

Vale S.A.
Form 6-K
October 26, 2017
[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

October, 2017

Vale S.A.

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

(Address of principal executive office)

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

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, 2017

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>Consolidated Income Statement</u>	4
<u>Consolidated Statement of Comprehensive Income</u>	5
<u>Consolidated Statement of Cash Flows</u>	6
<u>Consolidated Statement of Financial Position</u>	7
<u>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 and by geographic area</u>	10
<u>4. Special events occurred during the period</u>	14
<u>5. Costs and expenses by nature</u>	16
<u>6. Financial result</u>	16
<u>7. Income taxes</u>	17
<u>8. Basic and diluted earnings per share</u>	18
<u>9. Accounts receivable</u>	18
<u>10. Inventories</u>	19
<u>11. Other financial assets and liabilities</u>	19
<u>12. Non-current assets and liabilities held for sale and discontinued operations</u>	19
<u>13. Acquisitions and divestitures</u>	21
<u>14. Investments in associates and joint ventures</u>	22
<u>15. Intangibles</u>	24
<u>16. Property, plant and equipment</u>	25
<u>17. Loans, borrowings, cash and cash equivalents and financial investments</u>	26
<u>18. Liabilities related to associates and joint ventures</u>	28
<u>19. Financial instruments classification</u>	31
<u>20. Fair value estimate</u>	32
<u>21. Derivative financial instruments</u>	33
<u>22. Provisions</u>	37
<u>23. Litigation</u>	38
<u>24. Employee postretirement obligations</u>	39
<u>25. Stockholders' equity</u>	40
<u>26. Related parties</u>	40
<u>27. Commitments</u>	42
<u>28. Additional information about derivatives financial instruments</u>	42

Table of Contents

KPMG Auditores Independentes	Central Tel	55 (21) 2207-9400
Rua do Passeio, 38 Setor 2 17º andar	Fax	55 (21) 2207-9000
20021-290 - Rio de Janeiro, RJ - Brasil	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 subsidiaries as of September 30, 2017, the related condensed consolidated statements of income, comprehensive income and cash flows for the three and nine-month periods ended on September 30, 2017 and 2016, and the related condensed consolidated statement of changes in equity for the nine-month periods ended on September 30, 2017 and 2016. These condensed consolidated financial statements are the responsibility of the Company s management.

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

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

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

KPMG Auditores Independentes

Rio de Janeiro, Brazil

October 25, 2017

Table of Contents**Consolidated Income Statement**

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

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

Net income attributable to Vale's stockholders	2,230	575	4,736	3,457
---	--------------	------------	--------------	--------------

Earnings per share attributable to Vale's stockholders:

Basic and diluted earnings per share(restated in note 4):

	8			
Preferred share (US\$)	0.43	0.11	0.92	0.67
Common share (US\$)	0.43	0.11	0.92	0.67

(i) Period restated according to Note 12.

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

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

In millions of United States dollars

	Three-month period ended September 30,		Nine-month period ended September 30,	
	2017	2016	2017	2016
Net income	2,239	582	4,795	3,483
Other comprehensive income:				
Items that will not be reclassified subsequently to the income statement				
Cumulative translation adjustments	1,797	(447)	1,158	6,660
Retirement benefit obligations	64	(43)	(249)	(311)
Tax recognized within other comprehensive income	(19)	14	76	96
Total items that will not be reclassified subsequently to the income statement	1,842	(476)	985	6,445
Items that may be reclassified subsequently to the income statement				
Cumulative translation adjustments	(603)	219	88	(3,459)
Cash flow hedge				6
Net investments hedge	290		162	
Equity results in associates and joint ventures, net of taxes				5
Transfer of realized results to net income, net of taxes				(78)
Tax recognized within other comprehensive income	(180)	18	(209)	(124)
Total of items that may be reclassified subsequently to the income statement	(493)	237	41	(3,650)
Total comprehensive income	3,588	343	5,821	6,278
Comprehensive income (loss) attributable to noncontrolling interests	37	(3)	78	150
Comprehensive income attributable to Vale's stockholders	3,551	346	5,743	6,128

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

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

In millions of United States dollars

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

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

(i) Period restated according to Note 12.

