Vale S.A.
Form 6-K
June 01, 2015
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United States

Securities and Exchange Commission

Washington, D.C. 20549

FORM 6-K

Report of Foreign Private Issuer

Pursuant to Rule 13a-16 or 15d-16

of the

Securities Exchange Act of 1934

For the month of

May 2015

Vale S.A.

Avenida Graça Aranha, No. 26
20030-900 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.)

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

(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 o No x

(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 o No x

(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 o No x

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

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1.1. Statement and Identification of the Responsible Individual

Name of the individual responsible for the content of the Reference Form	**Murilo Pinto de Oliveira Ferreira**
Position of responsible individual	Executive Director
Name of the individual responsible for the content of the Reference Form	**Luciano Siani Pires**
Position of responsible individual	Director of Investor Relations

The above-mentioned directors stated that:

a. They have reviewed the Reference Form;

b. All the information contained in the Reference Form complies with Instruction CVM No. 480, in particular with Articles 14 through 19;

c. All the information contained therein is an accurate, precise and complete representation of the economic and financial situation of the issuer and of the risks inherent to its activities and the securities issued by it.

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2.1/2.2 Identification and remuneration of Auditors:

Does it have auditor?	YES
CVM (Securities Commission) Code	287-9
Type of Auditor	Domestic
Name/Corporate name	PricewaterhouseCoopers Auditores Independentes
CPF/CNPJ	61.562.112/0002-01
Service start date:	07/24/2009
End of service provision:	04/29/2014
Description of the service contracted	Provision of professional services related to (i) auditing the individual and consolidated financial statements for fiscal years ending on December 31, 2009, 2010, 2011, 2012 and 2013 and reviewing the quarterly information ITR for such fiscal years and the quarter ending on March 31, 2014, both for domestic and international purposes, as applicable, (ii) issuing comfort letters for the issuance of debts and equities at the Brazilian and international market, (iii) the certification of internal controls in order to comply with Section 404 of the Sarbanes-Oxley Act of 2002, and (iv) provision of other services related to the audit and (v) provision of other services, unrelated to the external audit.
Total amount of the remuneration of independent auditors itemized per service	In the fiscal year ended December 31, 2014, no payments were made.
Justification for replacement	Change of Independent Auditors according to article 31 in CVM Instruction 308/99
Reason submitted by the auditor in case of disagreement of the issuer justification	Auditor replacement was expressly approved by the auditor, with no disagreements

Name of the supervisor responsible	**Period of provision of service**	**CPF**	**Address**
João César de Oliveira Lima Junior	06/01/2012 to 04/29/2014	744.808.477-15	Avenida José da Silva de Azevedo Neto nº 200 Bloco 3 - Torre Evolution IV rooms 101, 103 to 108 and 201 to 208, Barra da Tijuca, City and State do Rio de Janeiro-RJ, CEP 22075-556. e-mail: joao.c.lima@br.pwc.com Phone: (21) 3232-6112
Marcos Donizete Panassol	07/24/2009 to 05/31/2012	063.702.238-67	Avenida José da Silva de Azevedo Neto, no. 200, bloco 3, Torre Evolution IV, salas 101, 103 a 108 e 201 a 208, Barra da Tijuca, Rio de Janeiro, RJ, CEP 22075-556 Email: marcos.panassol@br.pwc.com Telephone: (21) 3232-6112

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Does it have auditor?	YES
CVM (Securities Commission) Code	418-9
Type of Auditor	Domestic
Name/Corporate name	KPMG Auditores Independentes
CPF/CNPJ	57.755.217/0001-29
Service start date:	4/30/2014
End of service provision:	
Description of the service contracted	Provision of professional services related to the auditing of financial statements both for domestic and international purposes, and certifi order to comply with *Section 404* of *Sarbanes-Oxley Act* of 2002, for the fiscal year ending on December 31, 2014 and Review of Qu (ITR) ending June 30 and September 30, 2014. Additionally, the scope of work also covers the provision of other services related to the issuance of previously agreed upon procedure reports, according to NBC TSC4400.
Total amount of the remuneration of independent auditors itemized per service	Services acquired from external auditors of the Company for the fiscal year ended December 31, 2014, for the Company and its affiliate Reais (thousand): Financial audit: 1 Sarbanes-Oxley Act Audit: 1,103 Audit-related services(*): 681 **Total independent audit expenses:** **13,462** Other (*) 102 **Total of services** 13,564 (*) These services are retained mostly for periods shorter than one year and refer mainly to the issuance of previously agreed upon proce NBC TSC4400.
Justification for replacement	Not applicable
Reason submitted by the auditor in case of disagreement of the issuer justification	Not applicable

	CPF	**Address**

Name of the supervisor responsible	Period of provision of service		
Manuel Fernandes Rodrigues de Sousa	Starting 4/30/2014	783.840.017-15	Av. Almirante Barroso, 52 4º andar 20031-000, Rio de Janeiro, RJ e-mail: mfernandes@kpmg.com.br Telephone: (21) 3515-9336

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2.3 Other relevant information

At the meeting of November 28, 2013, the Board of Directors of Vale approved hiring the company KPMG Auditores Independentes to provide auditing services for the Company s financial statements for 3 (three) years starting in fiscal year 2014. Services started with the review of the 2014-second quarter information (ITRs).

The Company has specific internal procedures for pre-approval of engagements for their external auditors in order to avoid conflict of interest or loss of objectivity by its independent auditors.

The Company s policies regarding independent auditors and other services unrelated to external auditing are grounded in principles that safeguard their independence. In line with best corporate governance practices, all services provided by the independent auditors are pre-approved by the Supervisory Board, and the independent auditor provide us with an independence letter.

Additionally, the Company clarifies that there are no relevant transfers of services or resources between the auditors and related parties with the Company as defined in CVM deliberation no. 642/10 that approved CPC Technical Pronunciation 05(R1).

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3.1 Consolidated Financial Information

(Reais)	Fiscal Year (12/31/2014)	Fiscal Year (12/31/2013)	Fiscal year (12/31/2012)
Shareholders equity	149,601,623,000.00	152,122,066,000.00	152,909,437,000.00
Total Assets	309,415,532,000.00	291,880,311,000.00	266,921,654,000.00
Realized Net	88,274,564,000.00		
Revenue/Temporary		101,489,747,000.00	91,269,482,000.00
Revenue/Insurance Premium			
Gross Profit	29,188,660,000.00	48,979,108,000.00	41,537,098,000.00
Net Profit	954,384,000.00	115,091,000.00	9,891,696,000.00
Number of Shares, excluding treasury	5,153,374,926	5,135,374,926	5,153,374,926
Asset Value of Share (in R$/unit)	29.02983485	29.622387	29.670000
Earnings per Share	0.19000	0.02000	1.940000

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3.2 Non-Accounting measurements

a. value of non-accounting measurements

The Company uses EBITDA as a non-accounting measurement. In 2014, 2013, and 2012, respectively, the EBITDA of the Company was established in the amount of R$ 27,680 million; R$ 42,386 million, and R$ 23,164 million, respectively.

b. reconciliations between amounts reported and the values of audited financial statements

	Year ending on December 31		
In R$ million	**2014**	**2013**	**2012**
Operating profit - EBIT	**17,572**	**33,433**	**15,035**
Depreciation / Amortization of goodwill	10,108	8,953	8,129
EBITDA (LAJIDA)	**27,680**	**42,386**	**23,164**
Corporate income	(1,141)	(999)	(1,241)
Dividends received	1,302	1,836	932
Loss in the calculation of the sale of non-current assets	441	0.508	1,036
Result from the sale of interest in *joint venture* and affiliates	68	(98)	
Loss non-current asset impairment	2,713	5,390	8,211
Decrease in impairment	71		4,002
CFEM Provisions			1.100
Net gain (loss) from discontinued operations		**4**	**133**
EBITDA (LAJIDA) - adjusted	**31,134**	**49,027**	**37,337**
Depreciation / Amortization of goodwill	(10,108)	(8,953)	(8,129)
Dividends received	(1,302)	(1,836)	(932)
Reduction in recoverable value of investments	(71)		(4,002)
Corporate results	1,141	999	1,241
Loss in the calculation of the sale of non-current assets	(441)	(508)	(1,036)
Result from the sale of interest in *joint venture* and affiliates	(68)	98	
Reduction of non-current asset impairment	(2,713)	(5,390)	(8,211)
CFEM Provisions			(1,100)
Net financial income	(14,753)	(18,442)	(8,239)
Income tax and social contribution	(2,600)	(15,249)	2,595
Net gain (loss) from discontinued operations		**(4)**	**(133)**
Net income/year	**219**	**(258)**	**9,391**
Loss (profit) to non-controlling shareholders	**735**	**373**	**501**
Profit to controlling shareholders	**954**	**115**	**9,982**

c. why the Company believes that this measurement is more appropriate for a correct understanding of its financial situation and results of operations

EBITDA (LAJIDA) is a measure of the company s cash generation, aiming to assist the assessment by the Administration of the performance of operations. The analysis of operating results through EBITDA (LAJIDA) has the benefit of canceling the effect of non-operating gains or losses generated by financial transactions or the effect of taxes.

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We calculate the EBIDTA (LAJIDA) according to the terms set forth in CMV Instruction no. 527, from October 4, 2012 (CVM Instruction 527), as follows: the term s net results, plus the taxes over the profit, of the net financial expenses, of financial revenues, and of depreciation, amortization, and exhaustion.

We also calculate the adjusted EBITDA (LAJIDA) according to the net EBITDA (LAJIDA) from the corporate interest, from reduction in the recoverable asset of values, from non-recurrent items, and from depreciations, amortizations and exhaustions, plus dividends from joint ventures and sister companies. We understand that the adjusted EBITDA (LAJIDA) has a more precise measure of cash generation in the Company, since it excludes non-recurring and non-cash effects.

The consolidated cash generation measured by EBITDA (LAJIDA) and Adjusted EBITDA (LAJIDA) is not a measure recognized by BR GAAP or IFRS and does not represent cash flow for the periods presented and therefore should not be considered as an alternative to net income (loss), as an isolated indicator of operating performance or as an alternative to cash flow or as a source of liquidity. The EBITDA (LAJIDA) definition used by Vale may not be comparable with EBITDA (LAJIDA) disclosed by other companies, should they not adopt the standard meaning for EBITDA (LAJIDA) determined by CVM Instruction 527.

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3.3 Events subsequent to the latest financial statements

The Company does not provide guidance in the form of quantitative predictions about its future financial performance. The Company seeks to disseminate as much information about its vision of the various markets where it operates, guidelines, and implementation strategies in order to provide investors in the capital markets a basis for the formation of expectations about its performance in the medium and long term.

The Company Consolidated Financial Statements for the year ended December 31, 2014 were issued on February 25, 2015.

No subsequent events following the Consolidated Financial Statements of the Company, under the terms in the rules in IAS 24, approved by CVMº 593/09:

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3.4 Policy for allocation of results

	Fiscal Year Ended December 31		
	2014	2013	2012
a. Rules on retention of profits	According to Article 43 of the Bylaws, there should be a consideration in the proposal for distribution of profits of the formation of (i) fiscal benefit reserve, to be constituted in the form of current legislation, and (ii) investment reserve for the purpose of ensuring the maintenance and development of activities that constitute the main object of the Company, in an amount not exceeding 50% (fifty percent) of net income distributable up to the maximum capital of the Company.		
Values on retention of profits	Of the total of R$ 954,384,414.00, the distribution was (i) R$ 47,719,220.70 to legal reserve and (ii) R$ 161,770,077.08 (17%) to fiscal benefit reserves.	Of the total of 115,090,671.19, added with accrued gains from the adoption of new accounting principles issued by the Comissão de Valores Mobiliários (CVM) and the Comitê de Pronunciamentos Contábeis (CPC), in the amount of R$ 14,627,000.00, the distribution was (i) R$486,684,794.17 to legal reserves and (ii) R$24,161,826.66 (21%) to fiscal incentive reserves. (1)	Of the total of R$ R$9,733,695,883.37, the distribution was (i) R$486,684,794.17 to legal reserves and (ii) R$599,031,296.74 (6.2%) to fiscal incentive reserves (1) (1) Values above were approved by the General Shareholders Meeting held on April 17, 2013. However, we clarify that, due to adjustments to the IFRS, the net profit was adjusted to R$ 9,891,696 thousand.
b. Arrangements for distribution of dividends	According to Article 44 of the bylaws, at least 25% (twenty five percent) of annual net profits, adjusted according to the law, will be provided for the payment of dividends. Pursuant to Art. 5, §5 of the bylaws, the holders of preferred shares of Class A and special class, shall have their right to participate in the dividend to be distributed and calculated as per Chapter VII of the Bylaws, according to the following criterion: (a) Priority in the reception of dividends corresponding to (i) 3% (three per cent) at least of the net asset value of the share, calculated based on the financial statements analyzed that served as reference for the payment of dividends or (ii) 6% (six per cent) calculated on the part of the capital to which that class of share belongs, whichever is the greatest of these. (b) Right to participate in the distributed incomes, under equal conditions with common shares, after them, guaranteeing a dividend equal to the priority minimum set up pursuant to a above.		

c. Frequency of dividend distribution	In accordance with the industry practices adopted by the Company, payments are made semiannually in the months of April and October.		
d. Eventual restrictions to dividend distribution imposed by legislation or special regulation applicable to the Company, as well as contracts, judicial, administrative, or arbitral decisions	none	none	none

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3.5 Distributions of dividends and retention of net income.

(Reais)	Fiscal Year Ended December 31, 2014	Fiscal Year Ended December 31, 2013	Fiscal Year Ended December 31, 2012
Adjusted net income for dividend payments	744,895,116.22	99,069,960.97	8,647,979,792.46
Percentage of dividend over the adjusted net profit	100.0000000	100.000000	100.000000
Rate of return in relation to equity	0.63795	0.10000	6.000000
Dividend distributed	9,738,750,000.00	9,319,275,000.00	8,647,979,792.46
Net income retained	161,770,077.08	24,161,826.66	599,031,296.74
Date of approval of the retention	04/17/2015	04/17/2014	04/17/2013

01/01/2014 to 12/31/2014

Share Type	Share Class	Distributed Dividend	Amount (Unit)	Dividend Payment
Common		Interest on Capital	2,863,596,635.71	04/30/2014
Preferred	Preferred Class A	Interest on Capital	1,768,793,364.29	04/30/2014
Common		Mandatory Dividend	1,083,253,396.32	10/31/2014
Preferred	Preferred Class A	Mandatory Dividend	669,106,603.68	10/31/2014
Common		Interest on Capital	2,073,336,466.96	10/31/2014
Preferred	Preferred Class A	Interest on Capital	1,280,663,533.04	10/31/2014

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01/01/2013 to 12/31/2013

Share Type	Share Class	Distributed Dividend	Amount (Unit)	Dividend Payment
Common		Interest on Capital	2,263,206,859.28	04/30/2013
Preferred	Preferred Class A	Interest on Capital	1,397,943,140.72	04/30/2013
Common		Mandatory Dividend	489,342,023.63	04/30/2013
Preferred	Preferred Class A	Mandatory Dividend	302,257,976.37	04/30/2013
Common		Interest on Capital	2,624,124,419.28	10/31/2013
Preferred	Preferred Class A	Interest on Capital	1,620,875,580.72	10/31/2013
Common		Mandatory Dividend	384,207,050.57	10/31/2013
Preferred	Preferred Class A	Mandatory Dividend	237,317,949.43	10/31/2013

01/01/2012 to 12/31/2012

Share Type	Share Class	Distributed Dividend	Amount (Unit)	Dividend Payment
Common		Interest on Capital	2,035,913,849.00	04/30/2012
Preferred	Preferred Class A	Interest on Capital	1,237,985,533.00	04/30/2012
Common		Interest on Capital	1,675,236,084.00	10/31/2012
Preferred	Preferred Class A	Interest on Capital	1,034,763,916.00	10/31/2012
Common		Mandatory Dividend	1,646,850,049.47	10/31/2012
Preferred	Preferred Class A	Mandatory Dividend	1,017,230,360.99	10/31/2012

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3.6 Statement of Dividends on account of retained earnings or reserves

	Fiscal Year Ended December 31		
Dividends distributed to (in R$ thousands):	**2014**	**2013**	**2012**
Retained Earnings			
Constituted Reserves	8,993,855	9,220,205	740,520

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3.7 Debt

Fiscal year		Total amount of the debt (of any nature)	Type of index	Debt Index	Description and reason for the use of another index of indebtedness
12/31/2014	R$	159,813,909,000.00	Debt ratio	1.1	
12/31/2014	R$	76,517,311,000.00	Other indexes	2.5	Gross adjusted debt/EBITDA. Gross debt is the sum of Loans and short-term debt, Portion of the stock of long-term loans and Loans and long-term financing. The adjusted EBITDA (EBITDA) is calculated as described in section 3.2.b of this reference form, excluding non-recurrent items. For more information on how to reconcile the EBIDTA and the adjusted EBIDTA, see item 10.1 (a). The debt ratio Gross Debt / Adjusted EBITDA shows the approximate time necessary for a company to pay all its debt with its cash flow. The Company adopts the debt ratio gross debt / Adjusted EBITDA and interest coverage ratio Adjusted EBITDA / Interest expenses. These indexes are widely used by the market (rating agencies and financial institutions) and serve as a benchmark to assess the financial situation of the Company.
12/31/2014			Other indices	7.6	Adjusted EBITDA / Interest expenses The adjusted EBIDTA is calculated as described in item 3.2.b of this Reference form, excluding non-recurrent items. For more information on how to reconcile the EBIDTA and the adjusted EBIDTA, see item 10.1 (a). Interest expenses include the sum of all appropriated or adjusted interests, paid or not, at certain times, that result from benefits debt. The interest coverage index (Adjusted EBITDA / Interest Expenses) is used to determine a company s

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	cash flow capacity to comply with its debt payments
	The Company adopts the Gross debt/ adjusted EBIDTA debt rate and the adjusted EBIDTA/interest expenses interest coverage rate. These indices are widely used by the market (rating agencies and financial institutions) and they are a baseline to which to compare Vale s financial status.

