item: R\$ denominated debt           | R\$ depreciation                          | n.a.       |             |              |
| <b>IPCA vs. US\$ fixed rate swap</b>           | R\$ depreciation                          | (56)       | (171)       | (287)        |
|  | US\$ interest rate inside Brazil decrease | (56)       | (64)        | (74)         |
|  | Brazilian interest rate increase          | (56)       | (88)        | (116)        |
|  | IPCA index decrease                       | (56)       | (72)        | (87)         |
| Protected item: R\$ denominated debt           | R\$ depreciation                          | n.a.       |             |              |

Edgar Filing: Vale S.A. - Form 6-K

|  |                                  |      |       |       |
|--|----------------------------------|------|-------|-------|
| <b>IPCA vs. CDI swap</b>                               | Brazilian interest rate increase | 16   | (34)  | (77)  |
|  | IPCA index decrease              | 16   | (9)   | (33)  |
| Protected item: R\$ denominated debt linked to<br>IPCA | IPCA index decrease              | n.a. | 9     | 33    |
| <b>EUR fixed rate vs. US\$ fixed rate swap</b>         | EUR depreciation                 | (39) | (213) | (388) |
|  | Euribor increase                 | (39) | (43)  | (48)  |
|  | US\$ Libor decrease              | (39) | (51)  | (63)  |
| Protected item: EUR denominated debt                   | EUR depreciation                 | n.a. | 213   | 388   |
| <b>EUR Forward</b>                                     | EUR depreciation                 | (12) | (151) | (290) |
|  | Euribor increase                 | (12) | (13)  | (13)  |
|  | US\$ Libor decrease              | (12) | (13)  | (14)  |
| Protected item: EUR denominated debt                   | EUR depreciation                 | n.a. | 151   | (290) |

Table of Contents

| Instrument  | Instrument's main risk events   | Scenario I | Scenario II | Scenario III |
|---|---------------------------------|------------|-------------|--------------|
| <b>Bunker Oil protection</b>                                    |                                 |            |             |              |
| Forwards and options  | Bunker Oil price decrease       | (235)      | (340)       | (453)        |
| Protected item: Part of costs linked to bunker oil prices       | Bunker Oil price decrease       | n.a.       | 340         | 453          |
| <b>Nickel sales fixed price protection</b>                      |                                 |            |             |              |
| Forwards  | Nickel price decrease           | (13)       | (48)        | (82)         |
| Protected item: Part of nickel revenues with fixed prices       | Nickel price fluctuation        | n.a.       | 48          | 82           |
| <b>Purchase protection program</b>                              |                                 |            |             |              |
| Nickel forwards   | Nickel price increase           | (0,1)      | (0,5)       | (0,9)        |
| Protected item: Part of costs linked to nickel prices           | Nickel price increase           | n.a.       | 0,5         | 0,9          |
| Copper forwards   | Copper price increase           | (0,0)      | (0,7)       | (1,5)        |
| Protected item: Part of costs linked to copper prices           | Copper price increase           | n.a.       | 0,7         | 1,5          |
| <b>SLW warrants</b>   | SLW stock price decrease        | 36         | 5           | (21)         |
| <b>VLI call options</b>   | VLI stock value increase        | (43)       | (69)        | (95)         |
| <b>Options regarding non-controlling interest in subsidiary</b> | Subsidiary stock value decrease | 125        | 48          | (10)         |

| Instrument  | Main risks            | Scenario I | Scenario II | Scenario III |
|---|-----------------------|------------|-------------|--------------|
| Embedded derivatives - Raw material purchase (nickel) | Nickel price increase | (0,3)      | (11,4)      | (22,5)       |
| Embedded derivatives - Raw material purchase (copper) | Copper price increase | (0,4)      | (5,0)       | (9,5)        |
| Embedded derivatives - Gas purchase                   | Pellet price increase | (1,3)      | (2,6)       | (4,6)        |

**h) 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.

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 June 30, 2016.

| <b>Long term ratings by counterparty</b> | <b>Moody s</b> | <b>S&amp;P</b> |
|--|----------------|----------------|
| ANZ Australia and New Zealand Banking    | Aa2            | AA-            |
| Banco Bradesco                           | Ba3            | BB             |
| Banco de Credito del Peru                | Baa1           | BBB            |
| Banco do Brasil                          | Ba3            | BB             |
| Banco do Nordeste                        | Ba3            | BB             |
| Banco Safra                              | Ba3            | BB             |
| Banco Santander                          | Ba3            | BB             |
| Banco Votorantim                         | Ba3            | BB             |
| Bank of America                          | Baa1           | BBB+           |
| Bank of Nova Scotia                      | Aa3            | A+             |
| Bank of Tokyo Mitsubishi UFJ             | A1             | A              |
| Banpara                                  | Ba3            | BB-            |
| Barclays                                 | Baa3           | BBB            |
| BBVA                                     | A3             | BBB+           |
| BNP Paribas                              | A1             | A              |
| BTG Pactual                              | Ba3            | B+             |
| Caixa Economica Federal                  | Ba3            | BB             |
| Citigroup                                | Baa1           | BBB+           |
| Credit Agricole                          | A2             | A              |
| Deutsche Bank                            | A3             | BBB+           |
| Goldman Sachs                            | A3             | BBB+           |
| HSBC                                     | A1             | A              |
| Intesa Sanpaolo Spa                      | A3             | BBB-           |
| Itau Unibanco                            | Ba3            | BB             |
| JP Morgan Chase & Co                     | A3             | A-             |
| Macquarie Group Ltd                      | A3             | BBB            |
| Morgan Stanley                           | A3             | BBB+           |
| National Australia Bank NAB              | Aa2            | AA-            |
| Royal Bank of Canada                     | Aa3            | AA-            |
| Societe Generale                         | A2             | A              |
| Standard Bank Group                      | Baa3           |                |
| Standard Chartered                       | A1             | BBB+           |

