

Vale S.A.
Form 6-K
October 27, 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

September, 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

September 30, 2016

IFRS in US\$

Table of Contents

Vale S.A. Interim Financial Statements

Contents

	Page
<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. Liabilities related to associates and joint ventures</u>	16
<u>5. Non-current assets and liabilities held for sale</u>	18
<u>6. Acquisitions and divestitures</u>	19
<u>7. Cash and cash equivalents</u>	19
<u>8. Accounts receivable</u>	20
<u>9. Inventories</u>	20
<u>10. Investments in associates and joint ventures</u>	20
<u>11. Intangibles</u>	22
<u>12. Property, plant and equipment</u>	23
<u>13. Loans and borrowings</u>	24
<u>14. Litigation</u>	26
<u>15. Income taxes</u>	28
<u>16. Employee postretirement obligations</u>	29
<u>17. Financial instruments classification</u>	29
<u>18. Fair value estimate</u>	30
<u>19. Derivative financial instruments</u>	30
<u>20. Stockholders' equity</u>	40
<u>21. Costs and expenses by nature</u>	41
<u>22. Financial results</u>	42
<u>23. Deferred revenue - Gold stream</u>	42
<u>24. Commitments</u>	43
<u>25. Related parties</u>	44
<u>Members of the Board of Directors, Fiscal Council, Advisory Committees and Executive Officers</u>	46

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

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 September 30, 2016 and the related condensed consolidated statements of income, comprehensive income and cash flows for the three- and nine-month periods ended September 30, 2016 and 2015 and the condensed consolidated statements of changes in equity for the nine-month periods ended on September 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

October 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 September 30		Nine months period ended September 30	
		2016	2015	2016	2015
Net operating revenue	3(c)	7,324	6,505	19,669	19,710
Cost of goods sold and services rendered	21(a)	(4,955)	(5,040)	(13,999)	(15,394)
Gross profit		2,369	1,465	5,670	4,316
Operating (expenses) income					
Selling and administrative expenses	21(b)	(153)	(131)	(412)	(485)
Research and evaluation expenses		(85)	(121)	(223)	(358)
Pre operating and operational stoppage		(122)	(266)	(338)	(789)
Other operating income (expenses), net	21(c)	51	(113)	(144)	(270)
		(309)	(631)	(1,117)	(1,902)
Results on measurement or sale of non-current assets	5 and 6	(29)	(48)	(95)	90
Operating income		2,031	786	4,458	2,504
Financial income	22	374	2,556	7,580	6,375
Financial expenses	22	(1,421)	(9,732)	(5,111)	(17,529)
Equity results in associates and joint ventures	10	46	(349)	392	(402)
Others results in associates and joint ventures	4 and 6	(33)		(1,146)	97
Net income (loss) before income taxes		997	(6,739)	6,173	(8,955)
Income taxes					
	15				
Current tax		(57)	(100)	(815)	(237)
Deferred tax		(358)	4,603	(1,875)	5,415
		(415)	4,503	(2,690)	5,178
Net income (loss)		582	(2,236)	3,483	(3,777)
Income (loss) attributable to noncontrolling interests		7	(119)	26	(217)
Net income (loss) attributable to Vale's stockholders		575	(2,117)	3,457	(3,560)
Earnings per share attributable to Vale's stockholders:					
Basic and diluted earnings per share:	20(b)				
Preferred share (US\$)		0.11	(0.41)	0.67	(0.69)
Common share (US\$)		0.11	(0.41)	0.67	(0.69)

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

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 September 30		Nine months period ended September 30	
	2016	2015	2016	2015
Net income (loss)	582	(2,236)	3,483	(3,777)
Other comprehensive income (loss):				
Items that will not be reclassified subsequently to the income statement				
Cumulative translation adjustments	(447)	(10,966)	6,660	(18,869)
Retirement benefit obligations				
Gross balance for the period	(43)	(7)	(311)	(14)
Effect of taxes	14	2	96	25
	(29)	(5)	(215)	11
Total items that will not be reclassified subsequently to the income statement	(476)	(10,971)	6,445	(18,858)
Items that may be reclassified subsequently to the income statement				
Cumulative translation adjustments				
Gross balance for the period	219	6,632	(3,459)	10,345
Effect of taxes	18		(123)	
Transfer of realized results to net income, net of taxes			(75)	
	237	6,632	(3,657)	10,345
Cash flow hedge				
Gross balance for the period		148	6	689
Effect of taxes		(2)	(1)	(5)
Equity results in associates and joint ventures		(3)	5	(5)
Transfer of realized results to net income, net of taxes		(119)	(3)	(362)
		24	7	317
Total of items that may be reclassified subsequently to the income statement	237	6,656	(3,650)	10,662
Total comprehensive income (loss)	343	(6,551)	6,278	(11,973)
Comprehensive income (loss) attributable to noncontrolling interests	(3)	(162)	150	(266)
Comprehensive income (loss) attributable to Vale's stockholders	346	(6,389)	6,128	(11,707)

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 September 30		Nine months period ended September 30	
	2016	2015	2016	2015
Cash flow from operating activities:				
Net income (loss) before income taxes	997	(6,739)	6,173	(8,955)
Adjustments for:				
Equity results from associates and joint ventures	(46)	349	(392)	402
Others results in associates and joint ventures			1,113	(97)
Results on disposal of property, plant and equipment and intangibles	(121)	48	(55)	(320)
Depreciation, amortization and depletion	963	1,022	2,740	3,045
Financial results, net	1,047	7,176	(2,469)	11,154
Changes in assets and liabilities:				
Accounts receivable	57	343	(136)	686
Inventories	12	(331)	28	(231)
Suppliers and contractors	255	422	236	249
Payroll and related charges	(16)	53	29	(524)
Other taxes assets and liabilities, net	(43)	(143)	(94)	(349)
Deferred revenue - Gold stream (note 23) (ii)	524		524	532
Other assets and liabilities, net	(402)	113	(659)	350
Cash provided from operations	3,227	2,313	7,038	5,942
Interest on loans and borrowings paid	(423)	(381)	(1,245)	(1,157)
Derivatives received (paid), net (note 19)	(191)	(167)	(1,054)	(927)
Interest on participative stockholders debentures paid			(37)	(39)
Income taxes	(88)	(47)	(347)	(365)
Income taxes - Settlement program	(116)	(89)	(304)	(298)
Net cash provided by operating activities	2,409	1,629	4,051	3,156
Cash flow from investing activities:				
Financial investments redeemed (invested)	69	51	46	303
Loans and advances granted	(71)	25	(126)	(41)
Additions to investments	(9)	(8)	(230)	(144)
Additions to property, plant and equipment and intangible (note 3(b))	(1,249)	(1,870)	(3,847)	(6,181)
Dividends and interest on capital received from associates and joint ventures		19	118	231
Proceeds from disposal of assets and investments	326	472	350	1,033
Proceeds from gold stream transaction	276		276	368
Net cash used in investing activities	(658)	(1,311)	(3,413)	(4,431)
Cash flow from financing activities:				
Loans and borrowings (i)				

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

Additions	1,573	1,066	6,206	3,950
Repayments	(1,987)	(928)	(4,953)	(1,814)
Transactions with stockholders:				
Dividends and interest on capital paid to Vale's stockholders				(1,000)
Dividends and interest on capital paid to noncontrolling interest	(129)		(204)	(12)
Transactions with noncontrolling stockholders		1,089	(17)	1,049
Net cash provided by (used in) financing activities	(543)	1,227	1,032	2,173
Increase (decrease) in cash and cash equivalents				
	1,208	1,545	1,670	898
Cash and cash equivalents in the beginning of the period	4,168	3,158	3,591	3,974
Effect of exchange rate changes on cash and cash equivalents	(7)	(306)	108	(475)
Cash and cash equivalents at end of the period	5,369	4,397	5,369	4,397
Non-cash transactions:				
Additions to property, plant and equipment - capitalized loans and borrowing costs	172	195	562	568

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

(ii) Net of warrants.

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	September 30, 2016	December 31, 2015
Assets			
Current assets			
Cash and cash equivalents	7	5,369	3,591
Financial investments		115	28
Derivative financial instruments	19	141	121
Accounts receivable	8	2,556	1,476
Inventories	9	3,900	3,528
Recoverable income taxes		317	900
Recoverable taxes		1,603	1,404
Related parties	25	66	70
Others		651	311
		14,718	11,429
Non-current assets held for sale	5	4,789	4,044
		19,507	15,473
Non-current assets			
Derivative financial instruments	19	504	93
Loans		182	188
Recoverable income taxes		542	471
Recoverable taxes		688	501
Deferred income taxes	15(a)	6,849	7,904
Judicial deposits	14(c)	1,073	882
Related parties	25	19	1
Others		661	613
		10,518	10,653
Investments in associates and joint ventures	10	3,976	2,940
Intangibles	11	6,959	5,324
Property, plant and equipment	12	61,127	54,102
		82,580	73,019
Total assets		102,087	88,492
Liabilities			
Current liabilities			
Suppliers and contractors		3,751	3,365
Payroll and related charges		593	375
Derivative financial instruments	19	868	2,076
Loans and borrowings	13	2,181	2,506
Related parties	25	558	475
Income taxes - Settlement program	15(c)	449	345
Taxes payable		185	250

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

Provision for income taxes		154	241
Employee postretirement obligations	16	72	68
Asset retirement obligations		70	89
Liabilities related to associates and joint ventures	4	329	
Others		1,488	648
		10,698	10,438
Liabilities associated with non-current assets held for sale	5	149	107
		10,847	10,545
Non-current liabilities			
Derivative financial instruments	19	1,167	1,429
Loans and borrowings	13	29,268	26,347
Related parties	25	137	213
Employee postretirement obligations	16	2,113	1,750
Provisions for litigation	14(a)	919	822
Income taxes - Settlement program	15(c)	4,977	4,085
Deferred income taxes	15(a)	1,676	1,670
Asset retirement obligations		3,169	2,385
Participative stockholders' debentures		658	342
Deferred revenue - Gold stream	23	2,158	1,749
Liabilities related to associates and joint ventures	4	795	
Others		2,372	1,451
		49,409	42,243
Total liabilities		60,256	52,788
Stockholders' equity			
Equity attributable to Vale's stockholders	20	39,719	33,589
Equity attributable to noncontrolling interests		2,112	2,115
Total stockholders' equity		41,831	35,704
Total liabilities and stockholders' equity		102,087	88,492

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
Balance at December 31, 2015	61,614	(152)	(702)	985	(1,477)	(992)	(25,687)		33,589	2,115	35,704
Net income								3,457	3,457	26	3,483
Other comprehensive income:											
Retirement benefit obligations						(215)			(215)		(215)
Cash flow hedge						7			7		7
Translation adjustments				200		(90)	2,608	161	2,879	124	3,003
Transactions with stockholders:											
Dividends of noncontrolling interest										(174)	(174)
Acquisitions and disposal of participation of noncontrolling interest			2						2		2
Capitalization of noncontrolling interest advances										21	21
Balance at September 30, 2016	61,614	(152)	(700)	1,185	(1,477)	(1,290)	(23,079)	3,618	39,719	2,112	41,831
Balance at December 31,	61,614	(152)	(449)	19,985	(1,477)	(1,713)	(22,686)		55,122	1,199	56,321

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

2014											
Loss								(3,560)	(3,560)	(217)	(3,777)
Other comprehensive income:											
Retirement benefit obligations									11		11
Cash flow hedge									317		317
Translation adjustments								(6,404)	214	(3,062)	777
Transactions with stockholders:											
Dividends and interest on capital of Vale's stockholders											(1,000)
Dividends of noncontrolling interest											(6)
Acquisitions and disposal of participation of noncontrolling interest									180	(336)	(156)
Capitalization of noncontrolling interest advances											26
Balance at September 30, 2015	61,614	(152)	(269)	12,581	(1,477)	(1,171)	(26,084)	(2,783)	42,259	2,242	44,501

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.