3.8 Obligations according to the nature and maturity date:

Last accounting information (12/31/2014)

Type of debt	Less than 1 year (R$)	Between 1 and 3 years (R$)	Between 3 and 5 years (R$)	Over 5 years (R$)	Total (R$)
Collateral	409,140,423.72	761,031,815.81	761,031,815.81	1,554,442,709.59	3, 485,646,764.93
Floating Guarantee					
Unsecured obligations	28,104,616,576.28	26,285,112,754.42	19,003,900,800.19	82,934,632,104.18	156,328,262,235.07
Total	28,513,757,000.00	27,046,144,570.23	19,764,932,616.00	84,489,074,813.77	159,813,909,000.00

Note: Information in this item refers to the Company s consolidated financial results shown in items 3.7 and 3.8 does not represent the Company s level of indebtedness, but represents the total of the obligations based on the addition of the outstanding and non-outstanding liabilities. The collateral debt amount is guaranteed with read assets. The remaining debt does not have any collateral. Debts that lack collaterals or floating guarantees, whether or not they have personal guarantees, have been classified as unsecured obligations. Debts guaranteed with third party assets, as they do not encumber Company assets, were deemed as non-guaranteed debts and are classified as such.

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3.9 Other information that the Company deems relevant

Part of the financial contracts entered by the Company, as well as the securities representing the circulating debt issued by the Company (for more information on such securities, see item 18.5 of this Reference Form) have clauses specifying advances maturity of pending amounts for the event of cross acceleration from other financial contract signed with the same party and/or other financial contracts.

It is important to note that dividends paid by the Company according to the terms in item 3.5 above are anticipated from dividends and interest on capital imputed to dividends approved by the Shareholders Meetings approving the accounts of fiscal years ending on December 31, 2012, 2013 and 2014.

4.1 - Description of risk factors

(a) Risks relating to the Company

The Company may not be able to adjust the volume of production in time or cost-effectively in response to changes in demand.

In periods of high demand, Vale s capacity to rapidly increase production is limited, which may make it impossible to meet the demand for its products. Moreover, the Company may be unable to complete expansions and new Greenfield projects in time to take advantage of the increasing demand for iron ore, nickel and other products. When demand exceeds its production capacity, the Company may meet its customers excess demand by purchasing iron ore, iron ore pellets or nickel from its joint ventures or third parties and resell them, which would increase its costs and reduce its operating margins. If it is unable to meet its customers excess demand this way, Vale could lose customers. In addition, operating close to full capacity may expose the Company to higher costs, including demurrage fees due to capacity restraints in its logistics systems.

In contrast, operating at significant idle capacity in periods of weak demand may expose Vale to higher unit production costs since a significant portion of its cost structure is fixed in the short-term due to the intensive need of capital by mining operations. In addition, efforts to reduce costs during periods of weak demand may be limited by previous rules and labor or governmental agreements.

The Company s projects are subject to risks that may result in increased costs or delay in their implementation.

The Company is investing to maintain and increase its production and logistics capacity, as well as to expand the portfolio of minerals produced. Vale regularly analyses the economic viability of its projects. As a result of this analysis, the Company may decide to postpone, stay, or interrupt the execution of some of them. Its projects are subject to various risks that may adversely affect its growth and profitability prospects, including:

a) It may have to deal with delays or costs higher than expected in order to obtain the necessary equipment or services and to implement new technologies to build and operate a project.

b) Its efforts to develop projects according to the schedule may be hampered by the lack of infrastructure, including reliable telecommunication services and power supply.

c) Suppliers and other corporate contractors may not comply with their contractual obligations to the Company.

d) The Company may experience unexpected weather conditions or other force majeure events.

e) The Company may fail to obtain, experience delays or have higher than expected costs in obtaining the necessary permits and licenses for building a project.

f) Changes in market conditions or legislation may make the project less profitable than expected at the time its operation begins.

g) There may be accidents or incidents during project implementation.

h) It may be difficult to find appropriate skilled professionals.

Operational problems may materially and negatively affect the Company s business and financial performance.

An inefficient project management and operational incidents may lead to the suspension or reduction of the Company s operations, causing an overall decrease of productivity. Operational incidents may result in important failures in essential plant and machinery. There are no guarantees that project management will be efficient or that other operational problems will not occur. Any damage to the Company s projects or delays in its operations caused by inefficient project management or operational incidents may materially and negatively affect its business and operating results.

The Company s business is subject to various operational risks that can adversely affect the results of its operations, such as:

- *Unexpected weather conditions or other force majeure events may occur.*

- *Adverse mining conditions may delay or hinder its ability to produce the expected amount of minerals and to meet the specifications required by customers, which may lead to price reductions.*

- *There may be accidents or incidents during the business operations, involving its mines, and related infrastructure, plants, railways, ports and vessels.*

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• *Delays or disruptions in the transportation of its products, including railways, ports and vessels.*

• *Some of its projects are located in regions where tropical diseases, AIDS and other communicable diseases represent a major public health issue and pose risks to the health and safety of its employees.*

• *Labor disputes may disrupt its operations from time to time.*

• *Changes in the market or legislation may affect the economic perspectives of an operation making it incompatible with the Company s business strategy.*

• Interruptions or unavailability of information technology systems or essential services, which may result from accidents or irregular acts.

Deterioration of cash flow, credit rating and the Company ability to make capital increase may adversely affect investments planned by the Company

An eventual continuous drop on product prices and volatility of global economy may adversely affect cash flow, credit rating and the Company ability to guarantee funding in capital markets at attractive rates. Additionally, a crisis in Brazilian economy may cause reduction in the sovereign credit rating of Brazil and, consequently, a decrease in the Company credit rating.

This eventual deterioration of cash flow, credit rating and the Company ability to access capital markets may adversely affect the Company ability to fund capital investments, pay dividends and comply with financial clauses in some long-term debts assumed by the Company.

The Company s business may be negatively affected if its counterparties fail to meet their obligations.

Customers, suppliers, corporate contractors and other counterparties may not perform the contracts and obligations assumed before the Company, which may have an adverse impact on the Company s operations and financial results. The ability of its suppliers and customers to meet their obligations may be adversely affected in times of financial stress or economic recession. Suppliers are also subject to capacity constraints in times of high demand, which may affect their ability to meet their obligations to Vale.

The Company currently operates and has projects related to significant parts of its pelletizing, bauxite, nickel, coal, copper, fertilizers and steel businesses through joint ventures with other companies. Important parts of its investments in power and its oil and gas projects are operated through consortia. Its forecasts and plans for these joint ventures and consortia assume that its partners will observe their obligations to make capital contributions, purchase products, management, and, in some cases, provide skilled and competent personnel. If any of its partners fails to observe its commitments, the affected joint venture or consortium may not be able to operate in accordance with its business plans, or the Company may have to increase the level of its investment to implement these plans.

Additionally, some of the Company assets can be controlled and managed by partners in joint ventures that may not comply fully with Company procedures, including health, safety, environment, and common rules. Failure, by any of the Company partners, to adopt any rules, controls or procedures equivalent to Company rules, controls and procedures may increase costs, reduce production or cause environmental, health or security incidents or accidents, which could adversely affect Company results and reputation.

The Company s business is subject to environmental, health and safety incidents or accidents.

The Company has operations involving the use, handling, storage, elimination and disposal of hazardous materials into the environment and the use of natural resources. Besides, the mining sector is generally subject to significant risks and hazards, including the imminent risk of fire or explosion, toxic gas leak, leak of pollutants or other hazardous materials, incidents involving rockslides in underground mining operations, incidents involving mobile equipment or machinery, etc. These situations may be caused by accidents or violation of operational standards, resulting in a significant incident, including damage or destruction of mineral assets or production facilities, injury or death of employees, damages to the environment, production delays, financial losses and possible legal liabilities. The Company has rules on health and safety, environment and risk management systems and processes in place to minimize the risk of such incidents or accidents. Despite Vale s rules, policies and controls, the operations remain subject to incidents or accidents that may adversely affect Vale s business or reputation.

Natural disasters can cause serious damages to the Company s operations and projects in countries where it operates and/or may have a negative impact on its sales to countries adversely affected by such disasters.

Natural disasters such as windstorms, droughts, floods, earthquakes and tsunamis can adversely affect the Company s operations and projects in countries where it operates, as well as possibly generating a reduction in sales to countries negatively affected which include shortage in power supply and destruction of industrial infrastructure facilities. Furthermore, although the physical impacts of climate change on its businesses still are highly uncertain, the Company may experience changes in rainfall patterns, water shortages, rising sea levels, increased intensity of storms and floods as a result of climate change, which can adversely affect its operations. In the past few years, at specific occasions, the Company has found that force majeure events have happened due to severe climate changes on its mining and logistics activities. The current draught in the Southeast of Brazil could cause lack of water in the area with the largest population in the country, and this could have adverse effects on Brazilian economy and its activities in the country.

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The Company may not have an adequate insurance coverage for certain business risks.

The Company s businesses are generally subject to numerous risks and uncertainties that could result in damage or destruction of properties, facilities and equipment. Vale s insurance against risks that are typical in such business may not provide adequate coverage. Risk insurance (including liability for environmental pollution or certain hazards or interruptions of certain business activities) may not be available at a reasonable cost or at all. Even when it is available, the Company can self-insure by determining that this will have better cost-benefit. As a result, accidents and other negative events involving its mining, production or logistics facilities may have an adverse effect on its operations.

The Company reserve estimates may materially differ from the mineral quantities that it may be able to actually recover; its estimates of mine life may prove inaccurate; and market price fluctuations and changes in operating and capital costs may render certain ore reserves uneconomical to mine.

Company reported reserves correspond to estimated quantities the Company determines to be economically mined and processed under present and anticipated conditions to extract their mineral content. There are numerous uncertainties inherent in estimating quantities of reserves and in projecting potential future rates of mineral production, including factors beyond Company control. Reserve reporting involves estimating deposits of minerals that cannot be measured in an exact manner, and the accuracy of any reserve estimate is based on the quality of available data and engineering and geological interpretation and judgment. Thus, no assurance can be given that the amount of ore indicated in those reports will be effectively recovered or that it will be recovered at the rates anticipated by the Company. Reserve estimates and estimates of mine life may require revisions based on actual production experience and other factors. For example, fluctuations in the market prices of minerals and metals reduced recovery rates or increased operating and capital costs due to inflation, exchange rates, changes in current regulations or other factors may render proven and probable reserves uneconomical to exploit and may ultimately result in a restatement of reserves. This reformulation can affect the rates of depreciation and amortization and cause a negative impact on the Company s financial performance.

The Company may not be able to replenish its reserves, which could adversely affect its mining prospects.

The Company is engaged in mineral exploration, which is highly uncertain in nature, involves several risks and is many times non-productive. Its exploration programs, which involve significant capital expenditures, may fail to result in the expansion or replenishment of reserves depleted by current production. If the Company fails to develop new reserves, it will not be able to sustain its current level of production beyond the remaining lives of its existing mines.

The feasibility of a new mining project may change over time

Once mineral deposits are discovered, it can take a number of years from the initial phases of exploration until production is possible, during which the economic feasibility of production may change. Substantial time and expenditures are required to:

- Determine mineral reserves through drilling;

- Determine appropriate mining and metallurgical processes for optimizing the recovery of metal contained in ore;

- Obtain environmental and other required licenses;

- Construct the necessary mining and processing facilities and infrastructure required for the development of new projects (greenfield); and

- Obtain the ore and/or extract the minerals from the ore.

If a project proves not to be economically feasible by the time the Company is able to explore it, the Company may sustain significant losses, and eventually be compelled to reduce such assets. In addition, potential changes or complications involving metallurgical and other technological processes arising during the life of a project may result in delays cost overruns that may render the project not economically feasible.

The Company faces rising extraction costs or investment requirements over time as mineral reserves deplete.

Mineral reserves are gradually reduced in the ordinary course of a mining operation, whether open or underground. As mining progresses, distances to the primary crusher and to waste deposits become longer, pits become steeper, open mines become underground mines, and underground operations become deeper. Additionally, for some types of reserves, the mining level is reduced and hardness increases in greater depths. As a result, over time, the Company usually experiences increase in extraction costs per unit in each mine, or there may be a need for additional investments, including adjustment or construction of processing plants and expansion or construction of disposal barriers. Many of its mines have been operated for extended periods of time and it is likely that the Company needs to increase extraction costs per unit in these operations in particular.

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Labor disputes may disrupt the Company s operations from time to time.

The Company has a substantial number of employees and some subcontractors employees are represented by unions and are subject to collective bargaining agreements or other labor agreements that are subject to periodic negotiation.

Additionally, the Company is subject to periodical and regular investigations by the Ministry of Labor and Employment and the Labor Prosecution Office aiming compliance with labor rules, including those related to labor health and security. These investigations may cause fines and processes that could adversely and materially affect the businesses, the results and financial conditions of the Company.

Strikes and other labor disruptions in any of the Company s activities could adversely affect the operation of its facilities, the completion period and the cost of main projects. For more information on labor relations, see item 14 of this Reference Form. Moreover, we may be adversely affected by work stoppages involving third parties that may provide goods or services to the Company.

The Company may face shortages of equipment, services and skilled personnel.

The mining sector has faced global shortage of mining and construction equipment, spare parts, contractors and other skilled personnel during periods of high demand for minerals and metals and intensive development of mining projects. The Company may experience longer periods for the supply of mining equipment and face problems with the quality of outsourced engineering, construction and maintenance services. The Company competes with other mining companies and other extraction companies in relation to the hiring of highly skilled managers and staff with relevant technical and mining expertise, and may not be able to attract and retain such people. Shortages at peak periods can cause a negative impact on its operations, resulting in higher costs with investments, production disruptions, higher inventory costs, project delays and possible reduction in production and revenue.

Higher costs of energy or energy shortages may adversely affect the Company s business.

Energy costs are a significant component of the Company s production cost, representing 8.9% of the total cost of goods sold in 2014. To meet its energy demand, the Company depends on the following resources: Oil byproducts, which accounted for 40.8% of all energy needs in 2014, electricity (27.0%), natural gas (19.1%) and other sources of energy (0.9%), using amounts converted to TeraJoule (TJ).

Expenses with fuel accounted for 6.5% of its cost with goods sold in 2014. Increases in oil and gas prices negatively affect profit margins regarding its logistics services, mining business, and iron ore pelletizing, fertilizers and nickel.

Expenses with electricity accounted for 2.4% of its total cost of goods sold in 2014. If the Company cannot ensure safe access to electricity at affordable prices, it may be forced to reduce production or may experience higher production costs, both of which can adversely affect its operating results. The Company faces the risk of energy shortages in countries where it has operations and projects, especially in Brazil, due to excessive demand, lack of infrastructure or adverse weather conditions such as floods or droughts.

Future shortages and government efforts to respond to or prevent electricity shortages may have a negative impact on the cost or supply of electricity to the Company s operations.

Exchange rate volatility of currencies in which the Company conducts its operations relative to U.S. dollars could adversely affect its financial condition and operating results.

A substantial portion of the Company s revenues and debt is expressed in U.S. dollars, and exchange rate fluctuations can result in (i) losses regarding its net debt expressed in U.S. dollars and its accounts receivable and (ii) losses in fair value regarding its currency derivatives used to stabilize its cash flow in U.S. dollars. In 2014, the Company had exchange losses in the amount of US$ 2.1 billion, while in 2013 and 2012, the Company faced exchange losses of US$ 2.8 billion and US$ 1.9 billion, respectively. Moreover, the exchange rate volatility of the Brazilian real, Canadian dollar, Australian dollar, and Indonesian rupiah and other currencies against the U.S. dollar affects the Company s results, since most of its goods are sold in US dollar, and most of the cost of goods sold is expressed in currencies other than the U.S. dollar, primarily in real (54% in 2014) and Canadian dollars (13% in 2014), while Company income is expressed primarily in U.S. dollars. The Company expects that currency fluctuations will continue to affect its revenues, expenses and cash flow.

The significant volatility in currency exchange rates may also result in the interruption of foreign exchange markets and may limit the Company s ability to transfer or exchange certain currencies into US dollars and other currencies for the purpose of making timely payments of interest and principal on its debts. Central banks and governments of countries where the Company operates may impose restrictive foreign exchange policies in the future and levy taxes on foreign exchange transactions.

Failures on Company information technology systems or difficulties in the integration of new corporate resources planning software may affect regular businesses of the Company.

The Company counts on information technology systems (IT) for the operation of many of its business processes. Failures to such IT systems may, whether caused by accident or ill-intended acts, may cause disclosure or robbery of sensitive information, resource deviation and interruption to commercial operations.

The Company is involved in several lawsuits that may adversely affect its business, if rulings are not favorable to the Company.

The Company is involved in several lawsuits in which plaintiffs claim substantial amounts of money. The outcome of these lawsuits is uncertain and may result in obligations that may materially and negatively affect its business and the value of its shares, ADSs and HDSs. For more information, see item 4.3 of this Reference Form.

Company s governance processes and compliance with its obligations may fail to avoid regulatory fines and damages to its reputation.

The Company operates in a global environment and its activities extend across multiple jurisdictions and complex regulatory structures with an increase in its legal obligations around the world. Its governance process and compliance with obligations, which include the identification and mitigation of risks through internal controls focused in the information published in their own financial reports, may not

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be able to avoid future violations of the law and accounting and governance standards. The Company may be subject to violations of its Code of Ethics and Conduct, anticorruption policies, business conduct protocols and fraudulent and dishonest behavior by its employees, contractors and other agents. Failure by the Company to comply with applicable laws and other rules can result in fines, loss of operating licenses and damages to its reputation.

Investors may find it difficult to comply with any judgment rendered outside Brazil against the Company or any of its affiliates.

Company investors can be located in jurisdictions outside Brazil and may file claims against the Company or management members with courts within their jurisdictions. The company is a Brazilian company and most of its officers and members of the Board of Directors are Brazilian residents. Most of Company s assets and the assets of its officers and members of the Board of Directors will be probably located in jurisdictions other than the jurisdictions of its investors. The investors, in their jurisdictions, may not be able to serve notices against the Company or its manager s resident outside their jurisdictions. Additionally, a foreign decision may be enforced in Brazilian courts, without a new analysis on merits provided that it is previously confirmed by the Brazilian Superior Court of Justice, which confirmation will be granted as long as such judgment: (a) meets all the formal requirements to be enforced pursuant to the legislation in force in the country where it was rendered; (b) has been rendered by a competent court after due process against the company or after sufficient evidence of contempt of court by the company, pursuant to the legislation in force; (c) is not subject to appeal; (d) has been authenticated by the Brazilian consulate in the country where it was rendered and is accompanied by a sworn translation into Portuguese; and (e) is not contrary to the sovereignty of Brazil, its public policy or morality. Therefore, investors may not obtain favorable decisions outside their jurisdictions in judicial processes filed against the Company or its managers passed by courts in their jurisdictions with decisions on the basis of the legislation in force in those jurisdictions.