Table of Contents**i) Market curves**

The curves used on the pricing of derivatives instruments were developed based on data from BM&F Bovespa, Central Bank of Brazil, London Metals Exchange and Bloomberg.

**(i) Products****Nickel**

| <b>Maturity</b> | <b>Price (US\$/ton)</b> | <b>Maturity</b> | <b>Price (US\$/ton)</b> | <b>Maturity</b> | <b>Price (US\$/ton)</b> |
|-----------------|-------------------------|-----------------|-------------------------|-----------------|-------------------------|
| SPOT            | 9,415                   | DEC16           | 9,488                   | JUN17           | 9,556                   |
| JUL16           | 9,416                   | JAN17           | 9,502                   | JUN18           | 9,671                   |
| AUG16           | 9,433                   | FEB17           | 9,515                   | JUN19           | 9,773                   |
| SEP16           | 9,447                   | MAR17           | 9,527                   | JUN20           | 9,860                   |
| OCT16           | 9,462                   | APR17           | 9,536                   |                 |                         |
| NOV16           | 9,476                   | MAY17           | 9,547                   |                 |                         |

**Copper**

| <b>Maturity</b> | <b>Price (US\$/lb)</b> | <b>Maturity</b> | <b>Price (US\$/lb)</b> | <b>Maturity</b> | <b>Price (US\$/lb)</b> |
|-----------------|------------------------|-----------------|------------------------|-----------------|------------------------|
| SPOT            | 2.20                   | DEC16           | 2.20                   | JUN17           | 2.20                   |
| JUL16           | 2.20                   | JAN17           | 2.20                   | JUN18           | 2.22                   |
| AUG16           | 2.20                   | FEB17           | 2.20                   | JUN19           | 2.22                   |
| SEP16           | 2.20                   | MAR17           | 2.20                   | JUN20           | 2.24                   |
| OCT16           | 2.20                   | APR17           | 2.20                   |                 |                        |
| NOV16           | 2.20                   | MAY17           | 2.20                   |                 |                        |

**Bunker Oil**

| <b>Maturity</b> | <b>Price (US\$/ton)</b> | <b>Maturity</b> | <b>Price (US\$/ton)</b> | <b>Maturity</b> | <b>Price (US\$/ton)</b> |
|-----------------|-------------------------|-----------------|-------------------------|-----------------|-------------------------|
| SPOT            | 257                     | DEC16           | 253                     | JUN17           | 263                     |

Edgar Filing: Vale S.A. - Form 6-K

|       |     |       |     |       |     |
|-------|-----|-------|-----|-------|-----|
| JUL16 | 254 | JAN17 | 255 | JUN18 | 281 |
| AUG16 | 250 | FEB17 | 257 | JUN19 | 295 |
| SEP16 | 250 | MAR17 | 259 | JUN20 | 310 |
| OCT16 | 250 | APR17 | 260 |       |     |
| NOV16 | 252 | MAY17 | 262 |       |     |

(ii) Foreign exchange and interest rates

US\$-Brazil Interest Rate

| Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) |
|----------|---------------|----------|---------------|----------|---------------|
| 08/01/16 | 3.54          | 06/01/17 | 2.80          | 10/01/19 | 3.52          |
| 09/01/16 | 3.12          | 07/03/17 | 2.80          | 01/02/20 | 3.67          |
| 10/03/16 | 2.90          | 10/02/17 | 2.89          | 04/01/20 | 3.72          |
| 11/01/16 | 2.80          | 01/02/18 | 2.96          | 07/01/20 | 3.86          |
| 12/01/16 | 2.72          | 04/02/18 | 3.03          | 10/01/20 | 4.03          |
| 01/02/17 | 2.69          | 07/02/18 | 3.10          | 01/04/21 | 4.14          |
| 02/01/17 | 2.69          | 10/01/18 | 3.21          | 04/01/21 | 4.25          |
| 03/01/17 | 2.71          | 01/02/19 | 3.28          | 07/01/21 | 4.35          |
| 04/03/17 | 2.73          | 04/01/19 | 3.39          | 01/03/22 | 4.63          |
| 05/02/17 | 2.77          | 07/01/19 | 3.46          | 01/02/23 | 5.09          |