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	
	September 30, 2016	December 31, 2015	Three months period ended September 30, 2016	September 30, 2015	Nine months period ended September 30, 2016	September 30, 2015
Brazilian Reais (R\$)	3.2462	3.9048	3.2460	3.5379	3.5450	3.1684
Canadian dollar (CAD)	2.4757	2.8171	2.4881	2.7024	2.6802	2.5090
Australian dollar (AUD)	2.4895	2.8532	2.4616	2.5642	2.6273	2.4067
Euro (EUR or)	3.6484	4.2504	3.6232	3.9365	3.9549	3.5285

Subsequent events were evaluated through October 26, 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 disclosed below:

- *IFRS 9 Financial instruments.*
- *IFRS 15 Revenue from contracts with customers.*
- *IFRS 16 Leases.*
- *Amendments to IAS 12 Recognition of deferred tax assets.*
- *Amendments to IAS 7 Disclosure Initiative.*
- *Amendments to IFRS 2 Classification and measurement of share-based payment transactions.*
- *Amendments to IFRS 4 Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts.*

The Company is currently analyzing potential impacts regarding these pronouncements on its financial statements.

Table of Contents**3. Information by business segment**

The information presented to the Executive Board on the performance of each segment is derived from the accounting records.

a) Adjusted EBITDA

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

	Three months period ended September 30, 2016					
	Net operating revenue	Cost of goods sold and services rendered	Sales, administrative and other operating expenses	Research and evaluation expenses	Pre operating and operational stoppage	Adjusted EBITDA
Ferrous minerals						
Iron ore	3,782	(1,648)	(80)	(25)	(40)	1,989
Pellets	991	(512)	(8)	(4)	(5)	462
Ferroalloys and manganese	76	(63)	(6)		(3)	4
Other ferrous products and services	110	(70)	(1)		(1)	38
	4,959	(2,293)	(95)	(29)	(49)	2,493
Coal	163	(157)	3	(3)	(13)	(7)
Base metals						
Nickel and other products	1,159	(792)	(31)	(21)	(26)	289
Copper	420	(255)	(2)	(2)		161
Other base metals products			150			150

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

	1,579	(1,047)	117	(23)	(26)	600
Fertilizers						
Potash	34	(35)	(1)	(1)	(4)	(7)
Phosphates	470	(413)	(26)	(3)		28
Nitrogen	69	(53)	(2)	(1)		13
Other fertilizers products	25					25
	598	(501)	(29)	(5)	(4)	59
Others	25	(58)	(64)	(25)		(122)
Total	7,324	(4,056)	(68)	(85)	(92)	3,023

Table of Contents

	Three months period ended September 30, 2015						
	Net operating revenue	Cost of goods sold and services rendered	Sales, administrative and other operating expenses	Research and evaluation expenses	Pre operating and operational stoppage	Dividends received from associates and joint ventures	Adjusted EBITDA
Ferrous minerals							
Iron ore	3,278	(1,838)	(169)	(26)	(23)		1,222
Pellets	883	(508)	13	(1)	(5)		382
Ferroalloys and manganese	26	(31)	(2)		(4)		(11)
Other ferrous products and services	125	(70)	5	(1)			59
	4,312	(2,447)	(153)	(28)	(32)		1,652
Coal	127	(207)	(17)	(7)	(25)		(129)
Base metals							
Nickel and other products	1,011	(820)	8	(23)	(97)		79
Copper	336	(218)	(1)	(3)			114
	1,347	(1,038)	7	(26)	(97)		193
Fertilizers							
Potash	41	(29)	(1)	(15)	(8)		(12)
Phosphates	560	(364)	(3)	(7)	(20)		166
Nitrogen	80	(51)	(1)	(1)	(1)		26
Other fertilizers products	17						17
	698	(444)	(5)	(23)	(29)		197
Others	21	(43)	2	(37)		19	(38)
Total	6,505	(4,179)	(166)	(121)	(183)	19	1,875

Table of Contents

	Nine months period ended September 30, 2016						
	Net operating revenue	Cost of goods sold and services rendered	Sales, administrative and other operating expenses	Research and evaluation expenses	Pre operating and operational stoppage	Dividends received from associates and joint ventures	Adjusted EBITDA
Ferrous minerals							
Iron ore	10,208	(4,609)	(386)	(52)	(107)		5,054
Pellets	2,611	(1,408)	(43)	(8)	(17)	60	1,195
Ferroalloys and manganese	185	(162)	(3)		(9)		11
Other ferrous products and services	300	(192)	2	(1)	(2)		107
	13,304	(6,371)	(430)	(61)	(135)	60	6,367
Coal	463	(687)	46	(8)	(24)		(210)
Base metals							
Nickel and other products	3,209	(2,332)	(55)	(57)	(84)		681
Copper	1,170	(684)	(9)	(3)			474
Other base metals products			150				150
	4,379	(3,016)	86	(60)	(84)		1,305
Fertilizers							
Potash	79	(75)	2	(4)	(12)		(10)
Phosphates	1,123	(976)	(62)	(10)	(2)		73
Nitrogen	187	(139)	(8)	(2)			38
Other fertilizers products	57					3	60
	1,446	(1,190)	(68)	(16)	(14)	3	161
Others	77	(158)	(106)	(78)	(2)	55	(212)
Total	19,669	(11,422)	(472)	(223)	(259)	118	7,411

Table of Contents

	Nine months period ended September 30, 2015						
	Net operating revenue	Cost of goods sold and services rendered	Sales, administrative and other operating expenses	Research and evaluation expenses	Pre operating and operational stoppage	Dividends received from associates and joint ventures	Adjusted EBITDA
Ferrous minerals							
Iron ore	9,385	(5,680)	(526)	(95)	(74)		3,010
Pellets	2,820	(1,668)	16	(3)	(19)	203	1,349
Ferrous alloys and manganese	149	(130)	(2)		(14)		3
Other ferrous products and services	378	(266)	12	(3)	(1)	8	128
	12,732	(7,744)	(500)	(101)	(108)	211	4,490
Coal	418	(579)	(131)	(18)	(49)		(359)
Base metals							
Nickel and other products	3,586	(2,501)	(80)	(73)	(322)		610
Copper	1,119	(664)	(11)	(6)	(1)		437
Other base metals products			230				230
	4,705	(3,165)	139	(79)	(323)		1,277
Fertilizers							
Potash	102	(70)	4	(38)	(16)		(18)
Phosphates	1,362	(923)	(23)	(20)	(42)		354
Nitrogen	237	(157)	(4)	(2)	(3)		71
Other fertilizers products	43						43
	1,744	(1,150)	(23)	(60)	(61)		450
Others	111	(102)	(97)	(100)		20	(168)
Total	19,710	(12,740)	(612)	(358)	(541)	231	5,690

Table of Contents

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

	Three months period ended September 30		Nine months period ended September 30	
	2016	2015	2016	2015
Adjusted EBITDA	3,023	1,875	7,411	5,690
Depreciation, depletion and amortization	(963)	(1,022)	(2,740)	(3,045)
Dividends received from associates and joint ventures		(19)	(118)	(231)
Results on measurement or sale of non-current assets	(29)	(48)	(95)	90
Operating income	2,031	786	4,458	2,504
Financial results, net	(1,047)	(7,176)	2,469	(11,154)
Equity results in associates and joint ventures	46	(349)	392	(402)
Others results in associates and joint ventures	(33)		(1,146)	97
Income taxes	(415)	4,503	(2,690)	5,178
Income (loss) attributable to noncontrolling interests	(7)	119	(26)	217
Income (loss) attributable to Vale's stockholders	575	(2,117)	3,457	(3,560)

b) Assets by segment

	September 30, 2016			Three months period ended September 30, 2016	Nine months period ended September 30, 2016
	Product inventory	Investments in associates and joint ventures	Property, plant and equipment and intangible assets	Additions to property, plant and equipment and intangible (i)	Additions to property, plant and equipment and intangible (i)
Ferrous minerals	1,287	1,831	34,344	797	2,481
Coal	95	291	1,953	152	441
Base metals	1,142	16	24,983	189	691
Fertilizers	248	90	4,555	99	207
Others	1	1,748	2,251	12	27
Total	2,773	3,976	68,086	1,249	3,847

(i) Includes only cash effect.

	December 31, 2015			Three months period ended September 30, 2015	Nine months period ended September 30, 2015
	Product inventory	Investments in associates and joint ventures	Property, plant and equipment and intangible assets	Additions to property, plant and equipment and intangible (i)	Additions to property, plant and equipment and intangible (i)
Ferrous minerals	1,036	1,479	28,202	1,099	3,858
Coal	53	306	1,812	330	1,076
Base metals	1,166	17	23,522	368	1,021
Fertilizers	295	75	3,866	55	161
Others	3	1,063	2,024	18	65
Total	2,553	2,940	59,426	1,870	6,181

(i) Includes only cash effect.