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

Table of Contents**Consolidated Statement of Financial Position****In millions of United States dollars**

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

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

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

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

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

In millions of United States dollars

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

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

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

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

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

Vale S.A. and its direct and indirect subsidiaries (Vale or Company) are global producers of iron ore and iron ore pellets, key raw materials for steelmaking, and producers of nickel, which is used to produce stainless steel and metal alloys employed in the production of several products. The Company also produces copper, metallurgical and thermal coal, manganese ore, ferroalloys, platinum group metals, gold, silver and cobalt. The information by segment is presented in note 3.

2. Basis for preparation of the interim financial statements

a) Statement of compliance

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

b) Basis of presentation

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

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

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

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

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

The interim financial statements of the Company and its associates and joint ventures are measured using the currency of the primary economic environment in which the entity operates (functional currency), which in the case of the Parent Company is the Brazilian real (BRL or R\$). For presentation purposes, these interim financial statements are presented in United States dollar (USD or US\$) as the Company believes that this is how international investors analyze the interim financial statements.

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

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

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

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

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

3. Information by business segment and by geographic area

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

a) Adjusted EBITDA

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

	Three-month period ended September 30, 2017						
	Net operating revenue	Cost of goods sold and services rendered	Sales, administrative and other operating expenses	Research and evaluation	Pre operating and operational stoppage	Dividends received and interest from associates and joint ventures	Adjusted EBITDA
Ferrous minerals							
Iron ore	5,131	(2,086)	(89)	(22)	(47)	1	2,888
Iron ore Pellets	1,441	(733)	(21)	(5)	(3)		679
Ferroalloys and manganese	131	(71)	(4)		1		57
Other ferrous products and services	117	(77)	(2)			12	50
	6,820	(2,967)	(116)	(27)	(49)	13	3,674
Coal	360	(368)	(9)	(4)		67	46
Base metals							
	1,168	(883)	(44)	(14)			227

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

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

Three-month period ended September 30, 2016

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

Table of Contents

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

Nine-month period ended September 30, 2016							
	Net operating revenue	Cost of goods sold and services rendered	Sales, administrative and other operating expenses	Research and evaluation	Pre operating and operational stoppage	Dividends received and interest from associates and joint ventures	Adjusted EBITDA
Ferrous minerals							
Iron ore	10,208	(4,609)	(386)	(52)	(107)		5,054
Iron ore 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
Others							
	77	(158)	(106)	(78)	(2)	55	(212)
Total of continuing operations	18,223	(10,232)	(404)	(207)	(245)	115	7,250
Discontinued operations (Fertilizers)							
	1,446	(1,190)	(68)	(16)	(14)	3	161
Total	19,669	(11,422)	(472)	(223)	(259)	118	7,411

Table of Contents

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

From Continuing operations

	Three-month period ended September 30,		Nine-month period ended September 30,	
	2017	2016	2017	2016
Adjusted EBITDA from continuing operations	4,192	2,964	11,229	7,250
Depreciation, depletion and amortization	(920)	(853)	(2,732)	(2,475)
Dividends received and interest from associates and joint ventures	(88)		(170)	(115)
Impairment and other results on non-current assets	(169)	(29)	123	(95)
Operating income	3,015	2,082	8,450	4,565
Financial results, net	220	(1,039)	(1,732)	2,447
Equity results in associates and joint ventures	115	45	164	390
Impairment and other results in associates and joint ventures	(26)	(33)	(121)	(1,146)
Income taxes	(979)	(434)	(1,653)	(2,724)
Net income from continuing operations	2,345	621	5,108	3,532
Net income attributable to noncontrolling interests	7	11	53	25
Net income attributable to Vale's stockholders	2,338	610	5,055	3,507

From Discontinued operations

	Three-month period ended September 30,		Nine-month period ended September 30,	
	2017	2016	2017	2016
Adjusted EBITDA from discontinued operations	12	59	11	161
Depreciation, depletion and amortization	(1)	(110)	(1)	(265)
Dividends received and interest from associates and joint ventures				(3)
Impairment of non-current assets (note 12a)	(220)		(597)	
Operating loss	(209)	(51)	(587)	(107)
Financial results, net		(8)	(10)	22
Equity results in associates and joint ventures		1		2
Income taxes	103	19	284	34
Loss from discontinued operations	(106)	(39)	(313)	(49)
Net income (loss) attributable to noncontrolling interests	2	(4)	6	1
Loss attributable to Vale's stockholders	(108)	(35)	(319)	(50)

b) Assets by segment

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

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

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

(ii) Includes only cash effect.