US\$ Interest Rate

| Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) |
|----------|---------------|----------|---------------|----------|---------------|
| 1M       | 0.47          | 6M       | 0.67          | 11M      | 0.68          |
| 2M       | 0.55          | 7M       | 0.67          | 12M      | 0.68          |
| 3M       | 0.65          | 8M       | 0.67          | 2Y       | 0.74          |
| 4M       | 0.66          | 9M       | 0.68          | 3Y       | 0.81          |
| 5M       | 0.67          | 10M      | 0.68          | 4Y       | 0.90          |

TJLP

| Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) |
|----------|---------------|----------|---------------|----------|---------------|
| 08/01/16 | 7.50          | 06/01/17 | 7.50          | 10/01/19 | 7.50          |
| 09/01/16 | 7.50          | 07/03/17 | 7.50          | 01/02/20 | 7.50          |
| 10/03/16 | 7.50          | 10/02/17 | 7.50          | 04/01/20 | 7.50          |
| 11/01/16 | 7.50          | 01/02/18 | 7.50          | 07/01/20 | 7.50          |
| 12/01/16 | 7.50          | 04/02/18 | 7.50          | 10/01/20 | 7.50          |
| 01/02/17 | 7.50          | 07/02/18 | 7.50          | 01/04/21 | 7.50          |
| 02/01/17 | 7.50          | 10/01/18 | 7.50          | 04/01/21 | 7.50          |
| 03/01/17 | 7.50          | 01/02/19 | 7.50          | 07/01/21 | 7.50          |
| 04/03/17 | 7.50          | 04/01/19 | 7.50          | 01/03/22 | 7.50          |
| 05/02/17 | 7.50          | 07/01/19 | 7.50          | 01/02/23 | 7.50          |

Table of Contents**BRL Interest Rate**

| <b>Maturity</b> | <b>Rate (% p.a.)</b> | <b>Maturity</b> | <b>Rate (% p.a.)</b> | <b>Maturity</b> | <b>Rate (% p.a.)</b> |
|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| 08/01/16        | 14.11                | 06/01/17        | 13.43                | 10/01/19        | 12.30                |
| 09/01/16        | 14.11                | 07/03/17        | 13.34                | 01/02/20        | 12.24                |
| 10/03/16        | 14.10                | 10/02/17        | 13.11                | 04/01/20        | 12.22                |
| 11/01/16        | 14.06                | 01/02/18        | 12.88                | 07/01/20        | 12.21                |
| 12/01/16        | 14.03                | 04/02/18        | 12.74                | 10/01/20        | 12.20                |
| 01/02/17        | 13.92                | 07/02/18        | 12.61                | 01/04/21        | 12.15                |
| 02/01/17        | 13.80                | 10/01/18        | 12.53                | 04/01/21        | 12.16                |
| 03/01/17        | 13.72                | 01/02/19        | 12.41                | 07/01/21        | 12.16                |
| 04/03/17        | 13.64                | 04/01/19        | 12.35                | 01/03/22        | 12.17                |
| 05/02/17        | 13.55                | 07/01/19        | 12.33                | 01/02/23        | 12.24                |

**Implicit Inflation (IPCA)**

| <b>Maturity</b> | <b>Rate (% p.a.)</b> | <b>Maturity</b> | <b>Rate (% p.a.)</b> | <b>Maturity</b> | <b>Rate (% p.a.)</b> |
|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| 08/01/16        | 6.93                 | 06/01/17        | 6.29                 | 10/01/19        | 5.48                 |
| 09/01/16        | 6.93                 | 07/03/17        | 6.21                 | 01/02/20        | 5.43                 |
| 10/03/16        | 6.93                 | 10/02/17        | 6.12                 | 04/01/20        | 5.42                 |
| 11/01/16        | 6.88                 | 01/02/18        | 5.98                 | 07/01/20        | 5.42                 |
| 12/01/16        | 6.86                 | 04/02/18        | 5.87                 | 10/01/20        | 5.43                 |
| 01/02/17        | 6.76                 | 07/02/18        | 5.76                 | 01/04/21        | 5.39                 |
| 02/01/17        | 6.64                 | 10/01/18        | 5.68                 | 04/01/21        | 5.41                 |
| 03/01/17        | 6.56                 | 01/02/19        | 5.57                 | 07/01/21        | 5.43                 |
| 04/03/17        | 6.49                 | 04/01/19        | 5.51                 | 01/03/22        | 5.47                 |
| 05/02/17        | 6.41                 | 07/01/19        | 5.50                 | 01/02/23        | 5.60                 |

**EUR Interest Rate**

| <b>Maturity</b> | <b>Rate (% p.a.)</b> | <b>Maturity</b> | <b>Rate (% p.a.)</b> | <b>Maturity</b> | <b>Rate (% p.a.)</b> |
|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| 1M              | -0.36                | 6M              | -0.23                | 11M             | -0.20                |
| 2M              | -0.32                | 7M              | -0.22                | 12M             | -0.20                |
| 3M              | -0.29                | 8M              | -0.21                | 2Y              | -0.07                |
| 4M              | -0.26                | 9M              | -0.21                | 3Y              | -0.03                |
| 5M              | -0.24                | 10M             | -0.20                | 4Y              | -0.01                |