Table of Contents

c) Revenues by geographic area

	Three months period ended September 30, 2016					Total
	Ferrous minerals	Coal	Base metals	Fertilizers	Others	
Americas, except United States and Brazil	81		304	11		396
United States of America	54		184			238
Europe	624	56	446	21		1,147
Middle East/Africa/Oceania	333	14	4			351
Japan	373	18	92			483
China	2,720	17	172			2,909
Asia, except Japan and China	286	58	333	10		687
Brazil	488		44	556	25	1,113
Net operating revenue	4,959	163	1,579	598	25	7,324

	Three months period ended September 30, 2015					Total
	Ferrous minerals	Coal	Base metals	Fertilizers	Others	
Americas, except United States and Brazil	82	12	206	19		319
United States of America	9		176		3	188
Europe	627	23	422	37		1,109
Middle East/Africa/Oceania	229	15	8	3		255
Japan	389	22	88			499
China	2,355	24	176			2,555
Asia, except Japan and China	225	30	226	13		494
Brazil	396	1	45	626	18	1,086
Net operating revenue	4,312	127	1,347	698	21	6,505

	Nine months period ended September 30, 2016					Total
	Ferrous minerals	Coal	Base metals	Fertilizers	Others	
Americas, except United States and Brazil	246	14	862	28		1,150
United States of America	141		532		4	677
Europe	1,702	85	1,364	69		3,220
Middle East/Africa/Oceania	784	55	17	3		859
Japan	927	83	218			1,228
China	7,573	48	442			8,063
Asia, except Japan and China	671	178	840	49		1,738
Brazil	1,260		104	1,297	73	2,734
Net operating revenue	13,304	463	4,379	1,446	77	19,669

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

Nine months period ended September 30, 2015

	Ferrous minerals	Coal	Base metals	Fertilizers	Others	Total
Americas, except United States and Brazil	279	16	843	52		1,190
United States of America	24		644		18	686
Europe	1,908	74	1,432	99		3,513
Middle East/Africa/Oceania	807	82	64	6		959
Japan	1,155	61	282			1,498
China	6,381	36	498			6,915
Asia, except Japan and China	864	132	720	50		1,766
Brazil	1,314	17	222	1,537	93	3,183
Net operating revenue	12,732	418	4,705	1,744	111	19,710

Table of Contents

4. Liabilities related to associates and joint ventures

Refers to the provision to comply with the obligations under the agreement related to the dam failure of Samarco Mineração S.A. (Samarco), which is a Brazilian joint venture between Vale S.A. and BHP Billiton Brasil Ltda. (BHPB), as follows:

a) Reparation agreement

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

The Agreement does not contemplate admission of civil, criminal or administrative liability for the Fundão dam failure.

The Agreement has a 15-year term, renewable for successive one-year periods until all the obligations under the Agreement have been performed.

Under the Agreement, Samarco, Vale S.A. and BHPB have agreed to establish a foundation to develop and implement social and economic remediation and compensation, to be funded by Samarco as follows: US\$623 (R\$2.0 billion) in 2016, US\$374 (R\$1.2 billion) in 2017 and US\$374 (R\$1.2 billion) in 2018. 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 US\$249 (R\$800) and an annual maximum of US\$498 (R\$1.6 billion). From 2022 onwards, Samarco will provide the necessary funding in order to complete remaining programs approved for each relevant year. The foundation will allocate an annual amount of US\$75 (R\$240) 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, US\$156 (R\$500) will be provided for sewage collection and treatment and solid waste disposal under the terms of the Agreement.

To the extent that Samarco does not meet its funding obligations to 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.

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

On June 24, 2016, the Renova Foundation (Foundation) was constituted, under the Agreement, to develop and implement the socioeconomic and environmental's restoration and compensation programs. The Foundation began its operations in August of 2016.

As the consequence of the dam failure, the governmental authorities ordered the suspension of Samarco's operations.

b) Estimates used for the provision

The Samarco initially expected to resume its operations in the last quarter of 2016. Based on this assumption, Samarco's cash flow projections indicated that Samarco would be able to generate all or a substantial part of the funding required under the Agreement. This assumption was supported by studies of technical solutions available, combined with the progress of the repair works on the remaining dam structures after the dam failure and the definition of the contractual scope of the remediation measures and compensation to the communities impacted by the dam failure. Consequently, no provision was recognized in the Company's financial statements as of March 31, 2016.

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 during the current year, Samarco reviewed its assumption and concluded that was unable to make a reliable estimate of how and when its operations will resume.

Table of Contents

Therefore, the Company recognized a provision on its interim financial statements as of June 30, 2016, in the amount of US\$1,732 (R\$5,560) which was discounted at a free-risk rate, resulting in US\$1,163 (R\$3,733) liability, which represents its best estimate of the obligation to comply with the reparation and compensation programs under the Agreement, equivalent to the percentage of 50% entered into under the Agreement by Vale.

On August, 2016, Samarco issued non-convertible private debentures which were subscribed equally by the Company and BHPB, and the resources contributed by Vale S.A. were allocated as follows: (i) US\$45 (R\$146) was used by Samarco in the reparation programs in accordance with the agreement, and therefore, discounted from the provision of US\$1,163 (R\$3,733) mentioned above; and (ii) US\$33 (R\$106) applied by Samarco's to fund its working capital, and recognized in the income statement as Others results in associates and joint ventures in the third quarter of 2016. Funds to working capital requirements will be released on an as-needed basis by the shareholders and will be subject to achieving certain milestones, without undertaking an obligation to Samarco.

For the period ended in September 2016, the movements of the provision are as follows:

Balance at June 30, 2016	3,733
Payments	(146)
Interests	62
Balances at September 30, 2016	3,649
Current liabilities	1,069
Non-current liabilities	2,580

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

c) Relevant information of Samarco

Samarco disbursed US\$88 (R\$285) and US\$294 (R\$1,016) in the accident reparation during the three and nine months period ended September 30, 2016, respectively. Since the initial date of the accident, US\$326 (R\$1,141) has been disbursed to comply with the obligations under the agreement.

d) Contingencies related to Samarco accident

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

The federal government, the two Brazilian states affected by the failure (Espírito Santo and Minas Gerais) and other governmental authorities have initiated a public civil lawsuit against Samarco and its shareholders, Vale S.A. and BHPB, which the estimated value indicated by the plaintiffs in US\$6.3 billion (R\$20.2 billion).

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 TRF, which ratified the Agreement until the final judgments of the claim.

On August 17, 2016, the TRF of the 1st Region has rejected the appeal presented by Samarco, Vale S.A. e BHPB against the interim order and overruled the judicial decision that ratified the Agreement. The decision granted by the TRF of the 1st Region, among other measures, confirmed a prior injunction that prohibited the defendants from transferring or conveying any of their interest in its Brazilian iron ore concessions, without, however, limiting their production and commercial activities.

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.

(ii) U.S. Securities class action suits

Vale S.A. and certain of its officers have been named as defendants in 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 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. In August 2016, the plaintiffs submitted their opposition to the motion to dismiss, which was replied by the defendants in September 2016. The decision on the motion to dismiss remains pending.

Table of Contents

(iii) Public civil action filed by Federal Prosecution Office

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 US\$48 billion (R\$155 billion). The first conciliatory hearing was held on September 13th and a second hearing might be scheduled by the judge.

(iv) Criminal lawsuit

On October 20, 2016, the Federal Prosecutors Office (MPF) offered a criminal lawsuit to the Brazilian Federal Justice Court against Vale, BHPB, Samarco, VogBr Recursos Hídricos e Geotecnia Ltda. and 22 individuals for alleged crimes against the environment, urban planning and cultural heritage, flooding, landslide, as well as for alleged crimes against the victims of the Fundão dam failure. The MPF also requested that, if found guilty at the end of the criminal procedure, and the accused, the Judge imposes the minimum amount needed to repair the damage caused by the dam failure. So far, Vale was not serviced to present its defense.

(v) Other lawsuits

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.

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

5. Non-current assets and liabilities held for sale

	September 30, 2016		December 31, 2015
Shipping assets	Nacala	Total	Nacala

Non-current assets held for sale				
Accounts receivable		11	11	3
Other current assets		97	97	134
Property, plant and equipment and Intangible, net	497	4,184	4,681	3,907
Total assets	497	4,292	4,789	4,044
Liabilities associated with non-current assets held for sale				
Suppliers and contractors		138	138	93
Other current liabilities		11	11	14
Total liabilities		149	149	107
Net non-current assets held for sale	497	4,143	4,640	3,937

a) Shipping assets

In June 2016, Vale approved a plan to dispose its fleet of ships. As a consequence, the referenced 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)

See note 6.

Table of Contents

6. Acquisitions and divestitures

2016

Coal assets - In December 2014, the Company signed an agreement with Mitsui & Co., Ltd. (Mitsui) to sell 50% of its stake in the Nacala corridor and 15% of Vale's stake in Vale Moçambique. After completion of the transaction, Vale will indirectly own 81% of the Moatize mine and approximately 50% of Nacala Assets, sharing control with Mitsui and therefore will not consolidate the assets, liabilities and results of Nacala Corridor. On that date, the assets and liabilities related to Nacala were classified as non-current assets held for sale with no impact in the income statement.

In September 2016, the Company reviewed the terms related to this transaction, in which Mitsui agreed to contribute up to US\$450, being: (i) US\$255 for a 15% of Vale's stake in the Moatize coal mine; and (ii) an additional contribution of up to US\$ 195 based on meeting certain conditions, including mine performance. Mitsui will also contribute US\$348 for a 50% stake in the equity and quasi-equity instruments of the Nacala and extend a long-term facility of US\$165.

As at September 2016, completion of the transaction remains subject to successful completion of the Project Finance and certain government approvals.

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) and recognized a loss of US\$8 in the income statement as Results on measurement or sales of non-current assets. For this transaction, Vale received cash proceeds of US\$269 in the third quarter of 2016.

Thyssenkrupp Companhia Siderúrgica do Atlântico Ltd (CSA) In April 2016, the Company sold 100% of its interest at CSA (26.87%) for a non-significant 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 Others results in associates and joint ventures and a gain of US\$193 as Results on measurement or sales of non-current assets .

7. **Cash and cash equivalents**

	September 30, 2016	December 31, 2015
Cash and bank deposits	2,921	2,018
Short-term investments	2,448	1,573
	5,369	3,591

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.