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

Table of Contents

c) Net operating revenue by geographic area

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

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

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

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

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

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

Table of Contents

4. Special events occurred during the period

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

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

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

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

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

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

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

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

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

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

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

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

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

Table of Contents**b) Shareholding structure**

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

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

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

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

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

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

c) Shareholders Agreement

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

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

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

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

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

b) Selling and administrative expenses

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

c) Others operational expenses (incomes), net

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

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

6. Financial result

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

Table of Contents

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

7. Income taxes

a) Deferred income tax assets and liabilities

Changes in deferred tax are as follows:

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

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

b) Income tax reconciliation Income statement

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

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

Income tax benefit from interest on
stockholders' equity

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

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

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

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

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

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

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

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

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

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

9. Accounts receivable

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

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

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

Table of Contents**10. Inventories**

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

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

11. Other financial assets and liabilities

	September 30, 2017	Current December 31, 2016	Non-Current September 30, 2017	December 31, 2016
Other financial assets				
Financial investments	5	18		
Loans			154	180
Derivative financial instruments (note 21)	136	274	438	446
Related parties (note 26)	2,114	71	2,670	2
	2,255	363	3,262	628
Other financial liabilities				
Derivative financial instruments (note 21)	126	414	680	1,225
Related parties (note 26)	508	672	983	127
Participative stockholders' debentures			1,300	775
	634	1,086	2,963	2,127

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

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

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

a) Discontinued operations (Fertilizers assets)

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

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

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

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

Table of Contents

	Three-month period ended September 30,		Nine-month period ended September 30,	
	2017	2016	2017	2016
Discontinued operations				
Net operating revenue	533	598	1,304	1,446
Cost of goods sold and services rendered	(491)	(610)	(1,201)	(1,452)
Operating expenses	(31)	(39)	(93)	(101)
Impairment of non-current assets	(220)		(597)	
Operating loss	(209)	(51)	(587)	(107)
Financial Results, net		(8)	(10)	22
Equity results in associates and joint ventures		1		2
Loss before income taxes	(209)	(58)	(597)	(83)
Income taxes	103	19	284	34
Loss from discontinued operations	(106)	(39)	(313)	(49)
Net income (loss) attributable to noncontrolling interests	2	(4)	6	1
Loss attributable to Vale's stockholders	(108)	(35)	(319)	(50)
	Three-month period ended September 30,		Nine-month period ended September 30,	
	2017	2016	2017	2016
Discontinued operations				
Cash flow from operating activities				
Loss before income taxes	(209)	(58)	(597)	(83)
Adjustments:				
Equity results in associates and joint ventures		(1)		(2)
Depreciation, amortization and depletion	1	110	1	265
Impairment of non-current assets	220		597	
Increase (decrease) in assets and liabilities	75	(17)	77	(92)
Net cash provided by operating activities	87	34	78	88
Cash flow from investing activities				
Additions to property, plant and equipment	(71)	(100)	(215)	(207)
Others		(3)		(1)
Net cash used in investing activities	(71)	(103)	(215)	(208)
Cash flow from financing activities				
Loans and borrowings				
Repayments	(34)	(8)	(34)	(13)
Net cash used in financing activities	(34)	(8)	(34)	(13)
Net cash used in discontinued operations	(18)	(77)	(171)	(133)

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

Table of Contents

13. Acquisitions and divestitures

a) Coal - Nacala Logistic Corridor

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

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

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

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

(i) derecognized the assets and liabilities classified as held for sale in the total amount of US\$4,144, from which US\$4,063 refers to property, plant and equipment and intangibles;

(ii) derecognized US\$14 related to cash and cash equivalents;

(iii) recognized a gain of US\$504 in the income statement related to the sale and the re-measurement at fair value, of its remaining interest at Nacala BV based on the consideration received;

(iv) reclassified the gain related to the cumulative translation adjustments on to income statements in the amount of US\$11;

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

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

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

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

b) Floating Transfer Stations (FTS)

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

c) Shipping assets

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

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

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

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

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

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

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

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

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

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

Table of Contents**15. Intangibles**

Changes in intangibles are as follows:

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

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

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

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

Changes in property, plant and equipment are as follows:

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

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

(i) Includes capitalized borrowing costs.