**CAD Interest Rate**

Edgar Filing: Vale S.A. - Form 6-K

| Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) | Maturity | Rate (% p.a.) |
|----------|---------------|----------|---------------|----------|---------------|
| 1M       | 0.88          | 6M       | 1.01          | 11M      | 0.88          |
| 2M       | 0.88          | 7M       | 0.97          | 12M      | 0.87          |
| 3M       | 0.88          | 8M       | 0.94          | 2Y       | 0.86          |
| 4M       | 0.94          | 9M       | 0.92          | 3Y       | 0.88          |
| 5M       | 0.98          | 10M      | 0.90          | 4Y       | 0.90          |

Currencies - Ending rates

|          |        |          |        |          |        |
|----------|--------|----------|--------|----------|--------|
| CAD/US\$ | 0.7682 | US\$/BRL | 3.2098 | EUR/US\$ | 1.1103 |
|----------|--------|----------|--------|----------|--------|



Table of Contents**20. Stockholders equity****a) Share capital**

At June 30, 2016 and December 31, 2015, the share capital was US\$61,614 corresponding to 5,244,316,120 shares issued and fully paid without par value.

|  | ON                   | June 30, 2016<br>PNA | Total                 |
|--|----------------------|----------------------|-----------------------|
| <b>Stockholders</b>                              |                      |                      |                       |
| Valepar S.A.                                     | 1,716,435,045        | 20,340,000           | 1,736,775,045         |
| Brazilian Government (Golden Share)              |                      | 12                   | 12                    |
| Foreign investors - ADRs                         | 789,507,484          | 657,055,684          | 1,446,563,168         |
| FMP - FGTS                                       | 76,647,018           |                      | 76,647,018            |
| PIBB - BNDES                                     | 1,185,752            | 1,028,029            | 2,213,781             |
| BNDESPar   | 206,378,882          | 66,185,272           | 272,564,154           |
| Foreign institutional investors in local market  | 268,445,614          | 730,516,782          | 998,962,396           |
| Institutional investors                          | 85,718,256           | 120,989,909          | 206,708,165           |
| Retail investors in Brazil                       | 41,334,949           | 371,606,238          | 412,941,187           |
| <b>Shares outstanding</b>                        | <b>3,185,653,000</b> | <b>1,967,721,926</b> | <b>5,153,374,926</b>  |
| Shares in treasury                               | 31,535,402           | 59,405,792           | 90,941,194            |
| <b>Total issued shares</b>                       | <b>3,217,188,402</b> | <b>2,027,127,718</b> | <b>5,244,316,120</b>  |
| <b>Amounts per class of shares (in millions)</b> | <b>38,525</b>        | <b>23,089</b>        | <b>61,614</b>         |
| <b>Total authorized shares</b>                   | <b>3,600,000,000</b> | <b>7,200,000,000</b> | <b>10,800,000,000</b> |

**b) Basic and diluted earnings per share**

Basic and diluted earnings per share are as follows:

|  | Three-months period ended June 30 |              | Six-months period ended June 30 |                |
|--|-----------------------------------|--------------|---------------------------------|----------------|
|  | 2016                              | 2015         | 2016                            | 2015           |
| <b>Net income (loss) attributable to Vale's stockholders</b> | <b>1,106</b>                      | <b>1,675</b> | <b>2,882</b>                    | <b>(1,443)</b> |

| <b>Basic and diluted earnings per share:</b>      |              |              |              |                |
|---|--------------|--------------|--------------|----------------|
| Income (loss) available to preferred stockholders | 422          | 640          | 1,100        | (551)          |
| Income (loss) available to common stockholders    | 684          | 1,035        | 1,782        | (892)          |
| <b>Total</b>                                      | <b>1,106</b> | <b>1,675</b> | <b>2,882</b> | <b>(1,443)</b> |

| <b>Thousands of shares</b>                                       |                  |                  |                  |                  |
|--|------------------|------------------|------------------|------------------|
| Weighted average number of shares outstanding - preferred shares | 1,967,722        | 1,967,722        | 1,967,722        | 1,967,722        |
| Weighted average number of shares outstanding - common shares    | 3,185,653        | 3,185,653        | 3,185,653        | 3,185,653        |
| <b>Total</b>   | <b>5,153,375</b> | <b>5,153,375</b> | <b>5,153,375</b> | <b>5,153,375</b> |

| <b>Basic and diluted earnings per share</b> |      |      |      |        |
|---|------|------|------|--------|
| Preferred share                             | 0.21 | 0.33 | 0.56 | (0.28) |
| Common share                                | 0.21 | 0.33 | 0.56 | (0.28) |