Table of Contents**8. Accounts receivable**

	September 30, 2016	December 31, 2015
Trade receivables	2,621	1,534
Provision for doubtful debts	(65)	(58)
	2,556	1,476
Trade receivables related to the steel sector - %	74.66%	75.32%

	Three months period ended September 30		Nine months period ended September 30	
	2016	2015	2016	2015
Provision for doubtful debts recorded in the income statement		(10)		(11)
Trade receivables write-offs recorded in the income statement	(2)	1	(5)	(6)

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

9. Inventories

Product inventory	3,074	3,071
	2,773	2,553
Consumable inventory	1,127	975

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

10. Investments in associates and joint ventures

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

	2016	2015
Balance at June 30,	3,963	4,208
Additions	9	8
Disposals	(4)	
Translation adjustment	(43)	(750)
Equity results in income statement	46	(349)
Dividends declared	0	(8)
Others	5	(8)
Balance at September 30,	3,976	3,101

	2016	2015
Balance at January 1st,	2,940	4,133
Acquisitions		579
Additions	228	26
Disposals	(4)	79
Translation adjustment	543	(1,245)
Equity results in income statement	392	(402)
Dividends declared	(116)	(91)
Transfer to held for sale		(5)
Others	(7)	27
Balance at September 30,	3,976	3,101

Table of Contents

Associates and joint ventures	Investments in associates and joint ventures		Equity results in Income statement						Dividends received			
	% ownership	% voting capital	September 30,		Three months period ended			Three months period ended				
			2016	December 31, 2015	2016	2015	2016	2015	2016	2015		
Ferrous minerals												
Baovale Mineração S.A. Companhia	50.00	50.00	30	24	9	5	8	6				
Coreano-Brasileira de Pelotização Companhia	50.00	50.00	67	62	2	7	11	18			13	11
Hispano-Brasileira de Pelotização (i) Companhia	50.89	51.00	64	57	4	5	10	11			18	16
Ítalo-Brasileira de Pelotização (i) Companhia	50.90	51.00	71	50	5	6	11	16			9	13
Nipo-Brasileira de Pelotização(i) Minas da Serra Geral S.A. (iii)	51.00	51.11	111	104	9	11	17	35			20	17
MRS Logística S.A.	100.00	100.00		13				(1)				
Samarco Mineração S.A. (ii)	48.16	46.75	497	368	17	8	49	32				
VLI S.A.	50.00	50.00				(120)		(167)				146
Zhuhai YPM Pellet Co.	37.60	37.60	969	778	16	13	32	32				8
Others	25.00	25.00	22	23								1
			1,831	1,479	62	(65)	138	(18)			60	212
Coal												
Henan Longyu Energy Resources Co., Ltd.	25.00	25.00	291	306	2	(9)	(8)	(6)				
Base metals												
Korea Nickel Corp.	25.00	25.00	16	17	1	(1)	(1)	(3)				
Teal Minerals Inc.	50.00	50.00			(3)	(9)	(3)	(30)				
			16	17	(2)	(10)	(4)	(33)				
Others												
Aliança Geração de Energia S.A. (i)	55.00	55.00	588	481	11	7	33	26			15	22
Aliança Norte Energia Participações S.A. (i) California Steel Industries, Inc.	51.00	51.00	143	81	2	(1)	(1)	1				
Companhia Siderúrgica do Pecém	50.00	50.00	178	157	17	(8)	20	(22)				
Mineração Rio Grande do Norte S.A.	50.00	50.00	686	225	(52)	(245)	177	(311)				
Thyssenkrupp Companhia Siderúrgica do Atlântico Ltd. (iii)	40.00	40.00	132	93	7	10	42	20			3	32
Others						(29)		(60)				
			111	101	(1)	1	(5)	1			1	4
												1

	1,838	1,138	(16)	(265)	266	(345)	19	58	19
Total	3,976	2,940	46	(349)	392	(402)	19	118	231

(i) Although the Company held majority of the voting capital, the entities are accounted under equity method due to shareholders agreements.

(ii) Note 4.

(iii) Note 6

Table of Contents**11. Intangibles**

Changes in intangibles are as follows:

	Goodwill	Concessions	Right of use	Software	Total
Balance at June 30, 2016	3,219	3,123	140	431	6,913
Additions		206		6	212
Disposals		(3)			(3)
Amortization		(103)	(1)	(39)	(143)
Translation adjustment	(28)	13	(1)	(4)	(20)
Balance at September 30, 2016	3,191	3,236	138	394	6,959
Cost	3,191	4,376	218	1,572	9,357
Accumulated amortization		(1,140)	(80)	(1,178)	(2,398)
	3,191	3,236	138	394	6,959

	Goodwill	Concessions	Right of use	Software	Total
Balance at June 30, 2015	3,464	2,146	254	476	6,340
Additions		129		28	157
Amortization		(34)	(10)	(36)	(80)
Translation adjustment	(310)	(470)	(21)	(103)	(904)
Balance at September 30, 2015	3,154	1,771	223	365	5,513
Cost	3,154	2,663	476	998	7,291
Accumulated amortization		(892)	(253)	(633)	(1,778)
	3,154	1,771	223	365	5,513

	Goodwill	Concessions	Right of use	Software	Total
Balance at December 31, 2015	2,956	1,814	207	347	5,324
Additions		1,015	1	10	1,026
Disposals		(8)			(8)
Amortization		(177)	(2)	(117)	(296)
Translation adjustment	235	515	(1)	80	829
Transfers		77	(67)	74	84
Balance at September 30, 2016	3,191	3,236	138	394	6,959
Cost	3,191	4,376	218	1,572	9,357
Accumulated amortization		(1,140)	(80)	(1,178)	(2,398)
	3,191	3,236	138	394	6,959

	Goodwill	Concessions	Right of use	Software	Total
Balance at December 31, 2014	3,760	2,213	297	550	6,820
Additions		487		119	606
Disposals		(17)			(17)
Amortization		(116)	(32)	(122)	(270)

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

Translation adjustment	(645)	(796)	(42)	(182)	(1,665)
Acquisition of subsidiary	39				39
Balance at September 30, 2015	3,154	1,771	223	365	5,513
Cost	3,154	2,663	476	998	7,291
Accumulated amortization		(892)	(253)	(633)	(1,778)
	3,154	1,771	223	365	5,513

Table of Contents**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
Balance at June 30, 2016	891	10,320	9,232	7,983	11,166	6,848	14,519	60,959
Additions (i)							1,347	1,347
Disposals		(1)	(2)	(15)	(122)	(2)		(142)
Depreciation and amortization		(143)	(182)	(213)	(186)	(144)		(868)
Translation adjustment	(8)	(89)	(79)	(58)	(95)	(65)	(233)	(627)
Assets retirement obligations					458			458
Transfers	23	705	351	275	28	164	(1,546)	
Balance at September 30, 2016	906	10,792	9,320	7,972	11,249	6,801	14,087	61,127
Cost	906	16,588	15,209	14,175	19,108	10,544	14,087	90,617
Accumulated depreciation		(5,796)	(5,889)	(6,203)	(7,859)	(3,743)		(29,490)
	906	10,792	9,320	7,972	11,249	6,801	14,087	61,127

	Land	Building	Facilities	Equipment	Mineral properties	Others	Constructions in progress	Total
Balance at June 30, 2015	999	12,064	10,087	9,379	13,143	10,330	15,275	71,277
Additions (i)							2,592	2,592
Disposals			(30)	(13)		(583)	(6)	(632)
Depreciation and amortization		(125)	(154)	(240)	(175)	(176)		(870)
Transfers to non-current assets held for sale					(127)			(127)
Translation adjustment	(168)	(1,791)	(1,818)	(1,137)	(1,721)	(1,132)	(2,620)	(10,387)
Transfers	(55)	455	933	128	198	563	(2,222)	
Balance at September 30, 2015	776	10,603	9,018	8,117	11,318	9,002	13,019	61,853
Cost	776	13,384	13,213	12,676	16,918	12,542	13,019	82,528
Accumulated depreciation		(2,781)	(4,195)	(4,559)	(5,600)	(3,540)		(20,675)
	776	10,603	9,018	8,117	11,318	9,002	13,019	61,853

	Land	Building	Facilities	Equipment	Mineral properties	Others	Constructions in progress	Total
Balance at December 31, 2015	766	9,101	8,292	7,307	10,304	7,206	11,126	54,102
Additions (i)							3,242	3,242
Disposals		(1)	(3)	(28)	(125)	(345)	(21)	(523)
Depreciation and amortization		(372)	(471)	(663)	(590)	(454)		(2,550)
						(497)		(497)

Transfers to non-current assets held for sale								
Translation adjustment	114	793	1,004	655	907	957	2,493	6,923
Assets retirement obligations					513			513
Transfers	26	1,271	498	701	240	(66)	(2,753)	(83)
Balance at September 30, 2016	906	10,792	9,320	7,972	11,249	6,801	14,087	61,127
Cost	906	16,588	15,209	14,175	19,108	10,544	14,087	90,617
Accumulated depreciation		(5,796)	(5,889)	(6,203)	(7,859)	(3,743)		(29,490)
	906	10,792	9,320	7,972	11,249	6,801	14,087	61,127

	Land	Building	Facilities	Equipment	Mineral properties	Others	Constructions in progress	Total
Balance at December 31, 2014	1,069	11,654	10,813	9,287	14,929	10,954	19,416	78,122
Additions (i)							6,399	6,399
Disposals		(5)	(37)	(33)	(151)	(1,101)	(8)	(1,335)
Depreciation and amortization		(402)	(548)	(816)	(636)	(555)		(2,957)
Transfers to non-current assets held for sale					(127)			(127)
Translation adjustment	(300)	(3,320)	(3,178)	(2,006)	(2,881)	(2,244)	(4,440)	(18,369)
Transfers	7	2,676	1,968	1,684	184	1,829	(8,348)	
Acquisition of subsidiary				1		119		120
Balance at September 30, 2015	776	10,603	9,018	8,117	11,318	9,002	13,019	61,853
Cost	776	13,384	13,213	12,676	16,918	12,542	13,019	82,528
Accumulated depreciation		(2,781)	(4,195)	(4,559)	(5,600)	(3,540)		(20,675)
	776	10,603	9,018	8,117	11,318	9,002	13,019	61,853

(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	
	September 30, 2016	December 31, 2015	September 30, 2016	December 31, 2015
Debt contracts in the international markets				
Floating rates in:				
US\$	384	241	7,075	5,174
Fixed rates in:				
US\$	410	1,191	13,090	12,923
EUR			1,686	1,633
Other currencies	15	14	215	169
Accrued charges	279	326		
	1,088	1,772	22,066	19,899
Debt contracts in Brazil				
Floating rates in:				
R\$, indexed to TJLP, TR, IPCA, IGP-M and CDI	369	212	5,661	4,709
Basket of currencies and US\$ indexed to LIBOR	333	290	1,249	1,342
Fixed rates in:				
R\$	76	63	264	268
Accrued charges	315	169	28	129
	1,093	734	7,202	6,448
	2,181	2,506	29,268	26,347

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	5		210	215	1,653
2017	628		1,009	1,637	1,708
2018	2,052	843	1,169	4,064	1,599
2019	992	1,000	1,341	3,333	1,381
2020	3,394	1,339	907	5,640	1,215
2021	366	1,342	882	2,590	1,002
Between 2022 and 2025	1,225	3,345	1,049	5,619	2,609
2026 onwards	88	7,489	152	7,729	5,871

	8,750	15,358	6,719	30,827	17,038
--	-------	--------	-------	--------	--------

(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 September 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 September 30, 2016, the average annual interest rates by currency are as follows:

Loans and borrowings in	Average interest rate (i)	Total debt
US\$	4.55%	22,781
R\$ (ii)	11.15%	6,703
EUR (iii)	4.06%	1,734
Other currencies	3.50%	231
		31,449

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

(ii) R\$ denominated debt that bears interest at IPCA, CDI, TR or TJLP, plus spread. For a total of US\$4,583, 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 2.19% 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 September 30, 2016
Credit lines					
Revolving credit facilities	US\$	May 2015	5 years	3,000	1,200
Revolving credit facilities	US\$	July 2013	5 years	2,000	1,800
Financing lines					
BNDES (i)	R\$	April 2008	10 years	2,249	276
BNDES - CLN 150	R\$	September 2012	10 years	1,196	6
BNDES - S11D e S11D Logística	R\$	May 2014	10 years	1,899	754

(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 September 30, 2016.