There are no material changes to the net book value of consolidated property, plant and equipment pledged to secure judicial claims and loans and borrowings (note 17(c)) compared to those disclosed in the financial statements as at December 31, 2016.

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

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

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

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

b) Cash and cash equivalents

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

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

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

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

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

Table of Contents

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

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

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

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

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

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

(ii) R\$ denominated debt that bears interest at IPCA, CDI, TR or TJLP, plus spread. For a total of US\$3,325 the Company entered into derivative transactions to mitigate the exposure to the cash flow variations of the floating rate debt denominated in R\$, resulting in an average cost of 2.46% per year in US\$.

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

ii) Credit and financing lines

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

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

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

iii) Funding

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

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

Table of Contents

iv) Guarantees

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

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

v) Covenants

Some of the Company's debt agreements with lenders contain financial covenants. The primary financial covenants in those agreements require maintaining certain ratios, such as debt to EBITDA and interest coverage. The Company has not identified any instances of noncompliance as at September 30, 2017 and December 31, 2016.

vi) Hedge in foreign operations

Implementation of net investment hedge

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

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

Accounting policy

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

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

18. Liabilities related to associates and joint ventures

a) Movements of the provision

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

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

Table of Contents

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

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

b) Contingencies related to Samarco accident

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

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

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

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

(ii) Public civil lawsuit filed by Federal Prosecution Office

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

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

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

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

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

Table of Contents

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

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

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

(iii) U.S. Securities class action suits

Related to the Vale's American Depositary Receipts

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

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

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

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

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

Related to the Samarco bonds

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

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

Table of Contents

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

Vale S.A. continues to contest this lawsuit.

(iv) Criminal lawsuit

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

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

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

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

(v) Other lawsuits

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

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

19. Financial instruments classification

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

Table of Contents**20. Fair value estimate****a) Assets and liabilities measured and recognized at fair value:**

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

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

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

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

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

The pricing method used for European options is the Black & Scholes model. In this model, the fair value of the derivative is a function of the volatility in the price of the underlying asset, the exercise price of the option, the interest rate and period to maturity. In the case of options which income is a function of the average price of the underlying asset over the period of the option, the Company uses Turnbull & Wakeman model. In this model, in addition to the factors that influence the option price in the Black-Scholes model, the formation period of the average price is also considered.

In the case of swaps, both the present value of the assets and liability are estimated by discounting the cash flow by the interest rate of the currency in which the swap is denominated. The difference between the present value of assets and liability of the swap generates its fair value.

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

Contracts for the purchase or sale of products, inputs and costs of selling with future settlement are priced using the forward yield curves for each product. Typically, these curves are obtained on the stock exchanges where the products are traded, such as the London Metals Exchange (LME), the Commodity Exchange (COMEX) or other providers of market prices. When there is no price for the desired maturity, Vale uses an interpolation between the available maturities.

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

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

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

Table of Contents

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

21. Derivative financial instruments

a) Derivatives effects on statement of financial position

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

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

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

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

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

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

Table of Contents

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

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

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

Additional information about derivatives financial instruments

In millions of United States dollars, except as otherwise stated

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

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

The following tables detail the derivatives positions for Vale and its controlled companies as of September 30, 2017, with the following information: notional amount, fair value including credit risk, gains or losses in the period, value at risk and the fair value breakdown by year of maturity.

a) Foreign exchange and interest rates derivative positions

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

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

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

Table of Contents

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

(ii) Protection program for EUR denominated debt instruments

In order to reduce the cash flow volatility, swap and forward transactions were implemented to convert into US\$ the cash flows from certain debt instruments issued in Euros by Vale. In those swaps, Vale receives fixed rates in EUR and pays fixed rates in US\$. In those forwards only the principal amount of the debt is converted from EUR to US\$.