Table of Contents**21. Costs and expenses by nature****a) Cost of goods sold and services rendered**

|                            | Three-months period ended June 30 |              | Six-months period ended June 30 |               |
|----------------------------|-----------------------------------|--------------|---------------------------------|---------------|
|                            | 2016                              | 2015         | 2016                            | 2015          |
| Personnel                  | 595                               | 631          | 1,100                           | 1,173         |
| Materials and services     | 1,150                             | 987          | 1,938                           | 1,974         |
| Fuel oil and gas           | 317                               | 352          | 624                             | 659           |
| Maintenance                | 655                               | 689          | 1,276                           | 1,343         |
| Energy                     | 191                               | 172          | 353                             | 313           |
| Acquisition of products    | 146                               | 251          | 229                             | 505           |
| Depreciation and depletion | 866                               | 882          | 1,676                           | 1,793         |
| Freight                    | 611                               | 855          | 1,111                           | 1,626         |
| Others                     | 264                               | 367          | 737                             | 968           |
| <b>Total</b>               | <b>4,795</b>                      | <b>5,186</b> | <b>9,044</b>                    | <b>10,354</b> |
| Cost of goods sold         | 4,680                             | 5,047        | 8,822                           | 10,069        |
| Cost of services rendered  | 115                               | 139          | 222                             | 285           |
| <b>Total</b>               | <b>4,795</b>                      | <b>5,186</b> | <b>9,044</b>                    | <b>10,354</b> |

**b) Selling and administrative expenses**

|  | Three-months period ended June 30 |            | Six-months period ended June 30 |            |
|--|-----------------------------------|------------|---------------------------------|------------|
|  | 2016                              | 2015       | 2016                            | 2015       |
| Personnel  | 58                                | 74         | 109                             | 156        |
| Services (consulting, infrastructure and others) | 18                                | 26         | 34                              | 54         |
| Advertising and publicity                        | 2                                 | 3          | 3                               | 6          |
| Depreciation and amortization                    | 33                                | 34         | 56                              | 64         |
| Travel expenses                                  | 2                                 | 3          | 3                               | 6          |
| Taxes and rents                                  | 3                                 | 4          | 7                               | 10         |
| Others   | 24                                | 15         | 47                              | 58         |
| <b>Total</b>                                     | <b>140</b>                        | <b>159</b> | <b>259</b>                      | <b>354</b> |

**c) Others operational expenses (incomes), net**

Edgar Filing: Vale S.A. - Form 6-K

|  | Three-months period ended June 30 |            | Six-months period ended June 30 |            |
|--|-----------------------------------|------------|---------------------------------|------------|
|  | 2016                              | 2015       | 2016                            | 2015       |
| Provision for litigation   | 63                                | 41         | 94                              | 24         |
| Provision for loss with VAT credits (ICMS)                                 | 5                                 | 61         | 35                              | 102        |
| Provision (reversals) for disposal of materials and inventories            | (6)                               | 31         | (77)                            | 94         |
| Gold stream transaction  |                                   |            |                                 | (230)      |
| Insurance and externalities  | 33                                | 7          | 53                              | 20         |
| Result on sale or disposal of property, plant and equipment and intangible | 30                                | (15)       | 39                              |            |
| Others   | 35                                | 78         | 51                              | 147        |
| <b>Total</b>   | <b>160</b>                        | <b>203</b> | <b>195</b>                      | <b>157</b> |

Table of Contents**22. Financial result**

|  | Three-months period ended June 30 |              | Six-months period ended June 30 |                |
|--|-----------------------------------|--------------|---------------------------------|----------------|
|  | 2016                              | 2015         | 2016                            | 2015           |
| <b>Financial expenses</b>                                |                                   |              |                                 |                |
| Loans and borrowings gross interest                      | (452)                             | (405)        | (864)                           | (796)          |
| Capitalized loans and borrowing costs                    | 213                               | 177          | 390                             | 373            |
| Labor, tax and civil lawsuits                            |                                   | (17)         | (21)                            | (50)           |
| Derivative financial instruments                         | (166)                             | (87)         | (224)                           | (1,427)        |
| Indexation and exchange rate variation (a)               | (1,055)                           | (637)        | (2,225)                         | (5,938)        |
| Participative stockholders debentures                    | (86)                              | 361          | (202)                           | 636            |
| Expenses of REFIS  | (129)                             | (144)        | (244)                           | (288)          |
| Others   | (157)                             | (187)        | (300)                           | (307)          |
|  | <b>(1,832)</b>                    | <b>(939)</b> | <b>(3,690)</b>                  | <b>(7,797)</b> |
| <b>Financial income</b>                                  |                                   |              |                                 |                |
| Short-term investments                                   | 27                                | 21           | 69                              | 47             |
| Derivative financial instruments                         | 925                               | 322          | 1,423                           | 322            |
| Indexation and exchange rate variation (b)               | 2,964                             | 1,119        | 5,689                           | 3,401          |
| Others   | 7                                 | 9            | 25                              | 49             |
|  | <b>3,923</b>                      | <b>1,471</b> | <b>7,206</b>                    | <b>3,819</b>   |
| <b>Financial results, net</b>                            | <b>2,091</b>                      | <b>532</b>   | <b>3,516</b>                    | <b>(3,978)</b> |
| <b>Summary of indexation and exchange rate variation</b> |                                   |              |                                 |                |
| Loans and borrowings                                     | 2,781                             | 897          | 3,571                           | (4,117)        |
| Others   | (872)                             | (415)        | (107)                           | 1,580          |
| <b>Net (a) + (b)</b>                                     | <b>1,909</b>                      | <b>482</b>   | <b>3,464</b>                    | <b>(2,537)</b> |

**23. Commitments****a) Base metals operations**

In December 2015, the put option related to the dilution of Sumic Nickel Netherland B.V. ( Sumic ) interest in Vale Nouvelle-Calédonie S.A.S. ( VNC ) was automatically triggered.