(b) Risks relating to Company s controlling shareholder or parent group and (c) Risks related to Company shareholders.

The Company s controlling shareholder exerts significant influence over Vale and the Brazilian government holds certain veto rights.

On March 31, 2015, Valepar S.A. (Valepar) held 53.9% of the common shares and 33.7% of the Company s total capital. Because of its stock ownership, Valepar may elect the majority of members of the Board of Directors and can control the outcome of some actions requiring shareholder approval. For a description of the Company s ownership structure and of Valepar shareholders agreement, see item 15 of this Reference Form.

The Brazilian government owns 12 special class preferred shares (golden shares) of Vale, granting limited veto power over certain matters regarding the Company, such as changes of corporate name, location of main office and corporate purpose related to mining exploration. For a detailed description on the veto power of golden shares, see item 18.1 in the Reference Form.

(d) Risks relating to Company s controlled and subsidiary companies.

The integration between the Company and acquired companies may be more difficult than anticipated.

The Company may not able to successfully integrate its acquired businesses. The Company has partially increased its business through acquisitions and part of its future growth may depend on acquisitions. The integration of acquired businesses may take longer than expected and the costs related to the integration of those businesses may be higher than expected. Completed acquisitions may not result in increased revenues, cost economy or operational benefits as initially expected at the time of conception. Acquisitions may lead to substantial costs as a result, for example, impairment amortization, unexpected contingencies arising out of acquired enterprises, impossibility of maintaining a key team, inconsistent standards, checks, procedures and policies between the Company and the acquired business, which may adversely affect its financial condition and the results of operations. Additionally, management focus may be deviated from ordinary responsibilities to integration-related issues.

(e) Risks relating to Company suppliers

Several Company activities depend on the provision of products and services supplied by third parties. In view of that, Vale maps several risks of supply interruption related to its suppliers. At the limit, these interruptions may cause serious consequences to Company operations and projects.

Furthermore, for information about risks relating to Company suppliers, please see Risk Factors under The Company face shortages of equipment, services and skilled personnel . The higher energy cost or lack of energy could adversely affect Company business , above.

(f) Risks relating to Company customers

Company business could be adversely affected by demand and price reduction for products manufactured by its customers, including steel (for iron ore and coal operations), stainless steel (for nickel operations), copper wire (for copper operations) and agricultural commodities (for fertilizer operations).

The demand for iron ore, coal and nickel depends on global demand for steel. Iron ore and pellets, which together accounted for 65.4% of Company net operating revenues in 2014 are used in the production of carbon steel. Nickel, which accounted for 11.9% of Company net operating revenues in 2014 are mainly used to produce stainless and alloy steels. Demand for steel depends heavily on global economic conditions as well as on a series of regional and sectorial factors. The prices of the different types of steel and the performance of the global steel industry are highly cyclical and volatile and these business cycles in the steel industry affect the demand for and the prices of its products. Besides, the vertical integration of the steel and stainless steel industry and the use of scrap could reduce the global transoceanic trade of iron ore and primary nickel. The demand for copper is affected by the demand for copper wire and a sustained decline in the demand

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in the construction industry could have an adverse impact on Company copper businesses. The demand for fertilizer is affected by agricultural commodities prices in the international and domestic markets, and a sustained decline in the price of one or more agricultural commodities may cause an adverse impact on the Company s fertilizer business.

(g) Risks relating to the fields of economy in which the Company operates

The mining sector is highly exposed to the cyclicality of global economic activities and requires significant capital investments.

The mining sector is primarily a supplier of industrial raw material. Industrial production tends to be the most cyclical and volatile component of global economic activities, affecting the demand for minerals and metals. At the same time, investment in mining requires a substantial amount of resources, in order to replenish and maintain the reserves, expand the production capacity, build infrastructure and preserve the environment. The sensitivity to the industrial production, along with the need for significant long-term capital investments, are important sources of risks to the financial performance and growth prospects of Vale and the mining industry in general.

Economic developments in China may cause a negative impact on the Company s revenue, cash flow and profitability.

China has been the main driver of global demand for minerals and metals in recent years. In 2014, Chinese demand represented 69% of global transoceanic demand for iron ore, 52% of global demand for nickel, and 44% of the global demand for copper. The percentage of the Company s net operating revenues attributable to sales to consumers in China was 33.7% in 2014. Therefore, any contraction in China s economic growth may result in reduction on the demand for products, leading to lower revenues, cash flow and profitability. Poor performance of the Chinese real estate sector, the highest consumer of carbon steel in China, would also cause a negative impact on the Company s results.

Prices charged by the Company, including prices of iron ore, nickel, copper, coal, and fertilizers are subject to volatility.

The iron ore prices are defined based on a variety of pricing options, which generally use spot price indices as a basis for determining prices to customers. Nickel and copper prices are based on prices reported for these metals in the commodity exchange markets, such as the London Metal Exchange (LME) and the New York Mercantile Exchange (NYMEX). Company products prices and revenues for these products are therefore volatile and can adversely affect its cash flow. World prices for these metals are subject to significant fluctuations and are affected by many factors, including effective and expected global macroeconomic and political conditions, levels of supply and demand, availability and cost of substitutes, inventory levels, and investments from commodities funds, and actions of participants in commodities markets. A continuous reduction in the market prices of products sold by the Company may cause suspension of some projects and operations and reduction of assets, which may adversely affect the Company financial position and results.

The Company is especially exposed to changes in iron ore prices. The average price of iron ore dropped by 28.1%, from $135.00 per dry metric ton (TMS) in 2013 to $97.00 per TMS in 2014, according to the average of Platts IODEX (62% Fe CFR China). In February 2015, the average price of iron ore according to Platts IODEX was by then $ 65.4 per TMS. Additional to the decrease in iron ore demand, an excess in supply has adversely affected Vale prices since 2014. The expected conclusion of some iron ore projects in the coming years may result in additional pressure over prices.

The nickel industry had a strong supply growth in the past few years. Nickel refining in China, using mainly imported nickel and related raw material, has had an estimated growth of 536,000 metric tons from 2006 to 2014. In 2014, the estimated Chinese production of pig iron nickel represented 23% of the world s nickel output.

In January 2014, the Indonesian government approved a law that limits the sale and exportation of unprocessed nickel. Considering that Indonesia, in recent years, has supplied most of the high quality nickel to China, the Company believes that this exporting restriction will contribute to a drop in local production of refined nickel in China in the coming years, causing an increase in refined nickel importing operations and international nickel prices. Should this measure be reverted or should it have an impact other than Company expectations, nickel prices may not reflect Company expectations.

(h) Risks relating to the regulation of the sectors in which the Company operates

Regulatory, political, economic and social conditions in the countries in which the Company has operations or projects could adversely affect its business and the market prices of its securities.

Vale s financial performance may be negatively affected by regulatory, political, economic and social conditions in the countries where the Company has significant operation. In many of these locations, Vale is open to risks, such as potential renegotiations, annulments or changes imposed by existing contracts and licenses, property expropriation or nationalization, currency exchange, changes in legislation, local regulations and policies, political instability, bribery, extortion, corruption, civil war, acts of war, guerrilla activities, piracy in international transportation routes, and terrorism. The Company also faces the risk of having to submit to foreign jurisdiction or arbitration or to be forced to execute a court order against a sovereign nation within its own territory.

Company operations rely on authorizations and concessions from governmental regulatory agencies in the countries where the company operates. For further details about the authorizations and concessions that its operations rely on, please refer to item 7 in this Reference Form. The Company is subject to laws and regulations in many jurisdictions that can experience changes at any time, and changes of laws and regulations may require modifications in its technologies and operations and result in unexpected capital expenditures.

Actual or potential political or social changes and changes in economic policy may undermine investors confidence which could hamper investments and therefore reduce still negatively affect economic and other conditions under which the Company operates, so as to adversely affect its business.

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Disagreements with local communities where the Company operates may have a negative impact on its business and reputation.

Legal disputes with communities where the Company operates may appear. Although the Company (i) contributes to local communities through taxes, royalties, employment and business opportunities and social programs, and (ii) maintains a team dedicated to minimize the Company s social impacts, community expectations are complex and involve multiple stakeholders with different interests and constant evolvement. In some cases, Vale s operations and mineral reserves are located on lands or near lands owned or used by indigenous or aboriginal tribes, or other groups. Some of these indigenous populations may have rights to review or participate in the management of natural resources, and the Company discusses and negotiates with them in order to minimize the impacts of operations or to have access to their lands.

Some Company mining operations and other operations are located in territories where property may be subject to disputes or uncertainties, or in areas destined to be used for agriculture, or for purposes of agrarian reform, which may cause disputes with land owners, communities and local government. The Company checks and negotiates with these groups in order to reach a common agreement regarding land access and how to minimize the impact from its operations.

Disagreements or disputes with local groups, including indigenous or aboriginal tribes, may cause delays or interruptions in operations, adversely affect the Company s reputation or hinder its ability to work in mineral reserves and conduct operations. Protesters have acted in the past to disrupt Company operations and projects and may continue to do so in future. Although we are engaged in active discussions with all stakeholders and we defend ourselves vigorously against illegal acts, future attempts by protestors to cause harm to its operations could have a material adverse effect on its business.

The Company may experience adverse effects of changes in government policies or trends as nationalization of funds, including the imposition of new taxes or royalties on mining activities.

Mining is subject to government regulation in the form of specific taxes, fees and other contributions, as royalties on mining activities, which can have a significant impact on Company operations. In the countries where the Company operates, governments may impose existing taxes, fees or different contributions, or increase the existing rates for taxes, fees and different contributions, including royalties, reduce fiscal exemptions and benefits, solicit, or yet, compel renegotiation of fiscal stabilization agreements or, also, modify the basis on which they are calculated, in a manner unfavorable to the Company. Governments that have undertaken to create a stable tax and regulatory environment may shorten the duration of these commitments.

It is also possible that the Company must comply with internal benefit requirements in some countries, such as local processing rules, import taxes, or restrictions, or fees on transformed ore. Imposition or increase of such taxes or fees may significantly increase the risk profile and operational cost in these locations. The Company and the mining industry are subject to an increased nationalization trend related to mineral resources in certain countries where it operates, which may cause reductions in operations, tax increases or even expropriation and nationalization.

Concessions, authorizations, licenses and permits are subject to expiration, restriction or renewal and to various other risks and uncertainties.

Vale s operations depend on the granting of authorization and concessions by regulatory organizations from the government of countries where Vale works. The Company is subject to the laws and regulations of several jurisdictions, which can change at a moment s notice. Such changes may require changes in Vale s technologies and operations, resulting in unexpected capital expenses.

Some of Vale s mining concessions are subject to fixed expiration dates and can only be renewed for a limited number of times, and for limited periods. In addition to mining concessions, Company may obtain various authorizations, licenses and permits from government and regulatory agencies regarding the planning, maintenance, operation, and closure of the Company s mines, as well as its logistics infrastructure, which may be subject to fixed due dates or to periodic reviews or renewals. Although the Company expects renewals to be granted when and as requested, there is no guarantee that such renewals will be granted as usual, as well as there is no guarantee that new conditions will not be imposed in this regard. Fees due by mining concessions may substantially increase over time in comparison with the original issuance of each operating license. If that is the case, the Company s business objectives can be affected by the costs of maintenance or renewal of its mining concessions. Thus, it is necessary to continually assess the mineral potential of each mining concession, especially at the time of renewal, in order to determine if maintenance costs of mining concessions are justified by the results of future operations, and thus be able to let some concessions expire. There are no guarantees that such concessions will be granted under terms favorable to the Company, as well as there are no guarantees as to estimate future mining activities or operation goals.

In many jurisdictions where the Company has exploration projects, it may be required to return to the Government a certain portion of the area covered by the operating license as a condition for renewing license or obtaining a mining concession. This retrocession obligation may lead to a substantial loss of part of the mineral deposit originally identified in its feasibility studies. For more information on mining concessions and similar rights, see Regulatory Issues .

The Company may have its businesses affected by environmental, health and safety regulations, including regulations relating to climate change.

Almost all the aspects of Company s operations, products, services and projects all over the world are subject to environmental, health and safety regulations, which may expose the Company to increased liability and costs. These regulations require that the Company obtains environmental licenses, permits and authorizations for its operations and conducts environmental and social impact assessments in order to obtain approval for its projects, and permit to start construction. Besides, all significant changes required in existing operations must also undergo the same procedure. Difficulties to obtain operating licenses may cause delays in the deployment of projects or cost increases. Environmental, health, and safety regulations also impose rules and control standards on activities relating to research, mining, pelletizing, railway and maritime transportation services, ports, decommissioning, refining, distribution and marketing of products. These regulations

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may give rise to significant costs and liabilities. Besides, community associations and other stakeholders may request an increase in sustainable and socially responsible measures and development, and the efforts may lead to the creation or review of governmental rules and policies, which could entail significant cost increases and reduce Company profitability. Litigation relating to these or other matters may adversely affect the Company financial condition or cause harm to its reputation.

It is worth noting that according to the National Environmental Council (CONAMA) Resolution no. 237/97, the maximum validity for environmental licenses is five (5) years for prior license, six (6) years for installation licenses, and 10 (tem) years for operation licenses.

Lack of licenses or authorizations from competent environmental authorities to build, deploy, alter, improve and activities operation and/or enterprises potentially polluting and users of natural resources subject the violator to criminal and administrative penalties. The value of the fine will depend on the evaluation of any eventual associated environmental damage. Additional to fines, violator may be subject to sanctions as suspension of activities, deactivation, and demolition, and others, which are also applicable should the Project constructor fail to comply with terms set forth in the environmental licensing.

Environmental, health, and safety regulations in many of the countries where Vale operates have become stricter in recent years and more regulations or a more aggressive enforcement of regulations already in force are likely to adversely affect the Company by imposing restrictions on its activities and products, by establishing new requirements relating to the emission and the renewal of environmental licenses, increasing costs or forcing the Company to get engaged in area expensive regeneration ventures. For example, changes in the Brazilian legislation to protect underground hollows have forced the Company to conduct large technical studies to participate in complex discussions with competent administration entities, discussions that are still ongoing. Therefore, Vale cannot yet assess the regulatory impact on its operations, though it is possible that in some operations and iron ore mining projects it may be forced to limit or alter mining activities, incurring on additional costs to conserver underground hollow or to make up for the impact inflicted on them, the consequences of which may be relevant to output volumes, cost or reserves in the Company s iron ore business.

Concerns over the climate change and efforts to comply with international regulations could lead governments to impose limits on carbon emission, to impose taxes on gas the emission of greenhouse effect gases, and establish commercial emission conditions applicable to Company operations, which could adversely affect its operating costs or its investment requirements. In many countries where Vale operates, for instance, there is legislation limiting the emission of greenhouse gases in the mining industry. National and international regulatory initiatives that affect Vale s transportation activities could increase the company costs or force Vale to make new investments.

(n) Risks relating to Company s ADSs and HDSs (American Depositary Shares and Hong Kong Depositary Shares)

If holders of ADRs or HDSs exchange the ADSs or HDSs, respectively, for underlying shares, they risk losing the ability to remit abroad funds corresponding to the sale in foreign currency.

The custodian of shares underlying the Company s ADSs and HDSs keeps records with the Central Bank of Brazil, entitling him to remit U.S. Dollars abroad by way of payment of dividends and other distributions relating to the shares underlying ADSs and HDSs or to the disposal of the underlying shares. In the event holders of ADRs or HDRs exchange ADSs or HDSs for underlying shares, they shall be entitled to use the custodian s records of US dollars for only five days from the date of exchange. Upon said term, holders of ADRs or HDRs can no longer hold and remit foreign currency abroad through the sale of underlying shares or distributions regarding such shares, unless they obtain their own registration, pursuant to the terms of applicable legislation, which confers on registered foreign investors the right to buy and sell securities at BMF&BOVESPA. If holders of ADRs or HDRs try to obtain a registration, they may incur expenses or suffer delays in the registration process, which may delay the receipt of dividends and other distributions with respect to the underlying shares or capital return in a timely manner.

The Company is unable to assure holders of ADR or HDR that their custodian registration or any registration will not be affected by future legislation modifications or additional restrictions applicable to holders of ADR or HDR, the disposal of underlying shares or the repatriation of resources obtained through disposal will not be taxed in the future.

Holders of ADR and HDR may not be able to exercise their pre-emptive rights relating to shares underlying their ADSs and HDSs.

ADR and HDR may not be able to exercise their preemptive rights or other rights relating to the underlying shares. The ability of HDR and ADR holders to exercise their preemptive rights is not guaranteed, especially if the law applicable in holders jurisdiction (for example, the Securities Act in the United States or the Companies Ordinance in Hong Kong) demands that a registration declaration be effective or that an exemption from registration be available relating to those rights, as is the case in the United States, or for any document enabling preemptive rights to be registered as a prospectus, as is the case in Hong Kong. The Company is not bound to make a registration statement in the United States, or make any other record with respect to preemptive rights in any other jurisdiction, or to take measures that may be necessary to grant exemptions from available registration and it cannot ensure to holders that it shall make any registration statement or take such measures.

ADR and HDR holders may encounter difficulties to exercise their voting rights.

Holders of ADR or HDR do not have the same rights as shareholders. They only hold contract rights established in their favor under their respective deposit contracts. ADR and HDR holders are not entitled to take part in shareholders meetings and may vote by means of instructions delivered to the depositary. In fact, the ability of an ADR and HDR holder to instruct the depositary on how to vote will depend on the term and procedures to provide instruction directly or through a custodian and the holder liquidation system. With respect to ADSs, if no instruction is received, the depositary may, subject to certain limitations, appoint an attorney designated by the Company.

Legal protections for holders of Company securities differ from one jurisdiction to another and may be inconsistent, unknown or less effective than investors expectations.

Vale is a global company whose securities are listed on many markets and which investors are located in many different countries. Investors legal protection systems vary across the world, sometimes in relation to important aspects, and investors must be aware that, as far as the Company s securities are concerned, the protections and remedies available to them may be different from those they are used to in their markets. The company is subject to securities laws applicable in several countries, which provisions and monitoring and enforcement practices are different. The only Corporations Act applicable to the Company is the Brazilian equity companies law, with specific and substantial legal rules and procedures. The Company is also subject to corporate governance standards in various jurisdictions in which its

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securities are listed, but, as a foreign private issuer, the Company is not obliged to follow many of the corporate governance rules which apply to domestic issuers in the United States with securities listed on the New York Stock Exchange and is not subject to U.S. proxy voting rules. Likewise, the Company has been granted waivers and exemptions regarding certain requirements provided for in the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (HKEx Listing Rules), in the regulations on Takeovers and Mergers and Share Repurchases and in the Securities and Futures Ordinance of Hong Kong, which are generally applicable to issuers listed in Hong Kong.