In June and August 2016, the Company issued through its wholly owned subsidiary Vale Overseas Limited the guaranteed notes due 2021 and 2026 totaling US\$2,250. These notes bear a coupon of 5.875% and 6.250% per year, respectively, payable semi-annually, and were sold at a price of 100.000% of the principal amount.

d) Guarantees

As at September 30, 2016 and December 31, 2015, loans and borrowings are secured by property, plant and equipment and receivables in the amount of US\$469 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 September 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
Balance at June 30, 2016	231	112	555	26	924
Additions	6	26	74		106
Reversals	(1)	(29)	(40)	(4)	(74)
Payments	(2)	(3)	(23)		(28)
Indexation and interest	(4)	(6)	15	(1)	4
Translation adjustment	(4)	(2)	(6)	(1)	(13)
Balance at September 30, 2016	226	98	575	20	919

	Tax litigation	Civil litigation	Labor litigation	Environmental litigation	Total of litigation provision
Balance at June 30, 2015	322	131	625	69	1,147
Additions	19	8	59		86
Reversals	(9)	(9)	(72)		(90)
Payments	(16)	(39)	(6)	(10)	(71)
Indexation and interest	17	5	(23)	8	7
Translation adjustment	(60)	(23)	(131)	(7)	(221)
Balance at September 30, 2015	273	73	452	60	858

	Tax litigation	Civil litigation	Labor litigation	Environmental litigation	Total of litigation provision
Balance at December 31, 2015	269	79	454	20	822
Additions	41	82	184	5	312
Reversals	(40)	(51)	(87)	(8)	(186)
Payments	(93)	(47)	(91)		(231)
Indexation and interest	27	16	22	(1)	64
Translation adjustment	22	19	93	4	138
Balance at September 30, 2016	226	98	575	20	919

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

	Tax litigation	Civil litigation	Labor litigation	Environmental litigation	Total of litigation provision
Balance at December 31, 2014	366	118	706	92	1,282
Additions	177	55	124		356
Reversals	(182)	(39)	(114)	(1)	(336)
Payments	(19)	(38)	(20)	(21)	(98)
Indexation and interest	29	18	(19)	2	30
Translation adjustment	(98)	(41)	(225)	(12)	(376)
Balance at September 30, 2015	273	73	452	60	858

b) Contingent liabilities

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

	September 30, 2016	December 31, 2015
Tax litigation	7,901	5,326
Civil litigation	1,600	1,335
Labor litigation	2,695	1,866
Environmental litigation	1,846	1,381
Total	14,042	9,908

Table of Contents

i - Tax litigation - Our most significant tax-related contingent liabilities result from disputes related to (i) the deductibility of our payments of social security contributions on the net income (CSLL) from our taxable income, (ii) challenges of certain tax credits we deducted from our PIS and COFINS payments, (iii) assessments of CFEM (royalties), and (iv) charges of value-added tax on services and circulation of goods (ICMS), especially relating to certain tax credits we claimed from the sale and transmission of energy, ICMS charges in connection with the transfer of iron ore between different Brazilian states, ICMS charges on our own transportation costs and challenges to other tax credits we claimed. The changes reported in the period resulted from interest and inflation adjustments in the amounts in dispute.

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.

	September 30, 2016	December 31, 2015
Tax litigation	268	211
Civil litigation	69	102

Labor litigation	715	553
Environmental litigation	21	16
Total	1,073	882

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
Balance at June 30, 2016	7,289	1,739	5,550
Effect in income statement	(263)	95	(358)
Transfers between asset and liabilities	(148)	(148)	
Translation adjustment	(52)	(1)	(51)
Other comprehensive income	23	(9)	32
Balance at September 30, 2016	6,849	1,676	5,173

	Assets	Liabilities	Total
Balance at June 30, 2015	4,300	3,089	1,211
Effect in income statement	4,605	2	4,603
Translation adjustment	(934)	(206)	(728)
Other comprehensive income	11	11	
Balance at September 30, 2015	7,982	2,896	5,086

	Assets	Liabilities	Total
Balance at December 31, 2015	7,904	1,670	6,234
Effect in income statement	(1,835)	40	(1,875)
Transfers between asset and liabilities	(4)	(4)	
Translation adjustment	891	49	842
Other comprehensive income	(107)	(79)	(28)
Balance at September 30, 2016	6,849	1,676	5,173

	Assets	Liabilities	Total
Balance at December 31, 2014	3,976	3,341	635
Effect in income statement	5,364	(51)	5,415
Translation adjustment	(1,375)	(402)	(973)
Other comprehensive income	28	8	20
Acquisition of subsidiary	(11)		(11)
Balance at September 30, 2015	7,982	2,896	5,086

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 September 30		Nine months period ended September 30	
	2016	2015	2016	2015
Net income (loss) before income taxes	997	(6,739)	6,173	(8,955)
Income taxes at statutory rates - 34%	(339)	2,291	(2,099)	3,045
Adjustments that affect the basis of taxes:				
Income tax benefit from interest on stockholders' equity				356
Tax incentives	92	12	190	37
Equity results	9	(119)	129	(137)
Additions (reversals) of tax loss carry forward	68	2,848	(98)	2,848
Unrecognized tax losses of the period	(170)	(387)	(519)	(579)
Others results in associates and joint ventures	(11)		(364)	
Others	(64)	(142)	71	(392)
Income taxes	(415)	4,503	(2,690)	5,178

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 September 30, 2016, the balance of US\$5,426 (US\$449 as current and US\$4,977 as non-current) is due in 145 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 pension plans	September 30, 2016 Underfunded pension plans	Others benefits	Overfunded pension plans	December 31, 2015 Underfunded pension plans	Others benefits
Balance at beginning of the period	961			1,301		
Interest income	115			130		
Changes in asset ceiling and onerous liability	530			(54)		
Translation adjustment	262			(416)		
Balance at end of the period	1,868			961		
Amount recognized in the balance sheet						
Present value of actuarial liabilities	(3,069)	(4,300)	(1,382)	(2,474)	(3,689)	(1,223)
Fair value of assets	4,937	3,497		3,435	3,094	
Effect of the asset ceiling	(1,868)			(961)		
Liabilities		(803)	(1,382)		(595)	(1,223)
Current liabilities		(20)	(52)		(17)	(51)
Non-current liabilities		(783)	(1,330)		(578)	(1,172)
Liabilities		(803)	(1,382)		(595)	(1,223)

17. Financial instruments classification

	September 30, 2016			December 31, 2015			
	Loans and receivables or amortized cost	At fair value through net income	Total	Loans and receivables or amortized cost	At fair value through net income	Derivatives designated as hedge accounting	
Financial assets							
Current							
Cash and cash equivalents	5,369		5,369	3,591			3,591
Financial investments	115		115	28			28
Derivative financial instruments		141	141		121		121
Accounts receivable	2,556		2,556	1,476			1,476
Related parties	66		66	70			70
	8,106	141	8,247	5,165	121		5,286

Non-current

Derivative financial instruments		504	504		93	93
Loans	182		182	188		188
Related parties	19		19	1		1
	201	504	705	189	93	282
Total of financial assets	8,307	645	8,952	5,354	214	5,568

Financial liabilities**Current**

Suppliers and contractors	3,751		3,751	3,365		3,365
Derivative financial instruments		868	868		2,023	53
Loans and borrowings	2,181		2,181	2,506		2,506
Related parties	558		558	475		475
	6,490	868	7,358	6,346	2,023	53

Non-current

Derivative financial instruments		1,167	1,167		1,429	1,429
Loans and borrowings	29,268		29,268	26,347		26,347
Related parties	137		137	213		213
Participative stockholders debentures		658	658		342	342
Others (i)		252	252		141	141
	29,405	2,077	31,482	26,560	1,912	28,472
Total of financial liabilities	35,895	2,945	38,840	32,906	3,935	53

(i) See note 18(a).

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

	September 30, 2016			December 31, 2015		
	Level 2	Level 3	Total	Level 2	Level 3	Total
Financial assets						
Derivative financial instruments	316	329	645	214		214
Total	316	329	645	214		214
Financial liabilities						
Derivative financial instruments	1,787	248	2,035	3,505		3,505
Participative stockholders debentures	658		658	342		342
Others (minimum return instrument)		252	252		141	141
Total	2,445	500	2,945	3,847	141	3,988

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
September 30, 2016				
Debt principal	30,827	29,789	14,288	15,501
December 31, 2015				
Debt principal	28,229	26,233	12,297	13,936

19. Derivative financial instruments

a) **Derivatives effects on balance sheet**

	September 30, 2016		December 31, 2015	
	Current	Non-current	Current	Non-current
Derivatives not designated as hedge accounting				
Foreign exchange and interest rate risk				
CDI & TJLP vs. US\$ fixed and floating rate swap	131		69	
IPCA swap	7	74	2	16
Pré-dolar swap	2	16		
	140	90	71	16
Commodities price risk				
Nickel	1	5	50	11
	1	5	50	11
Others		409		66
		409		66
Total	141	504	121	93

Table of Contents

	September 30, 2016		December 31, 2015	
	Current	Non-current	Current	Non-current
Derivatives not designated as hedge accounting				
Foreign exchange and interest rate risk				
CDI & TJLP vs. US\$ fixed and floating rate swap	659	779	799	1,131
IPCA swap	19	75	21	101
Eurobonds swap	6	24	146	29
Euro Forward	7			
Pre dollar swap	20	36	93	72
	711	914	1,059	1,333
Commodities price risk				
Nickel	2	4	40	10
Bunker oil	155		924	
	157	4	964	10
Others				
		249		86
		249		86
Derivatives designated as cash flow hedge accounting				
Bunker oil			50	
Foreign exchange			3	
			53	
Total	868	1,167	2,076	1,429

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

	Three months period ended September 30					
	Gain (loss) recognized in the income statement		Financial settlement inflows(outflows)		Gain(loss) recognized in other comprehensive income	
	2016	2015	2016	2015	2016	2015
Derivatives not designated as hedge accounting						
Foreign exchange and interest rate risk						
CDI & TJLP vs. US\$ fixed and floating rate swap	(57)	(891)	4	2		
IPCA swap	1	(110)	(26)			
Eurobonds swap	9	(14)				
Euro forward	5					
Pre dollar swap	(7)	(181)		(3)		
	(49)	(1,196)	(22)	(1)		
Commodities price risk						