In March 2016, Vale Canada Limited purchased the equity interest held by Sumic in VNC for US\$135.

**b) Operating lease and purchase obligations**

The future payment commitments for operating lease and purchase obligations are as follows:

|  |            |
|--|------------|
| 2016                                   | 46         |
| 2017                                   | 53         |
| 2018                                   | 56         |
| 2019                                   | 48         |
| 2020 and thereafter                    | 50         |
| <b>Total minimum payments required</b> | <b>253</b> |

**c) Guarantees provided**

As of June 30, 2016, 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\$350 and US\$1,317, respectively.

Table of Contents**24. Related parties**

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.

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 financial statements are as follows:

|  | June 30, 2016             |                                  |                     |                 | December 31, 2015         |                                  |                     |                 |
|--|---------------------------|----------------------------------|---------------------|-----------------|---------------------------|----------------------------------|---------------------|-----------------|
|  | Cash and cash equivalents | Derivative financial instruments | Accounts receivable | Related parties | Cash and cash equivalents | Derivative financial instruments | Accounts receivable | Related parties |
| Banco Bradesco S.A.                            | 49                        | 334                              |                     |                 | 37                        | 66                               |                     |                 |
| Banco do Brasil S.A.                           | 162                       | 39                               |                     |                 | 395                       | 16                               |                     |                 |
| Companhia Coreano-Brasileira de Pelotização    |                           |                                  |                     | 14              |                           |                                  |                     | 6               |
| Companhia Hispano-Brasileira de Pelotização    |                           |                                  | 2                   |                 |                           |                                  | 1                   | 4               |
| Companhia Ítalo-Brasileira de Pelotização      |                           |                                  |                     |                 |                           |                                  |                     | 8               |
| Companhia Nipo-Brasileira de Pelotização       |                           |                                  |                     | 22              |                           |                                  |                     | 9               |
| Companhia Siderúrgica do Pecem                 |                           |                                  | 25                  |                 |                           |                                  |                     |                 |
| Consórcio de Rebocadores da Baía de São Marcos |                           |                                  | 12                  |                 |                           |                                  | 15                  |                 |
| Ferrovias Norte Sul S.A.                       |                           |                                  | 8                   |                 |                           |                                  | 3                   |                 |
| Mitsui & Co., Ltd.                             |                           |                                  | 3                   |                 |                           |                                  | 1                   |                 |
| MRS Logística S.A.                             |                           |                                  |                     | 19              |                           |                                  |                     | 17              |
| VLI Multimodal S.A.                            |                           |                                  | 5                   |                 |                           |                                  | 9                   |                 |
| VLI Operações Portuárias S.A.                  |                           |                                  | 13                  |                 |                           |                                  | 25                  |                 |
| VLI S.A.                                       |                           |                                  |                     | 12              |                           |                                  |                     | 10              |

Edgar Filing: Vale S.A. - Form 6-K

|              |            |            |           |           |            |           |           |           |
|--------------|------------|------------|-----------|-----------|------------|-----------|-----------|-----------|
| Others       |            |            | 18        | 4         |            |           | 24        | 17        |
| <b>Total</b> | <b>211</b> | <b>373</b> | <b>86</b> | <b>71</b> | <b>432</b> | <b>82</b> | <b>78</b> | <b>71</b> |