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4.2 Comments on expectations for changes in exposure to risk factors

The Company constantly analyzes the risks that the company is exposed to and which may adversely affect its business, financial situation and results of its operations. For that end, the Company counts on a risk management policy, under which it permanently monitors changes in the macro-economic and sectorial scenario which might impact its activities, by tracking the main performance indicators. The Company s policy is one of continuous focus on financial discipline and conservative cash management. At present, the Company does not identify any scenario, which would lead to a reduction or increase in the risks mentioned in item 4.1 of this Reference Form.

Please find below the measures taken by the Company to reduce its exposure to some of the risk factors presented in Item 4.1 of this Reference Form:

The Company may not be able to adjust the volume of production in time or cost effectively in response to changes in demand.

The Company seeks to continually develop technology solutions for excellence in operational performance.

Concessions, authorizations, licenses and permits are subject to expiration, restriction or renewal and to various other risks and uncertainties.

To deal with this challenge, the Company seeks to be a sustainable operator, always trying to be a catalyst for local development. Specifically on the environmental aspects, the Company has actions to improve efficiency in the licensing processes, such as a greater integration between environment and project development teams, the development of a Guide to Best Practices for Environmental Licensing and Environment, the appointment of teams of highly qualified specialists, a greater interaction with environmental agencies and the creation of an Executive Committee to streamline internal decisions.

Company s projects are subject to risks that may result in increased costs or delays that may jeopardize their successful implementation.

As a measure to mitigate projects risks, Vale invests in training its employees working in the planning and execution of projects, and has taken actions to streamline the environmental licensing that has been the main reason for delays, such as creating a Guide to Best Practices of Environmental Licensing and Environment. Besides, the Company has implemented the dissemination of information and prevention campaigns to improve standards of health and safety of employees.

Vale aims to control and manage environmental liabilities at its units. Contaminated areas are considered to be those where there is proven pollution caused by the deposition, accumulation, storage and infiltration of substances or residues, implying adverse impacts on assets to be protected. If there is any suspected contamination, Vale aims to carry on successive environmental studies aiming to limit the extension of environmental degradation and potential risks to health and environment. Discovery of contamination requires measures to be taken by government agents, agents of the entity causing the environmental damage and owners. Corrective measures should be applied aiming to establish quality levels compatible to a specific future use. Thus, upon detecting the need to remove contamination identified in the area, Vale aims to prepare the Remediation Plan, according to applicable rules. After the remediation, results found are monitored for a period of time to be defined by the environmental entity. Monitoring results will indicate the remediation efficiency.

Eventual use restrictions arising out of previously existing contamination and that is found after remediation of deactivated areas should be made public, by changing the registry before the appropriate registrar.

Operational problems may materially and negatively affect the company s business and financial performance.

Along with the project development process, the Company has adopted an integrated risk assessment, which anticipates potential problems and allows mitigation plans. The methodological rigor promotes a higher accuracy of estimates, transparency and predictability in project development, as well as it ensures compliance with environmental regulations and health and safety requirements, and minimizes impacts on communities.

Deterioration of cash flow, credit rating and the Company ability to increase capital could adversely affect investments planned by the Company.

For purposes of maintaining the company ability to make investments expected for future years, Vale has granted greater emphasis in the reduction of costs, capital discipline, management of liabilities, management of working capital and divestments.

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The company s business may be negatively affected if its counterparties fail to meet their obligations.

The Company always seeks high-level partners and keeps a fair and close relationship over time. Additionally, Vale tries to assess the quality of its counterparts credits to define their exposure based on this evaluation.

Natural disasters can cause serious damages to the company s operations and projects in countries where it operates and/or may have a negative impact on its sales to countries adversely affected by such disasters.

The Company has adopted measures that include business continuity plans that provide immediate responses to protect people, assets and the company s image, alternative solutions to guarantee business continuity and fast recovery for return to normal production flow and monitoring and weather forecast systems. Moreover, the geographical diversification of its assets and sales to different countries and regions collaborate to reduce this risk.

The company may not have an adequate insurance coverage for certain business risks.

For cases where there is a limitation on purchased coverage, the Company uses its captive insurers to absorb some of the risks. In addition, it seeks to maintain a long-term relationship with the insurance and reinsurance market, and in all insurance lines, it works with the diversification of counterparties.

It is important to emphasize that the Company only mitigates part of the risks through insurance policies, applying the operational risk management methodology to prioritize the risks and, for the most relevant ones, developing controls and action plans to mitigate the risks.

The company faces an increase in extraction costs as mineral reserves are reduced.

As for the risks listed above, Vale seeks to have an extensive and high quality asset base in the business in which it operates, without relying solely on certain mines, thereby, diversifying risks. The Company invests heavily in mineral exploration since, with more samples, the estimation risk is reduced.

It continuously resupplies its reserve base through new projects to avoid depletion of mines. Moreover, it has a presence in several minerals and geographic locations, which also helps to diversify risks.

Labor disputes may disrupt the Company s operations from time to time.

The Company believes that staff is one of its competitive advantages, and seeks to treat all employees in the fairest possible way. The Company promotes a work environment conducive to dialogue, in which all employees are encouraged to share with their colleagues and superiors their concerns of any nature.

The company may face shortages of equipment, services and skilled personnel.

The Company works to increasingly integrate strategic planning, anticipating the demand for equipment and skilled workforce, as well as investing in strategic contracts with suppliers and initiatives to train specialized technicians, engineers and employees engaged in project implementation.

Higher costs of energy or energy shortages may adversely affect the company s business.

In order to mitigate the risk of power outages and/or costs, the Company manages a power generation portfolio, comprised by self-production hydroelectric plants and long-term supply agreements, based on current and projected energy needs of its mining operations.

The volatility of the exchange rate of currencies in which the company conducts its operations relative to US dollars could adversely affect its financial condition and operating results.

The Company s cash flow exchange exposure is assessed in conjunction with other market risk exposures - prices of products and supplies and interest rates - and mitigated when deemed necessary to support the growth plan, strategic planning and the Company s business continuity. Various forms of mitigation may be used: financial transactions through the use of derivatives in order to hedge, committed lines of credit guaranteeing liquidity, or any strategic decisions aimed at reducing the risk of cash flow. For more details, see item 5.2 of this Reference Form.

Integration between the Company and acquired companies, that are an important part of the Company s strategies, may be more difficult than anticipated.

In order to mitigate the risk of integration, Vale works with a broad management focus on acquisitions and leverages the previously acquired knowledge.

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The company is involved in several lawsuits that may adversely affect its business, if rulings are not favorable to the Company.

Mitigation measures include the use of defenses presented by the Company based on legal opinions, consolidated legal doctrine, as well as in the predominant case law in the Higher Courts. The internal guidance and consultancy work is based on these same guidelines, sticking to the facts presented.

The Company s governance and compliance processes may not be able to avoid regulatory penalties and damages to its reputation.

The Company has internal controls and mechanisms to detect control failures and obtain information on cases of breach of conduct, especially through the Whistleblower Channel.

The adverse economic developments in China may cause a negative impact on the Company s revenue, cash flow and profitability.

The Company mitigates this risk, which is reflected in prices, when deemed necessary to support its growth plan, strategic planning and business continuity.

The Company may be negatively affected by changes in government policies or trends as resource nationalism, including the application of new taxes or royalties on mining activities.

As safety measures, the Company systematically monitors the changes previously mentioned to react quickly, when applicable participates in discussions with the government through representative bodies of the mining sector and always seeks to operate in the most sustainable possible manner.

Environmental, health and safety regulations, including regulations relating to climate change, may affect the Company s businesses.

The Company operates responsibly in all locations where it is present, respecting the communities and the environment. In order to be globally known as an example of excellence in the management of health and safety, the Company has been continually improving its systems.

4.3 - Publicly known and relevant in-court, administrative or arbitration proceedings

On December 31, 2014, the Company was not party in non-secret arbitrations.

(i) Labor

On December 31, 2014, the Company was defendant in 21,781 labor lawsuits, in a total of R$10.5 billion, for which there is R$1.9 billion provision due to risks involved. Labor lawsuits filed against the Company relate to matters as overtime, time *in itinere*, health hazard and dangerous conditions premium, salary equity, and outsourcing, among others.

The tables below present an individual description of labor suits relating to the business of the Company and/or its subsidiaries.

1) Claim no. 01266-2006-012

Jurisdiction	6th Panel Supreme Labor Court
[redacted]	
Date of filing	11/27/2006
[redacted]	
Amounts, goods or rights involved	R$ 820,176.64
[redacted]	

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	outsourced. On October 15, 2009, Vale filed an appeal against this decision. The Prosecution Office has also appealed. On February 22, 20/10, the Superior Regional Labor Court of the Third Region (TRT3) rejected Vale s appeal and partially accepted the appeal filed by the public prosecution office, granting the legal protection sought, forcing Vale to immediately comply with the decision. On May 18, 2010, Vale filed an appeal to the Supreme Labor Court (TST), claiming the violation of article 129, III, of the Federal Constitution, and article 83 of the Complementary Law No. 75/93, as well as of divergent case law based on the lack of collective interests authorizing the filing of the public civil action by the Prosecution Office, which could result in the lack of competence of such office to file such a claim and, consequently, dismissal of the action without appreciation on merits (article 267, I and VI and article 295, V, of the Code of Civil Procedure). Vale has also claimed the violation of Article 5, items XXII, LIV and LV, of the Federal Constitution and of Article 899 of the Consolidation of Labor Laws (CLT), because of the inapplicability of the mortgage ordered by the Regional Labor Court without an enforcement procedure. Finally, Vale claimed the violation of items II and XIII, of Article 5, and sole paragraph of article 170, both of the Federal Constitution, in view of the violation of the right to freely work, provided that the legal requirements are met, considering that activities performed by service providers are specialized and can be legitimately agreed. On May 21, 2010, in the files of the action filed by Vale, the TST accepted the preliminary order to suspend anticipated effects determining immediate compliance with the decision. On July 9, 2010, Vale s appeal to the TST was dismissed by the TRT on the grounds that the lower court ruling did not violate any federal law or any predominant case law, against which decision Vale filed an interlocutory appeal on July 19, 2010 to the TST, which is still pending judgment, where it seeks acceptance of the appeal and assessment by the TST. On March 18, 2015, the interlocutory appeal filed by Vale was granted and the appeal was presented to be judged on April 8, 2015, reclassifying it as a Bill of Review. Considering that despite the above decision the Prosecution Office understands there is a fine for alleged non-compliance with judicial decision by Vale, Vale is calculating amounts claimed by the Prosecution Office, namely, R$ 7,128,226.81, for purposes of checking their inclusion in the probability of loss.
[redacted]	[redacted]
Analysis of impact in the case of losing the suit/ Lawsuit s relevance to the Company	In case of maintenance of the unfavorable decision, Vale is obliged, in Minas Gerais, to refrain from outsource services previously mentioned, having to perform such activities through its own employees; and to provide for the termination of contracts of outsourcing which may have as their purpose such services.
[redacted]	[redacted]
Notes	There is only one labor claim filed by the employee who is on the list attached to the files of the Public Civil Action at stake who claims to be an employee of Vale. Initially, this was procedure no. 2102-2011-054, at the Court of Congonhas, however, due to decision regarding court competence, the claim was remitted to the Labor Court of Ouro Preto, where it is now procedure no. 1562-2012-069. The claim was judged to be inapplicable regarding recognition of employment relationship. An appeal was filed by the plaintiff, through whom the plaintiff was successful regarding the compensation for

hours *in itinere*, and the inapplicability of the employment relationship claim was sustained. The decision judging the appeal was not subject to appeals, reason why it became final and ended this procedure on February 24, 2014.

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2) Claim no. 0000676-11.2012.5.24.0041

Court	Labor Court of Corumbá Mato Grosso do Sul
[redacted]	
Date of filing	10/24/2012
[redacted]	
Amounts, goods or rights involved	R$ 127,191.57
[redacted]	
Chances of loss	Probable
[redacted]	
Amount provisioned (if any)	Not applicable, considering that the object of the claim is an obligation imposed to MCR.

3) Claim n. 00329.2006.92020003

Jurisdiction	Labor Court of Maruim Sergipe
[redacted]	
Date of filing	01/23/2001
[redacted]	
Amounts, goods or rights involved	Guarantee of the operational activities at the potassium chlorate mine in Sergipe.
[redacted]	

[redacted]

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	Vale filed an appeal to the Regional Labor Court (TRT), which was partially granted, on August 07, 2007, to exclude the interruption of mine activities and the payment of a daily fine of R$ 100 thousand from the conviction. On November 29, 2007, Vale filed an Appeal before the Supreme Labor Court (TST) claiming compliance with the legal standards applicable to the activity. On December 19, 2012, the TST rejected Vale s appeal, and on February 6, 2012, Vale filed another appeal known as motion for clarification. In March 2012, the motion was dismissed by the TST, and Vale filed another appeal, to the Individual Bargaining Session 1 (SDI-1, internal division of TST) and also an Extraordinary Appeal to the Federal Supreme Court STF). Both of these appeals are still pending. The parties have been negotiating to reach a possible settlement, motivating suspension of the suit.
[redacted]	
Analysis of impact in the case of losing the suit/ Reasons for importance for the Company	Any unfavorable decision may risk imposing an obligation to do so, fines and, in the worst case scenario, total or partial closure of the activities of the underground mine for exploitation of Potassium Chlorate/Sergipe, or a monetary penalty for illegal operation. The Company is taking precautionary measures to ward off the effects of any unfavorable decision, through improvements in working conditions.
[redacted]	

(ii) Taxes

The tables below present a description of individual tax cases considered relevant to the business of the company and/or its subsidiaries.

As result of some tax exceptions engaging companies at Vale group, the Company creates a provision totaling, on December 31, 2014, the amount of R$ 1,088 billion, of which (i) R$296 million are related to controlled companies abroad, (ii) R$356 million are related to Brazilian controlled companies, (iii) R$ 302 million relate to provisions related to CFEM-related procedures (described in item 4.6(ii)in this Reference Form), and (iv) R$134 million related to other tax procedures of the Company.

With regard to the processes listed below which challenge the taxation of IRPJ and CSLL on profits from Company s affiliates abroad, it is important to notice that (i) regarding the period from 2009 onwards, tax authorities may issue new tax assessments to ensure the right to collect from the remaining balance of values of said taxes, should they understand that the calculation done by the Company is not correct;

(ii) regarding the portion of IRPJ and CSLL questioned in Writ of Mandamus no. 2003.51.01.002937-0 (item 1 in this section), the Company adhered to the Special Installment Program established by Law 12.865, dated October 9, 2013 (Special Installment Program); and (iii) regarding the other portion of IRPJ and CSLL discussed in Writ of Mandamus no. 2003.51.01.002937-0 (item 1 in this section), related to the period between 2002 (containing generating facts occurring in the period between 1996 and 2002), part of the debts related to year 2005 (related to tax credits that appear in Active Debt Certificates no. 70.2.12.000303-20 and 70.6.12.000814-20, arising out of Administrative Procedure no. 18471.001.243/2007-69, and supported in Tax Collection an no. 0015197-06.2012.4.02.5101), and year 2013 and following, were not object of adherence to the installment program.

Debts related to the years between 1996 and 2002 were not included in the tax recovery program due to the retroactive nature of the tax law, principle violated by the sole paragraph of article 74 in MP 2158/01, which, created only in 2001, intended, under legal fiction, require taxation of past events (1996 to 2001) in 2002. regarding the portion of the tax credit for year 2005, there is no adherence, as the portion corresponding to the requirement of taxes arising out of accrued compensated tax losses in prior years (1996 to 2002). Regarding the years 2013 and following, there is no adherence considering that the installment program allows for the payment of debts which generating facts occurred solely by December 31, 2012. These years, therefore, are outside of the scope of the program.

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Additionally, considering the decision favorable to the Company in May 2012, attributing suspensive effects to the extraordinary appeal and, consequently dismissing the applicability of amounts being questioned, duly approved by the Plenary in April 2013, there is no need to post any bond while such favorable decision is still in force. In this sense, the company has used all the surety bonds and cancelled a pledge related to the third act of infringement (2007). In the case of Tax Collection 0011476-46.2012.4.02.5101 (Motion for Tax Collection 2012.5101.013553-4), waiting for the decision regarding the use of the seized amounts (the only collateral that remained in effect) to pay for the debt with discounts provided under Law 12.865/2013, the order was issued by Caixa Econômica Federal to convert R$ 41,299,643.64 (Nov/2014) into income. Waiting response for the order, waiting for the National Treasury to follow administrative procedures required for the payment of the debt

The special appeal addressed to the Superior Court of Justice (STJ), filed in the Writ of Mandamus no. 2003.51.01.002937-0 was judged in the session held on November 26, 2013, when Reporting Justice an Napoleão Maia, recognized (admitted) in part the appeal, and in this portion, he granted it, while Justice Sérgio Kukina partially granted the appeal, and, in that portion, denied it. This judgment was resumed on March 25, 2014, when Minister Ari Pargendler presented his vote, accompanying the reporting judge Napoleão Nunes Maia Filho, considering inapplicable the taxation of profit from foreign companies controlled by Vale, since international treaties against double taxation should prevail. The judgment session ended on April 24, 2014, when the First Panel of the STJ decided, by majority of votes, in favor of Vale. The decision was published on May 20, 2014.

This decision determined: (i) the incompatibility of the taxation regime on profits from affiliates domiciled abroad introduced by article 74 of the Preliminary Order no. 2.158-35/01 with certain international treaties against double taxation; (ii) the illegal nature of the taxation with positive results on asset equivalence set forth in article 7th, Normative Instruction no. 213/2002; and (iii) that profits gained by Vale in the Bermudas are subject to the terms in article 74, *caput* in MP 2.158-35/2001. The National Treasury filed an Extraordinary Appeal before the Federal Supreme Court, which is pending judgment.