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

Nickel	(3)	(19)	(3)	(22)	
Bunker oil	(7)	(530)	(166)	(30)	
	(10)	(549)	(169)	(52)	
Others	20	(43)			
Derivatives designated as cash flow					
hedge accounting					
Bunker oil		(121)		(104)	22
Foreign exchange		(11)		(10)	5
		(132)		(114)	27
Total	(39)	(1,920)	(191)	(167)	27

Table of Contents

	Gain (loss) recognized in the income statement		Nine months period ended September 30 Financial settlement inflows(outflows)		Gain(loss) recognized in other comprehensive income	
	2016	2015	2016	2015	2016	2015
Derivatives not designated as hedge accounting						
Foreign exchange and interest rate risk						
CDI & TJLP vs. US\$ fixed and floating rate swap	781	(1,662)	(88)	(334)		
IPCA swap	74	(159)	(25)	7		
Eurobonds swap	3	(137)	(142)	(13)		
Euro forward	(7)					
Pre dollar swap	69	(257)	(74)	(7)		
	920	(2,215)	(329)	(347)		
Commodities price risk						
Nickel	(40)	(38)	(29)	(48)		
Bunker oil	127	(500)	(642)	(175)		
	87	(538)	(671)	(223)		
Others	156	(114)				
Derivatives designated as cash flow hedge accounting						
Bunker oil		(305)	(51)	(322)		310
Foreign exchange	(3)	(35)	(3)	(35)	2	12
	(3)	(340)	(54)	(357)	2	322
Total	1,160	(3,207)	(1,054)	(927)	2	322

During 2015, the Company implemented bunker oil purchase cash flows protection program and recognized as cost of goods sold and services rendered and financial expense the amounts of US\$118 and US\$1,799 for the three months period ended on September 30, 2015, respectively, and the amounts of US\$299 and US\$2,902 for the nine months period ended on September 30, 2015, respectively. In 2016, all derivatives impacts were charged to financial results.

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

	Last maturity dates
Currencies and interest rates	July 2023
Bunker oil	December 2016
Nickel	September 2018
Others	December 2027

Additional information about derivatives financial instruments

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

There was no cash amount deposited as margin call regarding derivative positions on September 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 September 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.

a) Foreign exchange and interest rates derivative positions

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

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

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

Table of Contents

Fluxo	Valor principal				Valor justo		Liquidação financeira	Valor em Risco		Valor
	30 de Setembro de 2016	30 de Setembro de 2016	30 de Setembro de 2016	30 de Setembro de 2016	30 de Setembro de 2016	31 de Dezembro de 2015	Entradas (Saídas)	30 de Setembro de 2016	30 de Setembro de 2016	
Swap										
CDI vs. Taxa Fixa em US\$										
Ativo	R\$ 6,289	R\$ 5,239	CDI	106.78%	(580)	(783)	105	51	(420)	
Passivo	US\$ 2,563	US\$ 2,288	Pré	3.46%						
Swap										
TJLP vs. Taxa Fixa em US\$										
Ativo	R\$ 4,559	R\$ 5,484	TJLP +	1.33%	(671)	(1,015)	(189)	69	(14)	(2)
Passivo	US\$ 2,126	US\$ 2,611	Pré	1.72%						
Swap										
TJLP vs. Taxa flutuante em US\$										
Ativo	R\$ 253	R\$ 267	TJLP +	0.92%	(56)	(63)	(2)	5	(1)	
Passivo	US\$ 147	US\$ 156	Libor +	-1.21%						
Swap										
Taxa Fixa em R\$ vs. Taxa Fixa em US\$										
Ativo	R\$ 1,107	R\$ 1,356	Pré	7.43%	(38)	(165)	(76)	23	(15)	
Passivo	US\$ 383	US\$ 528	Pré	-0.79%						
Swap										
IPCA vs. Taxa Fixa em US\$										
Ativo	R\$ 1,000	R\$ 1,000	IPCA +	6.55%	(59)	(105)	1	12		
Passivo	US\$ 434	US\$ 434	Pré	0						
Swap										
IPCA vs. CDI										
Ativo	R\$ 1,350	R\$ 1,350	IPCA +	6.62%	46	2	(26)	0.4		

Passivo R\$ 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.

Termo	Valor principal				Taxa Média	Valor justo		Liquidação financeira		Valor em Risco	Valor justo	
	30 de Setembro de 2016	30 de Setembro de 2016	31 de Dezembro de 2015	31 de Dezembro de 2015		30 de Setembro de 2016	31 de Dezembro de 2015	Entradas (Saídas)	30 de Setembro de 2016			2016
<i>Swap</i>												
<i>Taxa Fixa em EUR vs. Taxa Fixa em US\$</i>												
Ativo	500	1,000	Pré		3.75%	(30)		(175)		(141)	12	(5)
Passivo	US\$ 613	US\$ 1,302	Pré		4.29%							

Termo	Valor principal		Compra / Venda	Taxa Média (USD/EUR)	Valor justo		Liquidação financeira		Valor em Risco	Valor justo
	30 de Setembro de 2016	31 de Dezembro de 2015			30 de Setembro de 2016	31 de Dezembro de 2015	Entradas (Saídas)	30 de Setembro de 2016		
500			C	1.143		(7)				6.1

(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 the first quarter.

Flow	Notional	Bought / Sold	Average rate (CAD / USD)	Fair value		Financial Settlement		Value at Risk	Fair value by year
				September 30, 2016	December 31, 2015	Inflows (Outflows)	September 30, 2016		

Forwards	CAD 10	B	1.028	(2)
----------	--------	---	-------	-----

Table of Contents**b) Commodities derivative positions****(i) Bunker Oil purchase cash flows protection program**

In order to partially 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 / Sold	Average strike (US\$/ton)	Fair value		Financial settlement Inflows (Outflows)		Value at Risk September 30, 2016
	September 30, 2016	December 31, 2015			September 30, 2016	December 31, 2015	September 30, 2016	September 30, 2016	
Bunker Oil protection									
Forwards	352,500	1,867,500	B	511	(88)	(577)	(457)		4
Call options	540,000	2,041,500	B	380	0.18	0.02			0.12
Put options	540,000	2,041,500	S	300	(27)	(297)	(173)		5
Total					(115)	(873)			

As at September 30, 2016 and December 31, 2015, excludes US\$40 e US\$101, 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.

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

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

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

Flow	Notional (ton)		Bought / Sold	Average strike (US\$/ton)	Fair value		Financial settlement Inflows (Outflows) September 30, 2016	Value at Risk September 30, 2016	Fair value September 30, 2016
	September 30, 2016	December 31, 2015			September 30, 2016	December 31, 2015			
Fixed price sales protection									
Nickel forwards	12,923	16,917	B	10,272	4	(46)	(30)	4	
Raw material purchase protection									
Nickel forwards	153	118	S	9,890	(0.11)	0.10	(0.10)	0.05	(0.05)
Copper forwards	1,262	385	S	4,873	(0.00)	0.09	0.09	0.05	(0.05)
Total					(0.11)	0.19			

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 / Sold	Average strike (US\$/share)	Fair value		Financial settlement Inflows (Outflows) September 30, 2016	Value at Risk September 30, 2016	Fair value by year end 2016
	September 30, 2016	December 31, 2015			September 30, 2016	December 31, 2015			
Call options	10,000,000	10,000,000	B	44	80	7		8	

Table of Contents**d) Call options from debentures**

The company has debentures in which lenders have call options of a specified quantity of Ferrovia Norte Sul S.A. ordinary shares, later changed to VLI S.A. shares. The call option's strike price is given by the debentures' remaining notional in each exercise date.

Flow	Notional (quantity)		Bought / Sold	Average strike (R\$/share)	Fair value		Financial settlement Inflows (Outflows) September 30, 2016	Value at Risk September 30, 2016	Fair value by year 2016
	September 30, 2016	December 31, 2015			September 30, 2016	December 31, 2015			
Call options	140,239	140,239	S	8,570	(37)	(39)		2	

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

Flow	Notional (quantity, in millions)		Bought / Sold	Average strike (R\$/share)	Fair value		Financial settlement Inflows (Outflows) September 30, 2016	Value at Risk September 30, 2016	Fair value by year 2016
	September 30, 2016	December 31, 2015			September 30, 2016	December 31, 2015			
Options	2,139	2,139	B/S	1.9	119	15		10	

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 / Sold	Average strike	Fair value	Financial settlement Inflows (Outflows)	Value at Risk	Fair value by year 2016
------	----------------	------------------	----------------	------------	--	---------------	-------------------------------

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

Flow	September 30, 2016	December 31, 2015	Sold	(US\$/ton)	September 30, 2016	December 31, 2015	September 30, 2016	September 30, 2016	2016
Nickel forwards	5,538	3,877	S	10,236	0.3	3.0			
Copper forwards	4,527	5,939	S	4,768	0.3	2.0			
Total					0.5	5.0			2.3

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

Flow	Notional (volume/month)		Bought / Sold	Average strike (US\$/ton)	Fair value		Financial settlement	Value at Risk	Fair value
	September 30, 2016	December 31, 2015			September 30, 2016	December 31, 2015	Inflows (Outflows) September 30, 2016	September 30, 2016	2016
Call options	746,667	746,667	S	179	(1.7)			1.1	(0.0)

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

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

- *Scenario I*: fair value calculation considering market prices as of September 30, 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