|  | Liabilities                      |                    |                 |                      |                                  |                    |                 |                      |
|--|----------------------------------|--------------------|-----------------|----------------------|----------------------------------|--------------------|-----------------|----------------------|
|  | June 30, 2016                    |                    |                 |                      | December 31, 2015                |                    |                 |                      |
|  | 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.                      |                                  | 12                 | 54              |                      |                                  | 11                 |                 |                      |
| Banco Bradesco S.A.                                  | 342                              | 132                |                 | 175                  | 205                              | 54                 |                 | 370                  |
| Banco do Brasil S.A.                                 | 207                              |                    |                 | 2.952                | 250                              |                    |                 | 2.625                |
| Banco Nacional de Desenvolvimento Econômico e Social | 43                               |                    |                 | 4.658                | 39                               |                    |                 | 4.066                |
| Baovale Mineração S.A.                               |                                  | 18                 |                 |                      |                                  | 8                  |                 |                      |
| BNDES Participações S.A.                             |                                  |                    |                 | 436                  |                                  |                    |                 | 371                  |
| Companhia Coreano-Brasileira de Pelotização          |                                  | 67                 | 34              |                      |                                  | 4                  | 70              |                      |
| Companhia Hispano-Brasileira de Pelotização          |                                  | 23                 | 21              |                      |                                  | 37                 | 7               |                      |
| Companhia Ítalo-Brasileira de Pelotização            |                                  | 22                 | 50              |                      |                                  | 3                  | 64              |                      |
| Companhia Nipo-Brasileira de Pelotização             |                                  | 65                 | 65              |                      |                                  | 9                  | 112             |                      |
| Consórcio de Rebocadores da Baía de São Marcos       |                                  |                    |                 |                      |                                  | 8                  |                 |                      |
| Ferrovias Centro-Atlântica S.A.                      |                                  |                    | 83              |                      |                                  |                    | 68              |                      |
| Mitsui & Co., Ltd.                                   |                                  | 13                 |                 |                      |                                  | 11                 |                 |                      |
| MRS Logística S.A.                                   |                                  | 11                 |                 |                      |                                  | 23                 |                 |                      |
| Sumic Nickel Netherland B.V                          |                                  |                    | 362             |                      |                                  |                    | 352             |                      |
| VLI S.A.   |                                  | 1                  | 68              |                      |                                  |                    |                 |                      |
| Others   |                                  | 2                  | 7               |                      |                                  | 22                 | 15              |                      |
| <b>Total</b>   | <b>592</b>                       | <b>366</b>         | <b>744</b>      | <b>8.221</b>         | <b>494</b>                       | <b>190</b>         | <b>688</b>      | <b>7.432</b>         |



Table of Contents

|   | Three-months period ended June 30 |                         |                  |                       |                         |                  |
|---|-----------------------------------|-------------------------|------------------|-----------------------|-------------------------|------------------|
|   | Net operating revenue             | 2016 Costs and expenses | Financial result | Net operating revenue | 2015 Costs and expenses | Financial result |
| Banco Bradesco S.A. (i)                     |                                   |                         | 152              |                       |                         | 10               |
| Banco do Brasil S.A. (i)                    |                                   |                         | (46)             |                       |                         | 12               |
| Baovale Mineração S.A.                      |                                   | (5)                     |                  |                       | (15)                    |                  |
| BNDES (i)                                   |                                   |                         | (105)            |                       |                         | (19)             |
| BNDES Participações S.A. (i)                |                                   |                         | (14)             |                       |                         | (1)              |
| Companhia Coreano-Brasileira de Pelotização |                                   | (18)                    |                  |                       | (19)                    |                  |
| Companhia Hispano-Brasileira de Pelotização |                                   | (9)                     |                  |                       | (9)                     |                  |
| Companhia Ítalo-Brasileira de Pelotização   |                                   | (12)                    |                  |                       | (14)                    |                  |
| Companhia Nipo-Brasileira de Pelotização    |                                   | (20)                    |                  |                       | (25)                    |                  |
| Companhia Siderúrgica do Atlântico          |                                   | (6)                     |                  |                       |                         |                  |
| Companhia Siderúrgica do Pecem              | 15                                |                         |                  |                       |                         |                  |
| Ferrovias Centro Atlântica S.A.             | 11                                | (7)                     |                  | 12                    | (9)                     |                  |
| Ferrovias Norte Sul S.A.                    | 6                                 |                         |                  |                       |                         |                  |
| Mitsui & Co., Ltd.                          | 42                                |                         |                  | 50                    |                         |                  |
| MRS Logística S.A.                          |                                   | (139)                   |                  |                       | (141)                   |                  |
| Samarco Mineração S.A.                      |                                   |                         |                  | 58                    |                         |                  |
| VLI Operações Portuárias S.A.               | 39                                | (3)                     |                  |                       |                         |                  |
| VLI S.A.                                    | 32                                |                         |                  | 68                    |                         |                  |
| Others                                      | 1                                 | (8)                     |                  | 12                    | (12)                    | (2)              |
| <b>Total</b>                                | <b>146</b>                        | <b>(227)</b>            | <b>(13)</b>      | <b>200</b>            | <b>(244)</b>            |                  |

|   | Six-months period ended June 30 |                         |                  |                       |                         |                  |
|---|---------------------------------|-------------------------|------------------|-----------------------|-------------------------|------------------|
|   | Net operating revenue           | 2016 Costs and expenses | Financial result | Net operating revenue | 2015 Costs and expenses | Financial result |
| Banco Bradesco S.A. (i)                     |                                 |                         | 134              |                       |                         | (74)             |
| Banco do Brasil S.A. (i)                    |                                 |                         | (82)             |                       |                         | (123)            |
| Baovale Mineração S.A.                      |                                 | (8)                     |                  |                       | (20)                    |                  |
| BNDES (i)                                   |                                 |                         | (151)            |                       |                         | (36)             |
| BNDES Participações S.A. (i)                |                                 |                         | (20)             |                       |                         | (11)             |
| Companhia Coreano-Brasileira de Pelotização |                                 | (35)                    |                  |                       | (34)                    |                  |
| Companhia Hispano-Brasileira de Pelotização |                                 | (19)                    |                  |                       | (21)                    |                  |
| Companhia Ítalo-Brasileira de Pelotização   |                                 | (22)                    |                  |                       | (28)                    |                  |
| Companhia Nipo-Brasileira de Pelotização    |                                 | (52)                    |                  |                       | (50)                    |                  |
| Companhia Siderúrgica do Atlântico          |                                 | (6)                     |                  |                       |                         |                  |
| Companhia Siderúrgica do Pecem              | 32                              |                         |                  |                       |                         |                  |