Debts listed in said Writ of Mandamus and in discussion on the records of the following processes were included in the Special Installment Program: (i) Tax Collection 0023959-11.2012.4.02.5101 (IRPJ and CSLL debts related to years 2003 to 2006); (ii) Tax Collection 2011.51.01.518168-2 and Motion for Tax Collection 2011.51.01.509917-5 (IRPJ and CSLL debts related to year 2007); (iii) Tax Collection 0023958-26.2012.4.02.5101 (IRPJ and CSLL debts related to year 2007); (iv) Tax Collection 0011487-75.2012.4.02.5101 (CSLL debts related to year 2008); (v) Tax Collection 0011476-46.2012.4.02.5101 and Motion for Tax Collection 0013553-28.2012.4.02.5101 (IRPJ debts related to year 2008); and (vi) Tax Collection 0023974-77.2012.4.02.5101 (CSLL debts related to year 2008).

As determined in the legislation applicable to the Special Installment Program, on November 29, a 2013, the Company made the initial payments of values due as IRPJ and CSLL on the profit of affiliates located abroad, due to adherence to the installment program. At the time, the Company also formally adhered to the terms of the Special Installment Program, upon delivering the respective attachments set forth by Joint Order PGFN/RFB no. 9/2013. Monthly payment of the installments has been duly made, ever since.

Adherence to the Special Installment Program implied payment to the Federal Revenue Secretariat of R$5,940 billion by the end of November 2013. Additionally, under the terms in REFIS in Law no. 12.865/13, Vale paid US$ 6.0 billion in 2013, including the advanced payment and the initial payment and Vale agreed upon paying the remaining US$ 16.3 billion in monthly payments. On December 31, 2014, the balance US$ 16.8 billion is due in 166 monthly payments, subject to interest at the SELIC rate.

The total liability for the years 2003 to 2012, including filed and unfiled periods for the Company and its affiliates, was estimated at R$ 45.0 billion - R$ 17,084 billion as principal, R$ 9,831 billion as fine, R$ 11,983 billion as interest and interest on fines, and R$ 6,094 billion as fees.

Among options offered by the legislation, the Company opted for the payment in cash of the principal related to years 2003, 2004 and 2006 and dividing, into installments, the principal, fines, and interest related to 2005, and 2007 to 2012. According to the legislation, in case of cash payment, only the principal of the tax is due while in the installment payment, 80% of fines are exempted, as well as 50% of interest and 100% of fees.

The option chosen by the Company presents estimated face value of R$ 22,214 billion, where R$ 16,222 billion as principal, R$ 1,565 billion as fine, and R$ 4,427 billion as interest and interest on fines. Reduction of the principal is due to the discount of R$798 million due to accrued losses in Brazil. The current value of this option after tax benefits is R$ 14,425 billion, and it appears to be a better option compared to total payment in cash as it reduces the pressure on liquidity and minimize the present value of payments.

Participation on REFIS had impact of US$ 6.7 billion (R$ 15.3 billion) on the net profit in 2013. In 2014, financial expenses with impact on the net profit related to interest comprising the payments made under REFIS were US$ 451 million (R$ 1.0 billion). Future cash flows will be affected by monthly installments.

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On this matter, it is important to note that on December 18, 2013, to comply with requirements in Law an 12.865/13, the Company submitted the petition to the records of said proceedings before the Superior Court of Justice (STJ), requiring partial dismissal of the decision and waiver of arguments under which the respective actions are grounded, according to partial waiver/dismissal parameters in the Writ of Mandamus no. 2003.51.01.002937-0.

Administrative procedures nos. 18471.000141/2008-15; 12897.000868/2009-98; 10569.000135/2011-64; 12897.000.023/2010-36; 10569.000199/2010-84, terminated. This matter is still discussed in the judicial sphere, being object of Tax Collections. These collections, in turn, were subject to dismissal, for purposes of adherence to the Special Payment in Installments, according to requirements set forth in Law 12.865/13, and the respective progress is presented in items 3.2, 4.2, and 5.2.

1) Writ of Mandamus 2003.51.01.002937-0

Jurisdiction	Superior Court of Justice and the Federal Supreme Court
Instance	3rd instance
Date of Filing	02/03/2003
Parties in the suit	Vale (Plaintiff/Appellant) and National Tax Authority (Defendant/Appellee)
Amounts, goods or rights involved	Not applicable
Main facts	In February 2003, Vale filed a Writ of Mandamus to ensure the right not to be subject to income tax and social contribution as far the profits of its subsidiaries and affiliates abroad were concerned, according to the sole paragraph of article 74 of the Provisional Executive Order 2.158-34/2001, and later amendments. Arguments of the Company:(i) section 74 of the Provisional Measure overlooks the treaties against double taxation signed by Brazil; (ii) the National Tax Code forbids the aforementioned taxation as set forth by the Provisional Measure; (iii) even if section 74 of the Provisional Measure were valid, exchange variation should be excluded from the assessment of due taxes; and (iv) the rule IN 213/2002 is illegal and (v) violation of the principle of prior taxation related to generating facts occurring before December 2001. In February 2003, an injunction request was granted to suspend the collection of the tax credit resulting from the challenged legislation, so that the rules of Law No. 9.532/97 would continue to apply. In August 2005, a rejection ruling was issued, causing revocation of the injunction previously obtained by Vale. Vale filed an appeal, which was received on September 29, 2005, which reestablished the suspension to enforce the tax credit obtained by the Company in the injunction. On March 29, 2011, the Federal Regional Court of the 2nd Region (TRF 2nd Region) dismissed the appeal, rejecting the arguments of Vale. After reviewing the ruling, published on May 30, 2011, Vale has changed the prognosis from remote to possible , as reflected in its financial statements for June 30, 2011, filed on July 28, 2011. On June 3, 2011, Vale filed an appeal (motion for clarification) against the decision by the 2nd Region TRF, pointing out omissions regarding the exchange rate variation and on the unconstitutionality of the sole paragraph of article 74 of Provisional Executive Order, in addition to a contradiction relative to the application of treaties to avoid double taxation. The contradiction claimed by Vale is based on the fact that such challenged decision states, at the same time, that (a) Article 7 of the treaties against double taxation prohibits Brazil from taxing profits

of affiliates and subsidiaries abroad, (b) that treaties prevail against internal laws

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	and (c) that, however, such provision does not prevent the application of article 74 of the Provisional Executive Order 2158-35/01. On November 28, 2011, the ruling which judged the motion (motion for clarification) partially in favor of Vale was published determining exclusion of exchange rate variation on the amount of foreign investment, but rejecting the other requests and the suspension of the tax credit granted by the appeal. On December 13, 2011, Vale filed a Special Appeal at the Superior Court of Justice (STJ) and an Extraordinary Appeal at the Supreme Court of Justice (STF). The Special and Extraordinary Appeals were admitted on May 7, 2012, the same day that Vale filed for a Preliminary Order before the Superior Court of Justice (STJ) and the Federal Supreme Court (STF) requesting attribution of suspensive effects to the Extraordinary Appeal. The Preliminary Orders aimed to suspend the application of tax credits. At the STJ, although the preliminary order was granted initially, the decision judging the preliminary order rejected Vale s claim, cancelling the preliminary order. At the STF, the preliminary order was granted on May 9, 2012 and confirmed by the panel at the STF on April 10, 2013, reason why it remains in force. On October 22, 2013, the Special Appeal by Vale (STJ) was included in the judgment agenda, but was later removed by the Federal Prosecution Office that, subsequently, issued an opinion unfavorable to Vale s claim. On November 26, 2013, the First Panel of the STJ resumed the judgment of the appeal, when the Reporting Justice and Napoleão Maia partially granted the appeal and, in this portion, granted the appeal, while Justice Sergio Kukina also granted in part the appeal and, in this portion, he denied it. This judgment was resumed on March 25, 2014, when Minister Ari Pargendler presented his vote, accompanying the reporting judge Napoleão Nunes Maia Filho, considering inapplicable the taxation of profit from foreign companies controlled by Vale, since international treaties against double taxation should prevail. The judgment session ended on April 24, 2014, when the First Panel of the STJ decided, by majority of votes, in favor of Vale, and the decision was published on May 20, 2014. In short, the decision determined (i) the incompatibility of the taxation regime on profits from affiliates domiciled abroad introduced by article 74 of the Preliminary Order no. 2.158-35/01 with certain international treaties against double taxation; (ii) the illegal nature of the taxation with positive results on asset equivalence set forth in article 7th, Normative Instruction no. 213/2002; and (iii) that profits gained by Vale in the Bermudas are subject to the terms in article 74, *caput* in MP 2.158-35/2001. The National Treasury filed an Extraordinary Appeal before the Federal Supreme Court, which is pending judgment.
Chances of loss	Possible (regarding the remaining discussion which debt will not be subject to adherence to the tax recovery program).
Analysis of impact in the case of losing the suit/ Reasons for importance for the Company	In the event of a final unfavorable decision, regarding all arguments raised by the Company, the Brazilian Tax Authority may collect income taxes and social contributions on profits of subsidiaries and/or affiliates abroad, taking into account the principle of the due process of law in the specific administrative and in-court collection procedures. This impact refers to the period which is not object of dismissal/waiver, for adherence to the Special Installment Plan, corresponding to the amount of R$ 1,515,851,530.61, as IRPJ, and R$ 415,414,688.29, as CSLL (December/2013), totaling R$

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	1,931,266,218.90. Amounts related to debts in 1996 and 2002, the 2005 portion and 2013 are not included.
Amount provisioned (if any)	Not applicable.
Notes	1 On September 20, 2012, Vale received a summoning by the Federal Revenue of Brazil recognizing extinction of values related to Exchange rate variation, in the approximate value of R$1.6 billion. Such extinction is due to the partially favorable decision issued in the judgment of an appeal (motion for stay) by the Company in this Writ of Mandamus 2003.51.01.002937-0, as described above in the item Main Facts . 2 The judgment of this direct claim of unconstitutionality (ADI) filed by the Confederação Nacional da Indústria (CNI) questioning constitutionality of article 74 in the Provisional Order 2.158-35/01 returned on April 3, 2013. On April 10, 2013, the result of such ADI was issued, and it was defined that article 74 is not applicable to affiliates located in countries without favored taxation (non-fiscal heavens), but is applicable to companies located in countries with favorable taxation (fiscal heavens). There was a decision for the retroactive nature of the sole paragraph of article 74 in the MP, implying the impossibility to apply this legislation to generating facts prior to 2002. On the same date, Extraordinary Appeals filed by Cooperativa Agropecuária Mourãoense - COAMO and EMBRACO were judged. The preliminary order of Vale was maintained under unanimous voting, as seen in an item 1.1. 3 - On December 18, 2013, in compliance with the terms in Law and 12.865/13, the Company filed a petition to the Superior Court of Justice requesting partial dismissal of the discussion and, also, waiving arguments under which the claim is grounded. On February 19, 2014, in the files of the Special Appeal, a partial waiver to the rights grounding the action was filed under terms required by Vale. The partial waiver produces effects in every tax contingency related to this issue, listed below

1.1) Development of Writ of Mandamus 2003.51.01.002937-0: Injunction no. 3.141

Court	Federal Supreme Court
[redacted]	
Date of filing	05/07/2012
[redacted]	
Values, assets or rights involved	Not applicable
[redacted]	

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	reconsider their decision, the suspensive effect will have effects until judgment of the extraordinary appeal. On December 18, 2013, Vale filed the waiver petition for purposes of adhering to REFIS. On February 14, 2014, a decision was issued determining the filing of a copy of the partial waiver request and the approving decision issued under the main Writ of mandamus (item 1 above). On February 24, 2014, Vale provided requested documents and the files moved to be appreciated by the reporting judge.
[redacted]	
Analysis of impact in case of loss/Reasons for the importance of the claim to the Company	In the event of any unfavorable outcome, there is a chance to require guarantee for amounts under discussion. This impact relates to the period that is not subject to dismissal/waiver for adherence to the Special Installment Program.
[redacted]	

2) Tax Assessment Notice no. 18471.001243/2007-69

Court	Tax Appeals Administrative Council
[redacted]	
Date of filing	12/10/2007
[redacted]	
Values, assets or rights involved	Total debt R$ 1,931,266,218.90 (December 2014)
[redacted]	

[redacted]

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	the Federal Regional Court of the 2nd Region in the writ of mandamus no. 2003.51.01.002937-0 (item 1 above) in the sense that there is an overlapping between the discussions in this administrative proceeding and in that writ of mandamus, rejected all administrative appeals and ordered the immediate collection of part of the credits that are currently object of Tax Assessment no. 0015197-06.2012.4.02.5101 (item 2.2). Therefore, the appeals filed by Vale and the National Tax Authority against the CARF decision have not been assessed by the Superior Chamber of Tax Appeals. Vale filed a writ of mandamus (no. 0001899-44.2012.4.02.5101 item 2.1 below) to attempt to reverse the order of DEMAC and ensure the regular development of the administrative process. Alongside, the Company filed a request for reconsideration at DEMAC, which was denied and, ever since, the files are with the judge, waiting to proceed.
[redacted]	
Analysis of impact in case of loss/Reasons for the importance of the claim to the Company	In the event of any unfavorable outcome, the taxes on the accounting gain regarding the ownership equity of foreign subsidiaries discussed under this tax assessment notice may be levied. Any financial impact, however, shall only occur in case of a final unfavorable decision in the in-court collection claim.
[redacted]	

2.1) Writ of mandamus. 0001899-44.2012.4.02.5101 related to the Tax Assessment Notice no. 18471.001243/2007-69

Court	28th Federal Court of Rio de Janeiro
[redacted]	
Date of filing	02/06/2012
[redacted]	
Values, assets or rights involved	Not applicable
[redacted]	
Probability of loss	Possible.
[redacted]	
Allocated amount (if any)	None

2.2) Tax Collection no. 0015197-06.2012.4.02.5101 regarding the Tax Assessment Notice no. 18471.001243/2007-69

Court	5th Tax Collection Court of Rio de Janeiro
[redacted]	
Date of filing	03/13/2012

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Parties to the claim	Federal Taxpayer Authority (plaintiff) and Vale (defendant)
[redacted]	
Main factors	On March 12, 2012, the National Tax Authority filed a claim to collect income taxes and social contributions presumably due, in view of the decision from DEMAC mentioned in item 2 above. On April 25, 2012, the National Tax Authority filed a petition requesting seizure of dividends to be distributed by Vale on April 30, 2012. On April 26, 2012, Vale filed a petition challenging the request from the National Tax Authority and offering, alternatively, a bank guarantee to secure the debt. On the same day, the court accepted the offering of the guarantee, presented by Vale on April 27, 2012. On May 8, 2012, the National Tax Authority presented a request to block monies through the BACENJUD system - through which the judge directly accesses all bank accounts in the country - that, upon objection by Vale, was rejected due to the preliminary order granted by Minister Marco Aurélio de Mello, suspending application of tax credits, object of this enforcement (item 1.1. above). Vale then requested acknowledgement of the lack of need to guarantee the execution since application of credits is suspended and dismissal of the previously granted surety bond, granted by the Court. Faced with such decision, on May 14, 2012, Vale paid the bail. Due to the aforementioned injunction granted in the provisional remedy cited in item 1.1, the lawsuit has been stayed, as the national Tax Authority cannot collect non-applicable credits. On July 17, 2014, Vale filed a motion requesting extinction of the tax collection due to the STF decision in ADI 2.588, which determined the unconstitutional nature of the sole paragraph in article 74 in Provisional Order 2.158-35/01. Waiting for the court to comment on the motion.
[redacted]	
Analysis of impact in case of loss/Reasons for the importance of the claim to the Company	In the event of any unfavorable outcome related to the injunction object of item 1.1 above, Vale may have to present a new guarantee of the amounts in question under this collection.
[redacted]	

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3.1) Development of Administrative Claim no. 18471.000141/2008-15: writ of mandamus. 0004826-69.2012.4.01.3400

Court	14th Federal Court of the Federal District
[redacted]	
Date of filing	01/25/2012
[redacted]	
Values, assets or rights involved	Not applicable
[redacted]	
Probability of loss	Not applicable due to adherence to REFIS.
[redacted]	
Allocated amount (if any)	None

3.2) Development of Administrative Claim no. 18471.000141/2008-15: Tax Assessment Notice no. 0023959-11.2012.4.02.5101

Court	7th Tax Collection Court of Rio de Janeiro
[redacted]	
Date of filing	3/13/2012
[redacted]	
Values, assets or rights involved	R$ 14,216,689,702.56 (in November 2013, date adhering to REFIS), without reduction factors provided for in the tax recovery program. Amount included in Administrative Claim no. 18471.0000141/2008-15.
[redacted]	

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	the STJ, in the injunction related to the item above and, thus, when the suspensive effect of the preliminary order granted was still in effect, the National Tax Authority, even with the suspended application of credits, filed a tax enforcement act to collect IRPJ and CSLL allegedly due, which, in their understanding, would be possible considering the decision by the President of the 2nd Chamber of CARF, mentioned in item 3.1 above. On May 11, 2012, Vale filed a petition informing the granting of the injunction by the STF suspending the applicability of credits (item 1.1 above) and, on the same date, a decision was pronounced suspending this tax collection. On December 18, 2013. Vale presented a petition claiming the loss of object of the collection due to adherence to REFIS. On February 24, 2014, an order was issued determining (a) the National Treasury should comment regarding the notified payment, and (b) the presentation by Vale of a legible power of attorney, which has been complied with by the Company. The National Treasury requested an extension of the term for 90 days on November 26, 2014, and it was again invited to comment on the payment informed by Vale. On December 16, certificates were issued attesting that the National Treasury failed to comment, and suspending the claim. The decision on such request has not been published yet.
[redacted]	
Analysis of impact in case of loss/Reasons for the importance of the claim to the Company	Not applicable, as the debt has terminated upon adherence to REFIS.
[redacted]	

4.1) Development of Administrative Claim no. 12897.000868/2009-98, dated 01/11/10: Writ of mandamus 2011.51.01.005614-9

Court	32nd Federal Court of Rio de Janeiro
[redacted]	
Date of filing	04/29/2011
[redacted]	
Values, assets or rights involved	Not applicable
[redacted]	

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	was issued. On January 30, 2013, Vale filed an appeal against the decision. On March 14, 2013, the judge received the appeal and attributed suspensive effect. On December 18, 2013, Vale filed the waiver petition for purposes of adhering to REFIS. The files were remitted to be appreciated by the judge. Despite of the unfavorable decision issued in this writ of mandamus, application of tax credits discussed herein is suspended due to the STF decision (item 1.1 above).
[redacted]	
Analysis of impact in case of loss/Reasons for the importance of the claim to the Company	Not applicable, as the debt has terminated upon adherence to REFIS.
[redacted]	

4.2) Development of Administrative Claim no. 12897.000868/2009-98 dated 01/11/10: Tax Collection no. 2011.51.01.518168-2

Court	11th Tax Collection Court of Rio de Janeiro
[redacted]	
Date of filing	07/08/2011
[redacted]	
Values, assets or rights involved	R$ 33,903,846.09 (November 2013, date adhering to REFIS) included in the amount of the main administrative process described in Administrative Claim no. 12897.000868/2009-98, added with legal fees.
[redacted]	

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Probability of loss	Not applicable, as the debt has terminated upon adherence to REFIS.
[redacted]	
Allocated amount (if any)	None.