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

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

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

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

b) Commodities derivative positions

(i) Bunker Oil purchase cash flows protection program

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

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

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

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

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

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

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

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

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

c) Silver Wheaton Corp. warrants

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

The company owns warrants of Silver Wheaton Corp. (SLW), a Canadian company with stocks negotiated in Toronto Stock Exchange and New York Stock Exchange. Such warrants configure American call options and were received as part of the payment regarding the sale of part of gold payable flows produced as a sub product from Salobo copper mine and some nickel mines in Sudbury.

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

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

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

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

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

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

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

Table of Contents
f) Embedded derivatives in contracts

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

Flow	Notional (ton)		Bought / Sold	Average strike (US\$/ton)	Fair value		Financial settlement Inflows (Outflows) September 30, 2017	Value at Risk September 30, 2017	Fair value by year 2017
	September 30, 2017	December 31, 2016			September 30, 2017	December 31, 2016			
Nickel forwards	4,623	5,626	S	10,905	(2)	0		2	(2)
Copper forwards	2,583	3,684	S	6,440	(0)	2		0	(0)
Total					(2)	2		2	(2)

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

Flow	Notional (volume/month)		Bought / Sold	Average strike (US\$/ton)	Fair value		Financial settlement Inflows (Outflows) September 30, 2017	Value at Risk September 30, 2017	Fair value by year	
	September 30, 2017	December 31, 2016			September 30, 2017	December 31, 2016			2017	2018+
Call options	746,667	746,667	S	233	(3)	(2)		2	(0)	(3)

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

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

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

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

22. Provisions

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

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

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

Changes in provision for litigation are as follows:

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

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

b) Contingent liabilities

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

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

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

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

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

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

Table of Contents

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

c) Judicial deposits

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

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

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

d) Others

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

24. Employee postretirement obligations

Reconciliation of net liabilities recognized in the statement of financial position

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

Movements of assets ceiling

Balance at June 30,	1,447	1,695
Interest income	38	43
Changes on asset ceiling and onerous liability	(135)	149
Translation adjustment	64	(19)
Balance at September 30,	1,414	1,868

Amount recognized in the statement of financial position

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

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

Amount recognized in the statement of financial position

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

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

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

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

PNA - Preferred shares

ON - Common shares

26. Related parties

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

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

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

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

	September 30, 2017			Assets		December 31, 2016		
	Cash and cash equivalents	Derivative financial instruments	Accounts receivable	Related parties	Cash and cash equivalents	Derivative financial instruments	Accounts receivable	Related parties
Previous Valepar shareholders	800	283	2		579	358	4	
Companhia Coreano-Brasileira de Pelotização				19				5
Companhia Hispano-Brasileira de Pelotização							1	
Companhia Ítalo-Brasileira de Pelotização								8
Companhia Nipo-Brasileira de Pelotização				15				15
Companhia Siderúrgica do Pecém			55				37	
Consórcio de Rebocadores da Baía de São Marcos			8				10	
MRS Logística S.A.				40				24
Nacala BV (i)				4,662				
VLI			7	8			9	12
Others			69	40			46	9
Total	800	283	141	4,784	579	358	107	73

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

Table of Contents

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

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

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

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

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

Nine-month period ended September 30,

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

(i) Does not include exchange rate variation.

Table of Contents

27. Commitments

a) Participative stockholders debentures

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

b) Guarantees provided

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

28. Additional information about derivatives financial instruments

a) Sensitivity analysis of derivative financial instruments.

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

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

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

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

Table of Contents

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

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

b) Financial counterparties ratings

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

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

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

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

Table of Contents

c) Market curves

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

(i) Products

CURVAS INGLES

Nickel

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

Copper

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

Bunker Oil

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

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

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

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

US\$ Interest Rate

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

TJLP

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

BRL Interest Rate

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

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

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

EUR Interest Rate

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

CAD Interest Rate

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

Currencies - Ending rates

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

[Table of Contents](#)

Signatures

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

Date: October 26, 2017

By:

Vale S.A.
(Registrant)

/s/ Andre Figueiredo
Andre Figueiredo
Director of Investor Relations