Table of Contents

Instrument	Instrument's main risk events	Scenario I	Scenario II	Scenario III
CDI vs. US\$ fixed rate swap	R\$ depreciation	(581)	(1,235)	(1,889)
	US\$ interest rate inside Brazil decrease	(581)	(588)	(596)
	Brazilian interest rate increase	(581)	(582)	(584)
Protected item: R\$ denominated debt	R\$ depreciation	n.a.		
TJLP vs. US\$ fixed rate swap	R\$ depreciation	(671)	(1,193)	(1,715)
	US\$ interest rate inside Brazil decrease	(671)	(696)	(721)
	Brazilian interest rate increase	(671)	(732)	(788)
	TJLP interest rate decrease	(671)	(714)	(758)
Protected item: R\$ denominated debt	R\$ depreciation	n.a.		
TJLP vs. US\$ floating rate swap	R\$ depreciation	(56)	(90)	(124)
	US\$ interest rate inside Brazil decrease	(56)	(58)	(61)
	Brazilian interest rate increase	(56)	(60)	(64)
	TJLP interest rate decrease	(56)	(59)	(62)
Protected item: R\$ denominated debt	R\$ depreciation	n.a.		
R\$ fixed rate vs. US\$ fixed rate swap	R\$ depreciation	(38)	(138)	(238)
	US\$ interest rate inside Brazil decrease	(38)	(49)	(61)
	Brazilian interest rate increase	(38)	(67)	(93)
Protected item: R\$ denominated debt	R\$ depreciation	n.a.		
IPCA vs. US\$ fixed rate swap	R\$ depreciation	(59)	(176)	(294)
	US\$ interest rate inside Brazil decrease	(59)	(65)	(73)
	Brazilian interest rate increase	(59)	(88)	(114)
	IPCA index decrease	(59)	(73)	(88)
Protected item: R\$ denominated debt	R\$ depreciation	n.a.		
IPCA vs. CDI swap	Brazilian interest rate increase	46	(1)	(42)
	IPCA index decrease	46	22	(1)
Protected item: R\$ denominated debt linked to IPCA	IPCA index decrease	n.a.	(22)	1
EUR fixed rate vs. US\$ fixed rate swap	EUR depreciation	(30)	(207)	(385)
	Euribor increase	(30)	(33)	(36)
	US\$ Libor decrease	(30)	(43)	(56)
Protected item: EUR denominated debt	EUR depreciation	n.a.	207	385
EUR Forward	EUR depreciation	(8)	(148)	(288)
	Euribor increase	(8)	(8)	(8)
	US\$ Libor decrease	(8)	(8)	(9)
Protected item: EUR denominated debt	EUR depreciation	n.a.	148	288

Instrument	Instrument's main risk events	Scenario I	Scenario II	Scenario III
------------	-------------------------------	------------	-------------	--------------

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

Bunker Oil protection				
Forwards and options	Bunker Oil price decrease	(115)	(169)	(227)
Protected item: Part of costs linked to bunker oil prices	Bunker Oil price decrease	n.a.	169	227
Nickel sales fixed price protection				
Forwards	Nickel price decrease	4	(30)	(64)
Protected item: Part of nickel revenues with fixed prices	Nickel price fluctuation	n.a.	30	64
Purchase protection program				
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)	(0.6)	(1.2)
Protected item: Part of costs linked to copper prices	Copper price increase	n.a.	0.6	1.2
SLW warrants	SLW stock price decrease	80	44	15
VLI call options	VLI stock value increase	(37)	(56)	(79)
Options regarding non-controlling interest in subsidiary	Subsidiary stock value decrease	119	20	(49)

Table of Contents

Instrument	Main risks	Scenario I	Scenario II	Scenario III
Embedded derivatives - Raw material purchase (nickel)	Nickel price increase	0.3	(13.8)	(27.9)
Embedded derivatives - Raw material purchase (copper)	Copper price increase	0.3	(5.1)	(10.4)
Embedded derivatives - Gas purchase	Pellet price increase	(0.5)	(2.3)	(4.9)

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 September 30, 2016.

Long term ratings by counterparty	Moody's	S&P
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	BB-
Caixa Economica Federal	Ba3	BB
Citigroup	Baa1	BBB+
Credit Agricole	A1	A
Deutsche Bank	A3	BBB+
Goldman Sachs	A3	BBB+
HSBC	A1	A

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

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+

i) **Market curves**

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

(i) **Products**

Nickel

Maturity	Price (US\$/ton)	Maturity	Price (US\$/ton)	Maturity	Price (US\$/ton)
SPOT	10,460	MAR17	10,617	SEP17	10,683
OCT16	10,544	APR17	10,627	SEP18	10,798
NOV16	10,560	MAY17	10,640	SEP19	10,882
DEC16	10,578	JUN17	10,650	SEP20	10,964
JAN17	10,593	JUL17	10,662		
FEB17	10,605	AUG17	10,673		

Copper

Maturity	Price (US\$/lb)	Maturity	Price (US\$/lb)	Maturity	Price (US\$/lb)
SPOT	2.21	MAR17	2.21	SEP17	2.22
OCT16	2.20	APR17	2.22	SEP18	2.23
NOV16	2.21	MAY17	2.22	SEP19	2.25
DEC16	2.21	JUN17	2.22	SEP20	2.26
JAN17	2.21	JUL17	2.22		
FEB17	2.21	AUG17	2.22		

Bunker Oil

Maturity	Price (US\$/ton)	Maturity	Price (US\$/ton)	Maturity	Price (US\$/ton)
SPOT	256	MAR17	262	SEP17	267
OCT16	259	APR17	263	SEP18	280

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

NOV16	262	MAY17	264	SEP19	293
DEC16	262	JUN17	264	SEP20	308
JAN17	262	JUL17	265		
FEB17	261	AUG17	266		

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

Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)
11/01/16	1.61	09/01/17	2.00	01/02/20	2.86
12/01/16	1.74	10/02/17	2.05	04/01/20	2.98
01/02/17	1.78	01/02/18	2.17	07/01/20	3.07
02/01/17	1.81	04/02/18	2.25	10/01/20	3.18
03/01/17	1.82	07/02/18	2.36	01/04/21	3.28
04/03/17	1.83	10/01/18	2.42	04/01/21	3.34
05/02/17	1.86	01/02/19	2.54	07/01/21	3.43
06/01/17	1.92	04/01/19	2.62	10/01/21	3.52
07/03/17	1.93	07/01/19	2.68	01/03/22	3.57
08/01/17	1.99	10/01/19	2.72	01/02/23	3.87

US\$ Interest Rate

Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)
1M	0.53	6M	0.91	11M	0.94
2M	0.65	7M	0.92	12M	0.94
3M	0.85	8M	0.93	2Y	1.02
4M	0.88	9M	0.93	3Y	1.08
5M	0.90	10M	0.94	4Y	1.15

TJLP

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

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

07/03/17	7.50	07/01/19	7.50	01/03/22	7.50
08/01/17	7.50	10/01/19	7.50	01/02/23	7.50

Table of Contents**BRL Interest Rate**

Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)
11/01/16	14.03	09/01/17	12.58	01/02/20	11.58
12/01/16	13.93	10/02/17	12.48	04/01/20	11.60
01/02/17	13.77	01/02/18	12.19	07/01/20	11.61
02/01/17	13.60	04/02/18	12.01	10/01/20	11.59
03/01/17	13.48	07/02/18	11.85	01/04/21	11.58
04/03/17	13.32	10/01/18	11.73	04/01/21	11.59
05/02/17	13.16	01/02/19	11.63	07/01/21	11.59
06/01/17	13.00	04/01/19	11.59	10/01/21	11.60
07/03/17	12.88	07/01/19	11.57	01/03/22	11.60
08/01/17	12.72	10/01/19	11.58	01/02/23	11.68

Implicit Inflation (IPCA)

Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)
11/01/16	7.40	09/01/17	6.04	01/02/20	5.27
12/01/16	7.32	10/02/17	5.95	04/01/20	5.29
01/02/17	7.16	01/02/18	5.75	07/01/20	5.30
02/01/17	7.00	04/02/18	5.63	10/01/20	5.29
03/01/17	6.89	07/02/18	5.50	01/04/21	5.28
04/03/17	6.74	10/01/18	5.41	04/01/21	5.29
05/02/17	6.59	01/02/19	5.32	07/01/21	5.30
06/01/17	6.43	04/01/19	5.28	10/01/21	5.31
07/03/17	6.32	07/01/19	5.26	01/03/22	5.32
08/01/17	6.17	10/01/19	5.27	01/02/23	5.43

EUR Interest Rate

Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)
1M	-0.38	6M	-0.11	11M	-0.01
2M	-0.35	7M	-0.08	12M	0.00
3M	-0.32	8M	-0.05	2Y	-0.22
4M	-0.21	9M	-0.04	3Y	-0.21
5M	-0.15	10M	-0.02	4Y	-0.19

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	0.10
2M	0.89	7M	0.74	12M	0.01
3M	0.90	8M	0.51	2Y	0.88
4M	0.96	9M	0.34	3Y	0.91
5M	1.00	10M	0.21	4Y	0.95

Currencies - Ending rates

CAD/US\$	0.7623	US\$/BRL	3.2462	EUR/US\$	1.1222
----------	--------	----------	--------	----------	--------

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

At September 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.

	September 30, 2016		Total
	ON	PNA	
Stockholders			
Valepar S.A.	1,716,435,045	20,340,000	1,736,775,045
Brazilian Government (Golden Share)		12	12
Foreign investors - ADRs	792,920,634	640,657,142	1,433,577,776
FMP - FGTS	75,083,246		75,083,246
PIBB - BNDES	742,578	993,751	1,736,329
BNDESPar	206,378,882	66,185,272	272,564,154
Foreign institutional investors in local market	273,953,175	746,942,370	1,020,895,545
Institutional investors	76,600,716	128,382,435	204,983,151
Retail investors in Brazil	43,538,724	364,220,944	407,759,668
Shares outstanding	3,185,653,000	1,967,721,926	5,153,374,926
Shares in treasury	31,535,402	59,405,792	90,941,194
Total issued shares	3,217,188,402	2,027,127,718	5,244,316,120
Amounts per class of shares (in millions)	38,525	23,089	61,614
Total authorized shares	3,600,000,000	7,200,000,000	10,800,000,000

b) Basic and diluted earnings per share

Basic and diluted earnings per share are as follows:

	Three months period ended September 30		Nine months period ended September 30	
	2016	2015	2016	2015
Net income (loss) attributable to Vale's stockholders	575	(2,117)	3,457	(3,560)

Basic and diluted earnings per share:				
Income (loss) available to preferred stockholders	220	(808)	1,320	(1,359)
Income (loss) available to common stockholders	355	(1,309)	2,137	(2,201)
Total	575	(2,117)	3,457	(3,560)
Thousands of shares				
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
Total	5,153,375	5,153,375	5,153,375	5,153,375
Basic and diluted earnings (loss) per share				
Preferred share	0.11	(0.41)	0.67	(0.69)
Common share	0.11	(0.41)	0.67	(0.69)