4.3) Development of Administrative Claim no. 12897.000868/2009-98 dated 01/11/10: Motion to Stay Collection no. 2011.51.01.509917-5

Court	11th Tax Collection Court of Rio de Janeiro
[redacted]	
Date of filing	09/28/2011
[redacted]	
Values, assets or rights involved	Value already mentioned in item 4.2 above.
[redacted]	
Probability of loss	Not applicable, as the debt has terminated upon adherence to REFIS.
[redacted]	
Allocated amount (if any)	None.

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4.4) Development of the Administrative Claim no. 12897.000868/2009-98: Tax Assessment 0023958-26.2012.4.02.5101

Court	7th Tax Collection Court of Rio de Janeiro
[redacted]	
Date of filing	05/8/2012
[redacted]	
Values, assets or rights involved	R$ 17,623,009,684.76 (November 2013, date adhering to REFIS) included in the main administrative procedure described in Administrative Claim no. 12897.000868/2009-98, added with legal fees.
[redacted]	
Probability of loss	Not applicable, as the debt has terminated upon adherence to REFIS.
[redacted]	
Allocated amount (if any)	None.

5.1) Development of Administrative Claim no. 12897.000023/2010-36, dated 02/12/10: Writ of mandamus 2010.51.01.017597-3

Court	Federal Regional Court of the 2nd Region
[redacted]	
Date of filing	09/28/2010
[redacted]	
Values, assets or rights involved	Not applicable
[redacted]	

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	Administrative Claim no. 12897.000023/2010-36. Given the acceptance of the arguments submitted by Vale, related to calculation errors, the National Tax Authority reduced the amount charged and issued a new collection letter, received by Vale on September 6, 2010. Due to the partial maintenance of the collection, on September 28, 2010, Vale filed a writ of mandamus. The injunction request was granted to suspend the collection of debts required by the National Tax Authority. Against this decision, the National Tax Authority filed an appeal (interlocutory appeal), which was denied. On December 16, 2011, an unfavorable judgment was rendered, as the Court deemed that such values would not be the object of the administrative appeal filed by the Company, in Administrative Claim no. 12897.000023/2010-36. Against this decision, Vale filed an appeal on January 9, 2012, After the reply by the appellee (National Tax Authority), the files were remitted to the TRF 2nd Region, to judge the appeal. On December 18, 2013, Vale filed the waiver petition for purposes of adhering to REFIS. On March 7, 2014, a decision was issued approving the waiver. On March 28, 2014, files were remitted to the National Tax Authority. On April 25, 2014, the term ended for the parties to comment on the decision that approved the dismissal of the claim. Files were remitted to the 21st Federal Court of the Judicial Section of Rio de Janeiro on May 6, 2014 and were filed on May 30, 2014.
[redacted]	
Analysis of impact in case of loss/Reasons for the importance of the claim to the Company	Process ended
[redacted]	

5.2) Development of Administrative Claim no. 12897.000023/2010-36 dated 02/12/10: Tax Collection no. 0011487-75.2012.4.02.5101

Court	1st Tax Collection Court of Rio de Janeiro
[redacted]	
Date of filing	01/26/2012
[redacted]	
Values, assets or rights involved	R$ 21,731,827.64 (November 2013, date adhering to REFIS) included in the amount of Administrative Claim no. 12897.000023/2010-36, added with legal fees.
[redacted]	

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	June 24, 2014, the National Treasury requested suspension of the claim for sixty days to evaluate the payment made. On September 3, 2014, the decision was issued determining suspension of the collection until the end of the monthly payments, and the National Treasury represented to be aware on September 25, 2014.
[redacted]	
Analysis of impact in case of loss/Reasons for the importance of the claim to the Company	Not applicable, as the debt has terminated upon adherence to REFIS.
[redacted]	

5.3) Development of Administrative Claim no. 12897.000023/2010-36 dated 02/12/10: Tax Collection no. 0011476-46.2012.4.02.5101

Court	4th Tax Collection Court of Rio de Janeiro
[redacted]	
Date of filing	01/26/2012
[redacted]	
Values, assets or rights involved	R$ 60,325,116.23 (November 2013, date adhering to REFIS), as IRPJ, value already included in the amount of Administrative Claim no. 12897.000023/2010-36, added with legal fees.
[redacted]	

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	Treasury was granted the review of the files to indicate the amount to be converted into final payment, with applicable deductions. On October 31, 2014, the National Treasury requested conversion into income of the amount of R$ 41,299,643.64 and on November 5, 2014 the order was issued by Caixa Econômica Federal to be complied with. On January 29, 2015, the National Treasury filed a brief requesting suspension of the claim for five days in order to allow the sector responsible for determining payment and cancellation could conclude the necessary procedures. On March 6, 2015, the National Treasury filed a motion informing that payments were imputed and remaining balances were cancelled, requesting the claim to be extinct. On March 19, 2015 Vale requested to withdraw the remaining judicial balance that, according to an order by Caixa Econômica, was R$14,198,955.67 on November 25, 2014. On the same date, the award was published determining extinction of the process and authorizing withdrawal of the remaining balance of the judicial deposit.
[redacted]	
Analysis of impact in case of loss/Reasons for the importance of the claim to the Company	Based on legal determination, due to adherence to the tax recovery program (REFIS), the value deposited judicially, resulting from money attachment, will be converted into income in favor of the Federal Government, becoming final payment, upon application of reduction factors determined by Law 12.865/13. Possible remaining balance may be raised by Vale
[redacted]	

5.4) Development of Administrative Claim no. 12897.000023/2010-36 dated 02/12/10: Motion to Stay Collection no. 0013553-28.2012.4.02.5101

Court	1st Tax Collection Court of Rio de Janeiro
[redacted]	
Date of filing	03/08/2012
[redacted]	
Values, assets or rights involved	Value already mentioned in item 5.4 above.
[redacted]	
Probability of loss	Not applicable, as the debt has terminated upon adherence to REFIS

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Analysis of impact in case of loss/Reasons for the importance of the claim to the Company	Based on legal determination, due to adherence to the tax recovery program, the value deposited judicially, resulting from money attachment, will be converted into income in favor of the Federal Government, becoming final payment, upon application of reduction factors determined by Law 12.865/13. On February 12, 2015, the res judicata certificate was issued and on February 19, the files were written off. The remaining balance will be withdraw in the files of the respective tax collection.
[redacted]	

5.5) Development of Administrative Claim no. 12897.000023/2010-36: Tax Assessment Notice no. 0023974-77.2012.4.02.5101

Court	1st Tax Collection Court of Rio de Janeiro
[redacted]	
Date of filing	05/08/2012
[redacted]	
Values, assets or rights involved	R$ 4,609,749,384.28 (November 2013, date adhering to REFIS), value included in the main administrative procedure described in Administrative Claim no. 12897.000023/2010-36, added with legal fees.
[redacted]	
Probability of loss	Not applicable, as the debt has terminated upon adherence to REFIS
[redacted]	
Allocated amount (if any)	None.

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5.6) Development of Administrative Claim no. 12897.000023/2010-36: Writ of mandamus no. 35681-31.2012.4.01.3400

Court	1st Tax Collection Court of the Federal District
[redacted]	
Date of filing	07/13/2012
[redacted]	
Values, assets or rights involved	Not applicable
[redacted]	
Probability of loss	Not applicable, as the debt has terminated upon adherence to REFIS
[redacted]	
Allocated amount (if any)	None.

6) Administrative Proceeding no. 16682.721173/2013-04

Court	Office of Large Taxpayers DEMAC / RJ
[redacted]	
Date of filing	11/14/2013
[redacted]	
Values, assets or rights involved	R$ 253,276,214.59 (December/2014).
[redacted]	

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	based on the following arguments: (i) the fine was applied in a wrong way; (ii) this is an alleged continuous infringement, which would cause reduction to the fine; (iii) infringement against the principles of proportionality and reasonability; (iv) contradiction between the checking term and the fiscal statement generating the act of infringement and decisions regarding claimed PIS and COFINS credits, (v) impossibility to apply a fine due to insufficient description of goods; and (vi) mistakes made by the supervision, while calculating gross income. On December 16, 2013, the files were forwarded to the Judgment Unit of the Federal Revenue Office of Brazil, in Ribeirão Preto SP. On June 13, 2014, the objection was judged and granted partially, to reduce the fine percentage over the value of the operations from 1 to 0.2%. Vale filed an Appeal and a Voluntary Appeal and both appeals are pending judgment by CARF.
[redacted]	[redacted]
Analysis of impact in case of loss/Reasons for the importance of the claim to the Company	Not applicable.
[redacted]	[redacted]
Notes	Resulting from MPF (Fiscal Procedure Order) no. 0718500.2012.0059

7) Administrative Proceeding no. 16682.721227/2013-23

Court	Office of Large Taxpayers DEMAC / RJ
[redacted]	[redacted]
Date of filing	11/14/2013
[redacted]	[redacted]
Values, assets or rights involved	R$ 670,451,315.10 (December/2014)
[redacted]	[redacted]

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	decision notified to the company on January 23, 2015. Retroactive effects of MP 656/14, current at the time, was applied as the MP revoked the fine of 50% over the amount of the credit object of the request of refund that was not granted. The legal term that no longer defines as infringement the factual hypothesis described in the claim determines cancellation of the punishment applied before.
[redacted]	
Analysis of impact in case of loss/Reasons for the importance of the claim to the Company	Not applicable.
[redacted]	
Notes	Derived from MPF (Fiscal Procedure Order) nº 0718500.2012.00599

(iii) Civil

The tables below present a description of individual civil nature processes considered relevant to the business of the company and/or its subsidiaries.

1) Claim no. 0063023-34.2008.8.19.0001

Jurisdiction	41st Civil Court of the Court of Justice of Rio de Janeiro
[redacted]	
Date of filing	03/17/2008
[redacted]	
Amounts, goods or rights involved	Protection of the company s assets and guarantee of its operations
[redacted]	
Chances of loss	Remote
[redacted]	
Amount provisioned (if any)	None.

2) Claim no. 0015963-69.2006.4025101

Jurisdiction	7th Specialized Panel of the Federal Circuit Court of Appeals of the 2nd Region (Court of Origin: 30th Court of the Federal Court of Rio de Janeiro)
[redacted]	

Date of filing	08/18/2006
[redacted]	
Amounts, goods or rights involved	R$ 4,301,976,312.60
[redacted]	

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	of Vale related to the failure to perform railway transposition in the city of Belo Horizonte. The parties have reached a settlement, through which the construction costs of the new railroad segment will be offset from an eventual conviction of Vale, if any, if the claim is judged in favor of the Federal Government. This agreement was legally approved. On June 25, 2012, a sentence rendered the lawsuit unfounded. The Federal Government filed an appeal that is awaiting judgment.
[redacted]	
Analysis of impact in the case of losing the suit/ Reasons for importance for the Company	Any unfavorable decision could generate a financial loss for the company, in the light of the amounts involved.
[redacted]	

3) Claim no. 0009362-71.1997.4.02.5001

Jurisdiction	5th Panel of the Federal Circuit Court of Appeals of the 2nd Region
[redacted]	
Date of filing	11/10/1997
[redacted]	
Amounts, goods or rights involved	Incalculable amount application for annulment of the concession contract for use of port terminals for the Tubarão Complex.
[redacted]	
Chances of loss	Remote
[redacted]	
Amount provisioned (if any)	None

4) Claim no. 0024892-89.2011.8.13.0570

Court	1st Civil Court of the District of Salina / MG
[redacted]	
Date of filing	09/14/2011
[redacted]	

Amounts, goods or rights involved	Compensation for damages to the State of Minas Gerais in the minimum amount of R$ 200 million, civil fine in an amount of no less than R$ 600 million, plus the

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	lands acquired by Vale.
[redacted]	
Chances of loss	Possible
[redacted]	
Amount provisioned (if any)	None

5) Special Appeal 1.262.401 - BA

Court	Superior Court of Justice
[redacted]	
Date of filing	08/26/2005
[redacted]	
Amounts, goods or rights involved	R$ 1,031,771,158.29.
[redacted]	
Chances of loss	Remote

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Analysis of impact in the case of losing the suit/ Reasons why it is relevant to the Company	Eventual unfavorable decision in the process would cause financial losses to the Company. Classification of the loss was altered from probable to remote because of the favorable decision issued in favor of Companhia Paulista de Ferro Ligas CPFL, as described in item Main Facts above.
[redacted]	

5) 14 Civ. 3042 (RMB) AJP

Court	US Regional Court for the South District of New York
[redacted]	
Date of filing	04/30/2014
[redacted]	
Amounts, goods or rights involved	Considering that this process is in the discovery phase, it is impossible to determine related amounts.
[redacted]	
Chances of loss	Considering that this process is in the discovery phase, it is impossible to determine the loss classification.
[redacted]	
Amount provisioned (if any)	Considering that this process is in the discovery phase, it is impossible to determine its impact in case of loss and, thus, there was no provisioning of amounts, if applicable.

(iv) Environmental

The tables below present a description of individual environmental nature processes considered relevant to the business of the company and/or its subsidiaries.

1) Claim no. 0317.02.002974-8

Jurisdiction	2nd Civil Court of Itabira - Minas Gerais
[redacted]	
Date of filing	09/26/1996
[redacted]	
Amounts, goods or rights involved	R$ 4,104,785,052.97
[redacted]	

[redacted]

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	parties filed a joint petition on March 12, 2013 requesting suspension of the suit to attempt a settlement. On March 27, 2013, the claim was suspended upon agreement between the parties.
[redacted]	
Analysis of impact in the case of losing the suit/ Reasons for importance for the Company	Any unfavorable decision in the lawsuit would generate great financial losses for the Company, although there is no risk of stoppage of activities.
[redacted]	

2) Claim no. 0317.02.007032-0

Jurisdiction	1st Civil Court of Itabira - Minas Gerais
[redacted]	
Date of filing	08/22/1996
[redacted]	
Amounts, goods or rights involved	R$ 3,544,842,445.74
[redacted]	
Chances of loss	Total amount divided into possible loss (7%) and remote loss (93%).
[redacted]	
Amount provisioned (if any)	None.

3) Process no. 26.295.47.2012.4.3700

Jurisdiction	8th Federal Court of São Luís Maranhão
[redacted]	
Date of filing	07/22/2012
[redacted]	
Amounts, goods or rights involved	R$ 62,010.00
[redacted]	

[redacted]

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	of all Works and activities related to the expansion of the Carajás Railroad. Vale and IBAMA filed appeals (interlocutory appeals), aiming to reverse the decision, and filed before the Presidency of the TRF of 1st Region (DF) a claim to suspend the preliminary order, claiming that (i) the risk of serious irreversible economic losses arising out of any eventual maintenance of such preliminary decision, as well (ii) as the fact that the environmental study prepared by Vale fully complied with the terms in CONAMA RES 237, while there are no grounds for the claim regarding the serious risk of social-environmental unbalance. The suspension request was accepted by the Presidency of the TRF of the 1st Region, and the plaintiffs appealed against this decision (interlocutory), but were not successful and the decision favorable to Vale was maintained. At the first instance, Vale and IBAMA filed their defenses claiming (a) the regular nature of the licensing process, (b) the clear definition, in the study, of all diagnosis regarding the impacts on areas and communities under direct and indirect influence of the work (including traditional communities), and (c) the need to respect the competence and technical skills held by IBAMA to carry out and conclude the environmental study. In recent decision, the federal judge accepted the claim by the Federal Public Defense Office to appear as plaintiff. Vale filed an appeal (interlocutory) against this decision, aligned with the opinion by the Federal Prosecution Office (MPF), in the sense of lack of legitimacy of the Public Defense to be party in the claim. The appealed decision was sustained, and there was reestablishment of the successive term for the Prosecution Office, IBAMA and VALE to present their comments. The Prosecution Office reiterated the annulment of the Licensing and IBAMA was requested to present new information about the Railroad operation and the removal of families. After IBAMA s manifestation on August 12, 2014, the files were remitted to be analyzed by the court. The preliminary order was not granted on September 15, 2014, and the State of Pará presented its lack of interest in the claim. On February 27, 2015 an order was published to inform the beginning of the term applicable to Vale to present its comments on the licensing process filed by IBAMA. On March 30, 2015, Vale s motion was filed. Waiting for decision.
[redacted]	
Analysis of impact in the case of losing the suit/ Reasons for importance for the Company	Eventual decision unfavorable to Vale, may compromise the licensing process for the expansion of EFC, with impacts on logistic operations of VALE to deploy the production transportation plan for Project S11D.
[redacted]	

4) Process no. 0021337-5220114.01.3700

Jurisdiction	8th Federal Court of São Luís Maranhão
[redacted]	
Date of filing	11/04/2011
[redacted]	
Amounts, goods or rights involved	R$ 871,290.00
[redacted]	

[redacted]

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	IBAMA; (iv) alter all the level passages related to each bridge to be built, signaling and lighting the passages to be used by the communities; (v) place fences on both sides of the EFC at the segment 20, protecting the areas used as crossing by people and animals. On July 2013, Vale filed a petition claiming that all its obligations, disregarding actions by IBAMA and/or Fundação Cultural Palmares have been complied with. In December 2013, the Prosecution Office filed a brief stating the non-compliance with obligations assumed under the agreement. In view of this brief by the MPF, the court requested that Instituto Nacional de Colonização e Reforma Agrária (INCRA), IBAMA, Fundação Cultural Palmares, and Vale should prove compliance with the obligations, determining that Vale should comply with such obligations within sixty days. Vale was ordered to present justification within thirty days for the change in the schedule as provided for in sub item (e) in clause four of the judicial agreement (construction of bridges for vehicles and people). Thus, in October 2014, Vale presented a petition informing compliance with items (a), (b) and (f) and informing the new schedule to build the bridge, object of this agreement. After comments by MPF, as described above, the files were submitted to the judge. Decision pending.
[redacted]	
Analysis of impact in the case of losing the suit/ Reasons for importance for the Company	Despite of an agreement signed in this claim, under which the company agrees upon several obligations related to the social-economic aspects of the area, eventual non-compliance of such agreement may, in the worst scenario, motivate judicial decisions that suspend expansion and operation of EFC in the area, compromising logistic operations of the railroad for indefinite period.
[redacted]	