Edgar Filing: Vale S.A. - Form 6-K

|                                 |            |              |              |            |              |              |
|---------------------------------|------------|--------------|--------------|------------|--------------|--------------|
| Ferrovias Centro Atlântica S.A. | 19         | (12)         |              | 24         | (21)         |              |
| Ferrovias Norte Sul S.A.        | 11         |              |              |            |              |              |
| Mitsui & Co., Ltd.              | 62         |              |              | 109        |              |              |
| MRS Logística S.A.              |            | (202)        |              |            | (260)        |              |
| Samarco Mineração S.A.          |            |              |              | 89         |              |              |
| VLI Operações Portuárias S.A.   | 68         | (3)          |              |            |              |              |
| VLI S.A.                        | 59         |              |              | 130        |              |              |
| Others                          | 10         | (18)         |              | 33         | (24)         | 1            |
| <b>Total</b>                    | <b>261</b> | <b>(377)</b> | <b>(119)</b> | <b>385</b> | <b>(458)</b> | <b>(243)</b> |

---

(i) Does not include exchange rate variation.

Table of Contents

**Members of the Board of Directors, Fiscal Council, Advisory Committees and Executive Officers**

**Board of Directors**

Gueitiro Matsuo Genso

**Chairman**

Sérgio Alexandre Figueiredo Clemente

**Vice-President**

Dan Antonio Marinho Conrado

Marcel Juviniانو Barros

Fernando Jorge Buso Gomes

Motomu Takahashi

Oscar Augusto de Camargo Filho

Lucio Azevedo

Alberto Guth

**Alternate**

Gilberto Antonio Vieira

Moacir Nachbar Junior

Arthur Prado Silva

Francisco Ferreira Alexandre

Robson Rocha

Luiz Mauricio Leuzinger

Yoshitomo Nishimitsu

Eduardo de Oliveira Rodrigues Filho

Victor Guilherme Tito

Carlos Roberto de Assis Ferreira

Marcelo Gasparino

**Advisory Committees of the Board of Directors**

**Controlling Committee**

Eduardo Cesar Pasa

Moacir Nachbar Junior

Oswaldo Mário Pego de Amorim Azevedo

Marcos Paulo Pereira da Silva

**Executive Development Committee**

Oscar Augusto de Camargo Filho

Marcel Juviniانو Barros

Fernando Jorge Buso Gomes

Tatiana Boavista Barros Heil

**Governance and Sustainability Committee**

Fernando Jorge Buso Gomes

Eduardo de Oliveira Rodrigues Filho

Ricardo Rodrigues Morgado

Ricardo Simonsen

**Fiscal Council**

Marcelo Amaral Moraes

**Chairman**

Paulo José dos Reis Souza

Sandro Kohler Marcondes

Aníbal Moreira dos Santos

Raphael Manhães Martins

Marcelo Amaral Moraes

**Alternate**

Paula Bicudo de Castro Magalhães

Sergio Mamede Rosa do Nascimento

Oswaldo Mário Pego de Amorim Azevedo

Julio Sergio de Souza Cardozo

**Executive Officers**

Murilo Pinto de Oliveira Ferreira

**Chief Executive Officer**

Vania Lucia Chaves Somavilla

**Executive Officer (Human Resources, Health & Safety, Sustainability and Energy)**

Luciano Siani Pires

**Executive Officer (Finance and Investors Relations)**

Roger Allan Downey

**Executive Officer (Fertilizers, Coal and Strategy)**

Gerd Peter Poppinga

**Executive Officer (Ferrous)**

Galib Abrahão Chaim

**Strategic Committee**

Murilo Pinto de Oliveira Ferreira  
Gueitiro Matsuo Genso  
Luiz Carlos Trabuco Cappi  
Oscar Augusto de Camargo Filho

**Finance Committee**

Gilmar Dalilo Cezar Wanderley  
Fernando Jorge Buso Gomes  
Eduardo de Oliveira Rodrigues Filho  
Tatiana Boavista Barros Heil

**Executive Officer (Capital Projects Implementation)**

Humberto Ramos de Freitas

**Executive Officer (Logistics and Mineral Research)**

Jennifer Anne Maki

**Executive Officer (Base Metals)**

Rogério Nogueira

**Global Controller Director**

Murilo Muller

**Controllership Director**

Dioni Brasil

**Accounting Manager**

**TC-CRC-RJ 083305/O-8**

Table of Contents

**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.

Date: July 28, 2016

By:

Vale S.A.  
(Registrant)

/s/ Andre Figueiredo  
Andre Figueiredo  
Director of Investor Relations

---