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

	Three months period ended September 30		Nine months period ended September 30	
	2016	2015	2016	2015
Personnel	581	567	1,681	1,724
Materials and services	1,017	980	2,955	2,925
Fuel oil and gas	338	315	962	974
Maintenance	739	595	2,015	1,939
Energy	215	139	568	452
Acquisition of products	132	168	361	672
Depreciation and depletion	899	861	2,577	2,654
Freight	617	909	1,728	2,534
Others	417	506	1,152	1,520
Total	4,955	5,040	13,999	15,394
Cost of goods sold	4,817	4,925	13,639	14,994
Cost of services rendered	138	115	360	400
Total	4,955	5,040	13,999	15,394

b) Selling and administrative expenses

	Three months period ended September 30		Nine months period ended September 30	
	2016	2015	2016	2015
Personnel	61	56	170	212
Services (consulting, infrastructure and others)	19	26	53	80
Advertising and publicity	2	4	5	10
Depreciation and amortization	37	31	93	95
Travel expenses	2	3	5	9
Taxes and rents	4	3	11	13
Others	28	8	75	66
Total	153	131	412	485

c) Others operational expenses (incomes), net

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

	Three months period ended September 30		Nine months period ended September 30	
	2016	2015	2016	2015
Provision for litigation	32	(4)	126	20
Provision for loss with VAT credits (ICMS)	27	55	62	157
Provision for profit sharing program	20	1	26	20
Provision (reversals) for disposal of materials and inventories	4	7	(73)	101
Gold stream transaction	(150)		(150)	(230)
Others	16	54	153	202
Total	(51)	113	144	270

Table of Contents**22. Financial result**

	Three months period ended September		Nine months period ended September	
	2016	2015	2016	2015
Financial expenses				
Loans and borrowings gross interest	(466)	(434)	(1,330)	(1,230)
Capitalized loans and borrowing costs	172	195	562	568
Labor, tax and civil lawsuits	(4)	10	(25)	(40)
Derivative financial instruments	(101)	(1,799)	(325)	(3,224)
Indexation and exchange rate variation (a)	(605)	(7,581)	(2,830)	(13,518)
Participative stockholders debentures	(48)	75	(250)	711
Expenses of REFIS	(144)	(138)	(387)	(425)
Others	(225)	(60)	(526)	(371)
	(1,421)	(9,732)	(5,111)	(17,529)
Financial income				
Short-term investments	6	51	75	98
Derivative financial instruments	62		1,485	322
Indexation and exchange rate variation (b)	277	2,464	5,966	5,865
Others	29	41	54	90
	374	2,556	7,580	6,375
Financial results, net	(1,047)	(7,176)	2,469	(11,154)
Summary of indexation and exchange rate variation				
Loans and borrowings	(295)	(6,913)	5,124	(11,035)
Others	(33)	1,796	(1,988)	3,382
Net (a) + (b)	(328)	(5,117)	3,136	(7,653)

23. Deferred revenue - Gold stream

In August 2016, the Company entered into an amendment to the original agreement with Silver Wheaton Corp. (SLW) to sell an additional 25% premium of the payable gold stream in copper concentrate from the Salobo copper mine for the life of the mine. In this transaction, the Company received: (i) an initial cash payment of US\$800 ; (ii) an option value with a reduction of the exercise price, from US\$65.00 to US\$43.75, of the 10 million warrants of SLW held by Vale since 2013 and maturing in 2023; and (iii) future cash payments for each ounce of gold delivered to SLW under the agreement, equal to the lesser of US\$400 per oz (plus a 1% annual adjustment from 2019 onwards) and the prevailing market price.

Vale may also receive an additional cash payment contingent on its decision to expand its capacity to process Salobo copper ores to more than 28 Mtpy before 2036. Salobo I and Salobo II, which are ramping up, will have a total capacity to process 24 Mtpy of run-of-mine (ROM). The

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

contingent additional cash payment could range from US\$113 to US\$953 depending on ore grade, timing and size of the expansion.

This transaction was bifurcated into two identifiable components (i) the sale of the mineral rights which resulted in US\$150 gain in the income statement under Other operating income (expenses), net and, (ii) US\$549 recorded as deferred revenue (liability) related to the services for gold extraction on the portion in which Vale operates as an agent for SLW gold extraction.

After the completion of this transaction SLW holds 75% of the payable gold stream in copper concentrated from the Salobo mine and 70% of the gold extracted during the next 20 years as a by-product of the Sudbury nickel mines. During the three months period ended September 30, 2016 and 2015, the Company recognized US\$58 and US\$23, respectively, and during the nine months period ended September 30, 2016 and 2015, US\$141 and US\$70, respectively, in income statement related to rendered services of the original and amended transactions.

Defining the gain on sale of mineral interest and the deferred revenue portion of the transaction required the use of critical accounting estimates as follow:

- Discount rates used to measure the present value of future inflows and outflows;
- Allocation of costs between copper and gold based on relative prices;
- Expected margin for the independent elements (sale of mineral rights and service for gold extraction) based on Company's best estimate.

Table of Contents

24. 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) Participative stockholders debentures

At October 3rd, 2016 (subsequently event), the company has paid the semiannual remuneration to stockholders debentures the amount of US\$51 (R\$164).

c) Operating lease and purchase obligations

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

2016	37
2017	55
2018	58
2019	50
2020 and thereafter	53
Total minimum payments required	253

d) Guarantees provided

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

As of September 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\$354 and US\$1,351, respectively.

Table of Contents**25. 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:

	Assets							
	September 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.	536	219			37	66		
Banco do Brasil S.A.	155	31			395	16		
Baovale Mineração S.A.								1
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 Atlântico				16				
Companhia Siderúrgica do Pecem			57					
Consórcio de Rebocadores da Baía de São Marcos			12				15	
Ferrovia Norte Sul S.A.			1				3	
Mitsui & Co., Ltd.			3				1	
MRS Logística S.A.				19				17
VLI Multimodal S.A.			5				9	

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

VLI Operações Portuárias S.A.			2				25	
VLI S.A.			2	12				10
Others			21	2			24	16
Total	691	250	105	85	432	82	78	71

	Liabilities							
	September 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	48			11		
Banco Bradesco S.A.	470			6	205	54		370
Banco do Brasil S.A.	209			2,885	250			2,625
BNDES	38			4,473	39			4,066
Baovale Mineração S.A.		22				8		
BNDES Participações S.A.				440				371
Companhia Coreano-Brasileira de Pelotização		46	30			4	70	
Companhia Hispano-Brasileira de Pelotização		25	31			37	7	
Companhia Ítalo-Brasileira de Pelotização		32	50			3	64	
Companhia Nipo-Brasileira de Pelotização		92	61			9	112	
Consórcio de Rebocadores da Baía de São Marcos						8		
Ferrovia Centro-Atlântica S.A.			83				68	
Mitsui & Co., Ltd.		13				11		
MRS Logística S.A.		13				23		
Sumic Nickel Netherland B.V			352				352	
VLI S.A.		1	34					
Others		29	6			22	15	
Total	717	285	695	7,804	494	190	688	7,432

Table of Contents

	Three months period ended September 30					
	Net operating revenue	2016 Costs and expenses	Financial result	Net operating revenue	2015 Costs and expenses	Financial result
Aliança Geração de Energia S.A.		(32)		6		
Banco Bradesco S.A. (i)			(249)			(87)
Banco do Brasil S.A. (i)			(244)			(127)
Baovale Mineração S.A.		(4)				
BNDES (i)			(162)			(96)
BNDES Participações S.A. (i)			(22)			(1)
Companhia Coreano-Brasileira de Pelotização		(6)	(5)		(24)	
Companhia Hispano-Brasileira de Pelotização		(12)	(3)		(16)	
Companhia Ítalo-Brasileira de Pelotização		(13)	(6)		(20)	
Companhia Nipo-Brasileira de Pelotização		(27)	(9)		(23)	
Companhia Siderúrgica do Pecem	59					
Ferrovias Centro Atlântica S.A.	11	(9)	(1)	13	(9)	(1)
Ferrovias Norte Sul S.A.	3					
Mitsui & Co., Ltd.	41			41		
MRS Logística S.A.		(133)			(110)	
Samarco Mineração S.A.				20		
VLI Multimodal S.A.	9					
VLI Operações Portuárias S.A.	31	(7)		28		
VLI S.A.	34			42		
Others	2	(9)	3	11	(5)	4
Total	190	(252)	(698)	161	(207)	(308)

(i) Does not include exchange rate variation.

	Nine months period ended September 30					
	Net operating revenue	2016 Costs and expenses	Financial result	Net operating revenue	2015 Costs and expenses	Financial result
Aliança Geração de Energia S.A.		(94)		6		
Banco Bradesco S.A. (i)			(115)			(161)
Banco do Brasil S.A. (i)			(326)			(250)
Baovale Mineração S.A.		(12)			(20)	
BNDES (i)			(313)			(132)
BNDES Participações S.A. (i)			(42)			(11)
Companhia Coreano-Brasileira de Pelotização		(42)	(5)		(58)	

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

Companhia Hispano-Brasileira de Pelotização		(31)	(3)		(37)	
Companhia Ítalo-Brasileira de Pelotização		(35)	(6)		(48)	
Companhia Nipo-Brasileira de Pelotização		(80)	(9)		(73)	
Companhia Siderúrgica do Atlântico		(6)				
Companhia Siderúrgica do Pecem	91					
Ferrovia Centro Atlântica S.A.	30	(22)	(2)	37	(30)	(1)
Ferrovia Norte Sul S.A.	14					
Mitsui & Co., Ltd.	103			150		
MRS Logística S.A.		(335)			(370)	
Samarco Mineração S.A.				109		
VLI Multimodal S.A.	9					
VLI Operações Portuárias S.A.	99	(11)		29		
VLI S.A.	93			172		
Others	12	(24)	1	43	(29)	5
Total	451	(692)	(820)	546	(665)	(550)

(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
Eduardo Refinetti Guardia
Fernando Jorge Buso Gomes
Motomu Takahashi
Oscar Augusto de Camargo Filho
Eduardo de Salles Bartolomeo
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
Marcelo Marcolino
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

Executive Development Committee

Oscar Augusto de Camargo Filho

Governance and Sustainability Committee

Fernando Jorge Buso Gomes
Fernando Santos do Nascimento
Eduardo de Oliveira Rodrigues Filho
Priscila Valle Costa de Oliveira
Ricardo Simonsen

Fiscal Council

Marcelo Amaral Moraes
Chairman

Paulo José dos Reis Souza
Sandro Kohler Marcondes
Aníbal Moreira dos Santos
Raphael Manhães Martins

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

Clovis Torres Junior
Executive Officer (Human Resources, Health & Safety, Sustainability, Energy, Mergers and Acquisitions, Governance, Corporate Integrity, Legal and Tax)

Luciano Siani Pires
Executive Officer (Finance and Investors Relations)

Roger Allan Downey
Executive Officer (Fertilizers, Coal and Strategy)

Gerd Peter Poppinga
Executive Officer (Ferrous)

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

Marcel Juviano Barros
Fernando Jorge Buso Gomes
Tatiana Boavista Barros Heil

Strategic Committee

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

Finance Committee

Gilmar Dalilo Cezar Wanderley
Fernando Jorge Buso Gomes
Eduardo de Oliveira Rodrigues Filho
Marcelo Marcolino

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.

Vale S.A.
(Registrant)

Date: October 27, 2016

By:

/s/ Andre Figueiredo
Andre Figueiredo
Director of Investor Relations