4.4 In-court, administrative or arbitration proceedings that are not confidential involving managers, former managers, controllers, former controllers or investors

1) Motion to Disagree in Special Appeal no. 1.310.535

Original Claim no. 005530-40.2007.8.19.0001

Jurisdiction	Appeals: Motion to Disagree before the 2nd Section of the Special Court of the STJ and Extraordinary Appeal before the STF (Original Court 48th Civil Court of Rio de Janeiro)
[redacted]	
Date of filing	05/09/2007
[redacted]	
Amounts, goods or rights involved	Vale was requested to make an escrow deposit as payment on March 8, 2010 in the amount of R$ 346,773,910.20, due to the temporary collection claim filed by Petros. Although no final decision has been rendered yet, on August 23, 2011, Petros, to increase the amount deposited in escrow, presented a surety bond issued by Banco Bradesco in the amount of R$ 497.0 million.
[redacted]	

[redacted]

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	Company waiting to be judged by the STJ. The preliminary decision, - as there are appeals waiting to be judged - Vale was determined to pay R$ 346,773,910.20 claimed by PETROS in the lawsuit. To increase the amount deposited in escrow, Petros presented a bank surety bond in the amount of R$ 497 million. Should the appeal is successful and there are changes in the merit of the case, Vale may be entitled to recover the amount provided to Petros. There also is an extraordinary appeal filed by Vale to be processed and judged by the STF.
[redacted]	
Analysis of impact in the case of losing the suit	If a decision unfavorable to Vale becomes final (res judicata), the Company shall not have to pay anything else taking into account the escrow deposit of R$ 346,773,910.20 mentioned above. Additionally, such a decision can open a precedent for similar judgments in other cases where future contracts for sale of gold are in dispute (total of 12 cases, including this one. For more details see item 4.6 of this Reference Form).
[redacted]	

2) Claim no. 0079940-46.2010.4.01.3800

Jurisdiction	18th Federal Court of Belo Horizonte Minas Gerais
[redacted]	
Date of filing	02/18/2004
[redacted]	
Amounts, goods or rights involved	Incalculable Request for annulment of the General Meeting.
[redacted]	
Chances of loss	Possible
[redacted]	
Amount provisioned (if any)	None

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3. Motion in Special Appeal no. 271.951 (Original Procedure No. 0529364272010.8.13.0145)

Jurisdiction	4th Panel of the Superior Court of Justice STJ Original Court - 7th Civil Court of Juiz de Fora/Minas Gerais
[redacted]	
Date of filing	October 12, 2012 (original date August 20, 2010)
[redacted]	
Amounts, goods or rights involved	Incalculable
[redacted]	
Chances of loss	Possible
[redacted]	
Amount provisioned (if any)	None

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4) Special Appeal no. 1363585 (Original Procedure No. 0497166342010.8.13.0145)

Jurisdiction	4th Panel of the Superior Court of Justice STJ Original Court - 8th Civil Court of Juiz de Fora Minas Gerais
[redacted]	
Date of filing	January 24, 2013 January 24, 2013 January 24, 2013.
[redacted]	
Amounts, goods or rights involved	Incalculable
[redacted]	
Chances of loss	Possible
[redacted]	
Amount provisioned (if any)	None

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5) Procedure No. 2010.51.01.002548-3 Writ of Mandamus

Jurisdiction	32nd Federal Court of Rio de Janeiro
[redacted]	
Date of filing	10/25/2012
[redacted]	
Amounts, goods or rights involved	Incalculable
[redacted]	

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Chances of loss	Remote
[redacted]	
Amount provisioned (if any)	None

6) Procedure no. 0393909-98.2012.8.19.0001

Jurisdiction	3rd Corporate Court of Rio de Janeiro
[redacted]	
Date of filing	10/05/2012
[redacted]	
Amounts, goods or rights involved	Around R$ 89.0 million.
[redacted]	
Chances of loss	Possible
[redacted]	
Amount provisioned (if any)	None.

4.5 Relevant confidential claims

On December 31, 2014, the Company was not a party in any relevant and sensitive cases.

4.6 Publicly known and relevant repeated or related in-court, administrative or arbitration proceedings

(i) Labor

This item 4.6 of the Reference Form highlights the amount allocated in relation to repeated or related claims. Given the size of the Company, the number of employees and service providers and the number of labor claims, only those repetitive processes that represent more than 5% (five percent) of all claims filed against the Company on December 31, 2014, described in the table below, namely: joint/subsidiary liability (13%), overtime (9%) additional payment due to unhealthy or risky work environments (7%), fines (6%) and commuting hours (5%).

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Fact and/or legal cause	The more recurring objects are subsidiary/joint liability, overtime, additional payment for hazardous/unhealthy conditions, hours *in itinere* and fines.
[redacted]	
Amount provisioned	R$ 1.0 billion
[redacted]	

(ii) Tax

Fact and/or legal cause	Discussion about the taxable base for the calculation of the Financial Compensation for Exploring Mineral Resources CFEM (for its acronym in Portuguese)
[redacted]	
Amount provisioned (if any)	R$ 302 million.
[redacted]	

Fact and/or legal cause	Collection of State VAT (ICMS) on interstate transfer of ore.
[redacted]	
Amount provisioned (if any)	None.
[redacted]	

Fact and/or legal cause	Collection of ICMS on transportation
[redacted]	
Amount provisioned (if any)	None.

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Company practice or that of subsidiary which caused the contingency	Vale disagrees with the payment of Tax on Goods and Services (ICMS), allegedly due to the State of Minas Gerais, incurring on the transportation of iron ore by Vale itself. Regarding collection of generating facts related to years 2009 and 2010 (R$ 460 million), an annulment claim was filed on January 22, 2015. On January 30, 2015, a preliminary decision was published in favor of the Company. Regarding acts of infringement for collection of generating facts occurring in years 2011 to 2013 (R$ 680 million), impugnation was filed on December 30, 2014 and is currently waiting judgment. In any event, Vale claims that ICMS is not due as there is no provision of service for itself.

(iii) Civil

Fact and/or legal cause	Twelve pension funds claim receipt of purges made because of inflation arising from economic plans called Plano Verão and Plano Collor on amounts paid under contracts for buying and selling gold concluded with Vale from 1988. More specifically, in the Petros case, which is the most significant one in amount terms, Vale was condemned to pay the R$ 346,773,910.20 (item 4.4, table 1, above).
[redacted]	
Amount provisioned (if any)	R$ 640,895.01 related to the ELETROS case.
[redacted]	

4.7 Other significant contingencies

Vale was involved in discussion with Swiss authorities regarding the granting of tax benefits to its Swiss subsidiary, Vale International. The dispute was resolved in December 2012 when Vale International paid the additional federal taxes claimed by the Swiss federal authorities, in four payments in the total amount of CHF 212 million Swiss francs. The first payment of CHF 53.2 million was made in January 2013 and payment of the last installment is expected in 2015.

Vale International s federal and regional tax exemptions were renewed at a rate of 80% through 2015, and are subject to certain conditions related to employment, real estate investment, and collaboration with Swiss universities.

Relevant Conduct Modification Agreements and Terms of Commitment

The Company is a party in the following relevant terms of commitment and conduct modification agreements:

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Cooperation Agreement not resulting from Administrative / Legal Proceeding

Origin: Terms of Engagement signed with the Indigenous Community (TI) Mãe Maria

a) Parties	Vale, Indigenous Association Te Mêmpapytarkate Akrãtikatêjê da Montanha, Jê Jõkrityiti (Akrãkaprekti) Association, Indigenous Association Parkatêjê Amjip Tar Kaxuwa and Indigenous Association Kyikatêjê and Fundação Nacional do Índio (FUNAI), with the Federal Prosecution Office (MPF) at Marabá, acting as intervening party.
[redacted]	
c) Description of the facts that have led to entering this agreement	Based on its social accountability policy, Vale already had entered into Engagement Agreements with the indigenous individuals from the Mãe Maria TI, which expired in 2012. Therefore, due to the influence of the Carajás Railroad (EFC) on this community, Vale decided to continue to send funds to meet the urgent needs of the individuals from this community, making sure that the Indigenous Component study and Basic Environmental Plan (PBA) were conducted, documents that are required for the licensing process to expand the Carajás Railroad, now, with FUNAI, helping communities to manage funds.
[redacted]	
e) Deadline, if any	Many different deadlines due in January 2015, time of conclusion of the Study of Indigenous Component and Basin Environmental Plan (PBA).
[redacted]	
g) Consequences in the event of noncompliance	Failure to comply by indigenous people causes suspension of the transfer of funds and health service. When non-compliance is by Vale, there is risk of indigenous people promoting actions that stop or affect Company or subsidiaries activities, as manifestations that imply stoppage at the EFC, prejudicing railroad operations. Said manifestations by the indigenous people also tend to restrict freedom of access of Vale s teams and hired third parties who run studies inherent to environmental licensing processes and actions related to compliance with conditions, which may be characterized as non-compliance with the environmental licenses granted by the environmental entity, weakening Vale s position, or of its subsidiaries, at the institutional level, with not prejudice to the executive measures to be taken by the MPF, IBAMA, FUNAI, and the other autarchies involved with the protection of indigenous rights.

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2nd Amendment to the Agreement to Promote Sustainable Development, executed with FUNAI and the Krenak People, effective between 2011 and 2019, and this agreement is an amendment to the Agreement that settled Public Civil Action no. 2006.38.13.009676-0

Origin: Agreement that settled the Public Civil Action filed by the MPF and FUNAI against CEMIG Companhia Energética de Minas Gerais, CVRD Companhia Vale do Rio Doce and CHA Consórcio Hidrelétrico Aimorés (Public Civil Action and Agreement , respectively). After termination of the Agreement, on 11/30/2011, the Company voluntarily executed: (i) the Agreement to Promote Sustainable Development of the Indigenous Land of the Krenak (Agreement to Promote), (ii) the First Amendment to the Agreement to Promote and (ii) the Second Amendment to the Agreement to Promote Segundo Aditivo ao Termo de Fomento.

a) Parties	a) **Agreement** - MPF, FUNAI, CEMIG Companhia Energética de Minas Gerais, CVRD Companhia Vale do Rio Doce and CHA Consórcio Hidrelétrico Aimorés; b) **Agreement to promote** Vale, Krenak Indigenous People, FUNAI and MPF; c) **First Amendment to the Agreement to Promote** Vale, Krenak Indigenous People, FUNAI and MPF; d) **Second Amendment to the Agreement to Promote** - Vale, Krenak Indigenous People and FUNAI
[redacted]	[redacted] o
c) Description of the facts that have led to entering this agreement	Approval of the Agreement settled the Public Civil Action filed by the MPF and FUNAI, that aimed the deployment of mitigating and compensation measures arising out of the installation of Usina Hidrelétrica de Aimorés. The purpose of the Agreement was the provision of environmental, social, and economic support, by recovering 54 hectare of green area, construction of 5 cultural centers and deployment of milk cattle project. After termination of the Agreement, voluntarily by the Company, and aiming to maintain the support and the relationship between Vale and the Krenak People, new terms were executed, maintaining the Company assistance to the development of the indigenous people. The contract currently in effect is the Second Amendment to the Agreement to Promote.
[redacted]	[redacted]
e) Deadline, if any	(a) **Agreement** 07/18/2008 to 11/30/2011 executed on 07/18/2008

(b)	**Agreement to Promote**	12/01/2011 to 06/01/2012	executed on 10/24/2011

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	(c) First Amendment to the Agreement to Promote 12/01/2011 to 12/01/2013* - executed on 05/03/2012 **(d) Second Amendment to the Agreement to Promote** 12/01/2011 12/01/2019* - executed on 03/27/2015 * Amendments above alter terms in the original Agreement to Promote, with retroactive effects. This is the reason their respective effective dates are 12/01/2011, date of effectiveness of the Agreement to Promote.
[redacted]	
f) Information about the conduct adopted to comply with the commitments made in the agreement	The Department of Community Relations includes a focal unit that monitors compliance with obligations set forth in the Second Amendment to the Agreement to Promote.
[redacted]	

Agreement of Social and Environmental Commitment FUNAI, Vale, MPF and Tupiniquim People of Terra Indígena Comboios (TI Comboios), executed in August 2014, related to the Subprogram of Social and Environmental Liabilities of the Basic Environmental Plan ((PBA) of the Corrective Operation License (LOC) of Estrada for Ferro Vitória-Minas

Origin: - Agreement of Social and Environmental Commitment related to the Subprogram of Social and Environmental Liabilities of the Basic Environmental Plan (PBA) of LOC for Estrada de Ferro Vitória-Minas

a) Parties	Vale, MPF, FUNAI and the Tupiniquim People of TI Comboios.
[redacted]	
c) Description of the facts that have led to entering this agreement	Based on the Indigenous Component Study, responsible for identifying possible impacts of the EFVM on the TI Comboios, in the Corrective Operation License Process for EFVM, actions were proposed under the Environmental Basic Plan, including the Subprogram of Social and Environmental Liabilities, aiming to provide financial funds to the indigenous people to be used in specific areas: education, health, home, production activity and social projects.
[redacted]	

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e) Deadline, if any	Until full and appropriate destination of the funds, while Company obligation is to transfer R$ 5,000,000.00 (five million reais) in 2 payments, which has been complied with, with no need for additional investments, and only compliance with some conditions by the indigenous people is pending, as their access to the funds is conditioned to approval by the MPF and FUNAI of the project proposal to be presented, to use the funds for the above mentioned specific areas.
[redacted]	
g) Consequences in the event of noncompliance	Failure to comply with the Second Amendment of the Agreement to Promote by indigenous people causes suspension of the transfer of funds. When non-compliance is by Vale, there is risk of indigenous people promoting actions that stop or affect Company or subsidiaries activities, as manifestations that imply stoppage at the EFC, prejudicing railroad operations. Said manifestations by the indigenous people also tend to restrict freedom of access of Vale s teams and hired third parties who run studies inherent to environmental licensing processes and actions related to compliance with conditions, which may be characterized as non-compliance with the environmental licenses granted by the environmental entity, weakening Vale s position, or of its subsidiaries, at the institutional level, with not prejudice to the executive measures to be taken by the MPF, IBAMA, FUNAI, and the other autarchies involved with the protection of indigenous rights.

Legal Agreement

Origin: Proceeding no. 21337.52.2011

h) Parties	Vale, MPF, Palmares Cultural Foundation, National Institute for Colonization and Land Reform, and IBAMA.
[redacted]	
j) Description of the facts that have led to entering this agreement	The MPF has accused Vale, who subsidized the licensing process for the Carajás Railroad expansion project, of lacking the environmental study investigating the diagnostic impact of the expansion on the two *quilombo* communities located in the State of Maranhão.
[redacted]	
l) Deadline, if any	Sparse deadlines, with commitment to be met through the end of the Carajás Railroad expansion project. Among them are: (i) the already made payment of R$ 700,000.00 to the communities to finance the building of social devices in the community and Palmares Foundation; (ii) development of an environmental study already done and the adoption of measures to mitigate the impact of the Company s operations and activities in the region; (iii) building of four overpasses for the communities that are parties in the agreement and with a deadline of construction extending over four years; and (iv)

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	improvement of the current passageways until the overpasses are built in the region. These commitments are underway.
[redacted]	
n) Consequences in the event of noncompliance	The MPF may request that the Company comply with the commitments made, under penalty of a fine determined by a competent federal judge.
[redacted]	

Conduct Modification Agreement (TAC) no. 283/2004

Origin: Preparation Proceeding no. 0203/01 - Regional Labor Public Prosecution Office of the 1st region Rio de Janeiro

a) Parties	Labor Prosecution Office and Vale S.A.
[redacted]	
c) Description of the facts that have led to entering this agreement	Legal obligation to train and hire people with disabilities to meet legal requirements, including regarding the quota set forth in article no. 93 of Law no. 8.212/91
[redacted]	
e) Deadline, if any	The TAC is renewed yearly and it indicates the year s quota for training and hiring.
[redacted]	
g) Consequences in the event of noncompliance	R$1,000.00 per worker that is not trained and hired, within the quota for that particular year
[redacted]	

Environmental Obligation Agreement: TCA at do Pico do Itabirito

Origin: Public Civil Investigation no. 319.02.0001-8 MPMG

a) Parties	Minerações Brasileiras Reunidas S.A. - MBR, Vale S.A., Ministério Público Estadual-MG, Instituto Estadual de Florestas, Secretaria de Estado do Meio Ambiente e Desenvolvimento Sustentável de Minas Gerais, and Anglogold Ashanti Brasil Mineração Ltda.
[redacted]	
c) Description of the facts that	Agreement signed for the enforcement of protection measures

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have led to entering this agreement	to the area known as Pico do Itabirito and archeological site of Cata Branca.
[redacted]	
e) Deadline, if any	Schedule presented to the State Prosecution Office expected conclusion: July 2015.
[redacted]	
g) Consequences in the event of noncompliance	Fine R$2,500.00/day delaying enforcement of the agreed and non-complied with portion.
[redacted]	

4.8 Rules of the country of origin and of the country in which the securities are held in custody

Not applicable to the Company, as it is not a foreign issuer.

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5.1 Description of the main market risks

Considering the nature of the business and operations of the Company, the main factors of market risk to which the company is exposed are:

- exchange rates and interest rates;
- product and inputs prices;

Exchange risk and interest rate

The Company s cash flow is subject to the volatility of several currencies, since its products prices are indexed predominantly on the US dollar while a significant portion of its costs, expenses and investments are indexed in other currencies, in particular in Brazilian real and Canadian dollars. Frequently, Vale uses derivatives, especially swaps and forward operations, attempting to reduce the potential cash flow volatility arising out of this currency difference. Vale also uses swaps to translate part of the debt service costs denominated in reais into US dollars.

The company is also exposed to interest rates on loans and financing. Debts with floating interest rate in US dollars consist mainly of loans that include exportation pre-payment operations and loan from commercial banks and multilateral organizations. Overall, these debts are indexed according to Libor (London Interbank offered Rate) variations. While considering the effect of interest rate volatility onto cash flow, the Company considers possible effect of natural hedge between fluctuations in US interest rates and prices of commodities in the decision making process for financial investments.

On December 31, 2014, 71.7% of Vale s debt was in American dollars (US$), corresponding to R$ 54,014 million, of which R$ 35,350 million were tied to fixed interest rates and R$ 18,664 million were tied to Libor. Another 21.9% of the debt is in Brazilian Real (R$), corresponding to R$ 16,495 million, of which R$ 5,150 million were tied to the IBR Rate, R$ 7,437 million were tied to the TJLP (long term interest rates) and R$ 3,907 million to fixed interest rates and others. The remaining 6.4% of the debt were expressed predominantly in euros ( ), corresponding to R$ 4,848 million, at fixed interest rate.

For more information about risks on exchange and interest rates, see item 4.1 in this Reference Form.

Risk of product and inputs prices

The company is exposed to market risks related to price volatility for commodities and inputs. The Company s main products are: iron ore and pellets, nickel, copper products, fertilizers and coal. The Company s main input are different material and equipment, including tires, transporting belts, parts and components of mining equipment, rail equipment, industrial facilities and workshop maintenance, fuels and gases, and electric power.

For more information on the risk of product prices, see item 4.1 in this Reference Form.

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5.2 Description of the policy for management of market risks

The Company understands that risk management is essential to support its growth plan, strategic planning and financial flexibility. Therefore, Vale has developed its risk management strategy with the objective of providing an integrated view of risks to which it is exposed. To do this, it not only assesses the impact of variables negotiated in the financial market on business results (market risk), but also those arising from a liquidity risks, risks from the obligations assumed by third parties to the Company (credit risk), those inherent to inappropriate and deficient internal processes, personnel, systems or external events (operational risk), and others.

Vale s Board of Directors established a policy of corporate risk management and a Risk Management Executive Committee for purposes of supporting the growth plan, the strategic planning, and continuity of Company businesses, in addition to strengthening the Vale Group s capital structure and asset management, ensuring an appropriate flexibility in financial management, maintaining the necessary level of solidity for the level of investment, as well as strengthening corporate governance practices.

The policies of corporate risk management determine that Vale should measure and monitor its corporate risk in a consolidated manner, for purposes of ensuring that the total level of corporate risk is aligned with guidelines set by the Board of Directors and the Executive Directors.

The Risk Management Executive Committee, created by the Board of Directors, is responsible for supporting the Executive Directors in risk assessment and for issuing opinions related to Company risk management. It is also responsible for supervising and reviewing the principles and instruments used in corporate risk management.

The Executive Directors are responsible for approving the developments of policies in rules, regulations and responsibilities and informing the Board of Directors on such procedures.

Rules and guidelines used in risk management complement the corporate risk management policy and define Company practices, procedures, controls, roles and responsibilities related to risk management.

When needed, the company may allocate specific risk limits to management activities requiring those, including, without limitation, limits on market risk, corporate and sovereign risks, according to acceptable limits to corporate risk.

a. Risks for which protection is sought

Vale is exposed to the behavior of several market risk factors (especially the price of products and input, exchange rates and interest rates) that could impact its cash flow. Assessment of this potential impact, arising out of the volatility of risk factors and its correlations, is performed periodically to support the decision making process, the Company growth strategy, ensuring financial flexibility and monitoring volatility of future cash flows.

Thus, when needed, market risk mitigation strategies are assessed and deployed in line with such goals. Some of these strategies use financial instruments, including derivatives. Portfolios comprised of financial instruments are monthly monitored in a consolidated manner, allowing the follow-up of financial results and their impact on cash flow.

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b. Asset protection strategy (hedge)

In line with Vale risk management policy, commodities-related risk mitigation strategies may also be used to adequate the risk profile and reduce the cash flow volatility. For these mitigation strategies, the company mainly uses forwards, future, or zero-cost collars operations.

In the case of cash flow exchange hedge involving income, costs, expenses and investments, the main risk mitigation strategies are currency and swap operations.

Vale deployed hedge operations to protect its cash flow against market risk from its debts especially exchange risk. Swap operations are used to convert debts in reais and euros into US dollars that mature on similar dates or, in some cases, earlier - than debt final maturity date. Their amounts are similar to the payment of interest and principal, according to market liquidity risks.

Swap operations that mature earlier than debts final maturity are renegotiated through time in order to have matching or close - maturity dates. Therefore, on the settlement date, the swap results will compensate part of the Exchange rate variation on Vale obligations, helping to stabilize the cash flow.

In the case of debt instruments denominated in reais, if there is real (R$) increase (decrease) before the North-American dollar (US$), the negative (positive) impact in Vale s debt service (interest and/or principal payment), in North-American dollars, will be partially offset by the positive (negative) effect from the swap operation, regardless of the US$/R$ Exchange rate on the date of payment. The same reasoning is applicable to debts denominated in other currencies and their respective swap operations.

c. Instruments used for asset protection (hedge)

Protection programs and hedge programs employed by Vale, and their objectives include:

- Protection program of loans and financing in reais, indexed to CDI: In order to reduce the volatility of the cash flow, swap transactions have been made in order to convert the cash flow of debt, indexed to the CDI to U.S. dollars, in loans and financing contracts. In these operations, Vale pays fixed and / or floating rates (Libor) in U.S. dollars and receives remuneration linked to the CDI.

- Protection program of loans and financing in reais, indexed to TJLP: In order to reduce the volatility of the cash flow, swap transactions have been made in order to convert the cash flow of debt indexed to the TJLP to U.S. dollars, in loans and financing contracts with BNDES. In these operations, Vale pays fixed and/or floating rates (Libor) in U.S. dollars and receives remuneration linked to the TJLP.

- Protection program of loans and financing in reais with fixed rates: In order to reduce the volatility of the cash flow, swap transactions have been made in order to convert the cash flow of debt denominated in reais at fixed rate to US dollars in loans contracts with BNDES. In these operations, Vale pays fixed rates in U.S. dollars and receives fixed rates in reais.

- Protection program of loans and financing in reais, indexed to the IPCA. In order to reduce the volatility of the cash flow, swap transactions have been made in order to convert the cash flow of debt indexed to the IPCA to U.S. dollars, in debenture agreements indexed to the IPCA issued by Vale in 2014, with total issuing value of R$ 1 billion. In these operations, Vale pays fixed rates in U.S. dollars and receives remuneration linked to the IPCA.

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• Protection Program for loans and financing in Euros: In order to reduce the volatility of the cost of debt in US dollars, swap transactions were made to convert the cash flow of debts in euros for U.S. dollars. These operations were used to convert the flow of part of the debts in euros, with nominal value of up to 750 million each, issued in 2010 and 2012 by Vale. In these operations, Vale receives fixed rates in Euros and pays compensation linked to fixed floating rates in US dollars.

On December 31, 2014, the amount of the principal and of the debt s interest rate in Brazilian real converted through swaps in US dollars was R$ 13,817.6 million (US$ 5,202.0 million) and the amount of the principal and of the debt s interest rate in Euros converted through swaps into US dollars was 1,000 million (US$ 1,895.5 million). The average cost of these operations was 2.92% per year after the swapping. Due to the market s liquidity conditions, the average term of swap operations may be lower than the debt s average term.

• Exchange hedge program for disbursements in Canadian dollars: In order to reduce the volatility of cash flow, forward operations were made to mitigate the exchange exposure arising out of the unmatched currencies in US dollars revenue and Canadian dollars disbursements.

• Protection program for nickel operations: The objective of this program is to reduce the volatility of cash flows, and eliminate the decoupling between the pricing of the nickel purchase (concentrated, cathode, sinter, and other types) and the resale period of the processed product The products purchased are raw material used in the process of production of refined nickel. In this case, operations usually made are the selling of nickel for future liquidation either in the Stock Market (LME) or over-the-counter.

• Sales program for nickel at a fixed price: aiming to maintain its exposure to fluctuations in the price of nickel, it has been carried out derivative transactions to convert to a floating-price basis commercial nickel contracts with those clients seeking to fix the price. The operations are intended to ensure that prices for these sales are equivalent to the average price of the London Metal Exchange (LME) upon physical delivery to the customer. Typically, operations made within this program are purchases of nickel for future liquidation, either in the Stock Market (LME) or over-the-counter. These operations are reverted before the original maturity date in order to match with the dates of liquidation of the commercial contracts that had a fixed price.

• Protection program for selling of copper scrap: Hedge operations were made in order to reduce the volatility of the cash flow and eliminate the mismatching between the pricing period of the purchase of copper scrap. Copper scrap bought is combined with other inputs in order to manufacture copper for final customers. In this case, operations usually made are sales for future liquidation either in the Stock Market (LME) or over-the-counter.

• Hedge Program for purchase of fuel oil - Bunker Oil: In order to reduce the impact of fluctuations in the price of fuel oil (Bunker Oil) when procuring freight, and hence reduce the volatility of Company s cash flow, hedge operations were carried out. The operations are usually made by the contracting of future purchases.

Hedge Accounting

According to the Accounting for Derivative Financial Instruments and Hedging Activities pronouncement, all derivatives, assigned in hedge relations or not, are recorded in the balance sheet at fair value and gains and losses in fair value are recorded in the current result, unless when qualified as hedge accounting. A derivative should be assigned in hedge to be qualified as hedge accounting. These rules include determining which portions of hedge are deemed to be effective or non-effective. In general, a hedge relation is effective when a change in fair value is compensated by an equal and contrary change in the fair value of the hedged item. According to these rules, effectiveness tests are run to evaluate the effectiveness and quantify the non-effectiveness of the hedges.

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A cash flow hedge is a protection against the exposure to volatility in the expected future cash flow, attributable to a specific risk, as a future purchase or sale. If a derivative is designated as cash flow hedge, the effective portion in the changes of derivative fair value is recorded in other comprehensive income, and recognized in the result when the hedged item affects the period result. The non-effective portion of the changes in derivative fair value designated as hedge is recorded in result. If a portion of the derivative contract is excluded for effectiveness test purposes (for instance the value in time), the value of such excluded portion is included in the result.

d. Parameters used for managing those risks

The parameters used to check the qualification or disqualification of the Company s exposure are:

(i) verification of execution of the programs mentioned in 5.2(c) above;

(ii) analysis and constant monitoring of the contracted volumes, and

(iii) adjustment to the adequacy of maturity dates, taking into account their corresponding protection or hedge strategies, guaranteeing the framing of Vale s exposures. The failure to match exposure and protection strategies may occur if:

a. the protection volume S.A.mounts are higher than the respective exposure volume S.A.mounts;

b. the exposure that is protected ends; or

c. the maturity dates of protection strategies and the respective exposures no longer match.

To avoid potential non-matching due to item (iii.a) above, the criterion adopted is periodic follow up of volume S.A.mounts to be realized used as basis to propose strategy proposals. In the case of protection of input prices, for instance, if consumption updated estimates point to a decrease in volumes compared to initial estimates used to propose protection strategies, protection strategy volumes will be adjusted accordingly.

To avoid potential non-matching due to item (iii.b) above, if during periodic follow up the initial exposure fails to be realized, the protection strategy ends immediately (unwind position).

To avoid potential non-matching due to item (iii.c) above, the company constantly checks the alignment between protection strategies and the initially estimate exposure maturity.

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e. If the Company uses various financial instruments with various objectives for asset protection (hedge) and what these goals are

When needed, the company may allocate specific risk limits to management activities requiring those, including, without limitation, limits on market risk, corporate and sovereign risks, according to acceptable limits to corporate risk.

- Sale of Vale s future gold production (byproduct): Vale Switzerland S.A. concluded, after approval by the Board of Directors, final contracts with Silver Wheaton Corp. (SLW), a Canadian company with shares negotiated in the Toronto Stock Exchange and New York Stock exchange, to sell 70% of the payable gold flow produced as a byproduct in certain nickel mines in Sudbury for 20 years, and with Silver Wheaton (Caymans) Ltd. to sell 25% of the payable gold flow produced as a byproduct in the Salobo copper mine for the longevity of the mine. In addition to the original payment of US$ 1.9 billion in cash, Vale Switzerland received 10 million SLW warrants at a strike price of US$ 65.00 for 10 years, and this portion is an American buy-out option. Additionally, Vale will receive cash payments in the future for every ounce (oz.) of gold delivered to SLW as per the agreement, at the lowest value between US$ 400 per ounce (plus an annual adjustment for the 1% inflation starting in 2016 in the Salobo case) and the market price. The transaction releases a considerable amount contained in the Vale s world class base metal assets, to the extent that it attributes to the payable gold flow produced as a byproduct of Salobo the amount of US$ 5.32 billion, in addition to the payment of US$ 400 per ounce of gold delivered, given that there will be no additional expenses for extracting the gold found in the copper concentrate produced in Salobo.

Additionally, on March 2, 2015, Vale entered into a contractual amendment with Silver Wheaton (Caymans) Ltd., wholly-owned subsidiary, for purposes of selling an additional 25% flow of payable gold, produced as byproduct of the copper mining at the Salobo mine, during the mine s use life. Vale will receive an initial payment in cash of US$ 900 million and future payments in cash, per ounce (oz) of gold provided to Silver Wheaton based on the lower value between US$ 400 per ounce and the market price, and this value will be updated annually at 1% starting in 2017. Vale may also receive an additional payment in cash, depending on its decision to expand the capacity to process the copper mining at the Salobo mine to over 28 Mtpa prior to 2036. This additional amount may vary between US$ 88 million and US$ 720 million, depending on the time and size of the expansion.

- Position in embedded derivatives: Vale s cash flow is also vulnerable to several market risks associated with contracts that contain embedded derivatives or that work as derivatives. From Vale s perspectives, these include, but are not limited to, commercial contracts, purchase agreements, lease agreements, bonds, insurance policies and loans. The embedded derivatives observed on December 31, 2014 were the following: 1) Purchase of intermediate products and raw materials. Purchase agreements for raw materials and nickel concentrate that contain price provisions based on the future price of copper and nickel. These provisions are considered embedded derivatives. 2) Gas purchase for the pelleting company in Oman. The *Companhia de Pelotização Vale Omã* (LLC), a Vale subsidiary, has a natural gas purchase agreement with a clause establishing an award that may be paid if the sale price for Vale s pellet is greater than a specific price pre-determined in the gas supply contract. This clause is considered an embedded derivative.

f. Organizational structure for risk management control

The Executive Board for Risk Management, created by the Board of Directors, is the main body in the risk management structure, being responsible for supporting the Executive Board in risk assessment and for issuing opinions on the risk management at Vale Group. It is also responsible for monitoring and managing corporate risks, as well as supervising and reviewing the main corporate risk management principles and instruments, in addition to periodically reporting to Vale Executive Directors on the main risks and respective exposures. For more information about the members of Vale s Executive Board for Risk Management, see item 12.7 in this Reference Form.

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The financial committee is responsible for issuing opinions on Vale corporate risk policies. The Board of Directors is responsible for approving such policies.

The Executive Board is responsible for approving policy developments into rules, regulations and responsibilities and for notifying the Board of Directors on such procedures.

Risk management guidelines and instructions complement the corporate risk management policy and define practices, processes, controls, roles and responsibilities in the Company regarding risk management.

In Vale, the area formally responsible for risk management is the Treasury and Financial Department, and includes the Insurance and Market and Credit Risk Management, Operational Risk Management, and Insurance. Depending on the type of risk, management is centralized or decentralized. Several other departments act jointly in the integrated risk management process.

The recommendation and implementation of derivative-related financial operations are carried out by independent areas. It is the responsibility of the area of risk management to define and propose to the Executive Board for Risk Management operations or measures to mitigate market risk consistent with Vale s strategy. It is the responsibility of the financial area to carry out the transactions involving derivative contracts. The independence between areas ensures effective control over these operations.

g. Adequacy of the operational structure and internal controls to verify the effectiveness of the policy adopted

In case of market risks, the monitoring and periodic assessment of Vale s consolidated position of financial instruments used to mitigate market risks allow it to keep pace with the financial results and the impact on cash flow and ensure that the goals originally outlined are met. The fair value calculation of the positions is made available monthly for management monitoring.

Several areas act as *compliance* in the process of risk management: the back-office, part of the General Board of Financial, is responsible for confirming the financial characteristics of transactions as well as the counter-parties with which the operations were performed, report the fair value of the positions. This area also assesses whether the operations were performed according to internal approval given. As well as this area, the area of internal controls, acts to verify the integrity of the controls that mitigate risks in the contracted transactions within the above mentioned governance criteria.

In case of other risks, additionally to the risk management area, there are several other areas responsible for risk management.

Additionally, internal audit also participates in the compliance process with regulations.

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5.3 Significant changes in key market risks

There were not significant changes in the main market risks during the period.

5.4 Other relevant information

In line with the integrated view of risks exposure, Vale considers in risk management, additionally to market risk management, liquidity risk, the risk from the obligations assumed by third parties to the Company (credit risk), those inherent to inappropriate and deficient internal processes, personnel, systems or external events (operational risk), and others.

Credit Risk of Counterparties

Vale s credit risk of counterparties arises from potential negative impacts in its cash flow due to uncertainty in the ability of having counterparts meet their contractual obligations, forward sales, transaction with derivatives, warrants, advancement payments to suppliers, and cash investments. To manage that risk, Vale has procedures and processes, such as approval and credit limits control, obligatory exposure diversification through several counterparts and monitoring the portfolio s credit risk, which provide a structure to evaluate and manage the credit risk of counterparties and maintain the risk above the acceptable levels.

Vale s counterparts may be divided into three categories: clients, responsible for obligations represented by receivables related to sales in installments; financial institutions with whom Vale maintains its cash investments or acquires transactions with derivatives; and suppliers of equipment, products and services, in case of anticipated payments.

Regarding credit risk, the company adopts the following management standards:

Credit Risk Assessment for commercial operations (sales to customers)

For the commercial credit risk, which arises from sales of products and services to final customers, the Risk Management Department, according to current powers, approves or requests the approval of credit risk limits for each counterpart. Besides that, the Executive Board annually sets global commercial credit risk limits for client portfolio.

Vale attributes an internal credit risk classification and a credit limit for each client based on a credit risk assessment quantitative method, using three main information sources: i) the expected default frequency (*Expected Default Frequency* or EDF) found by the KMV model (Moody s); ii) credit ratings attributed by the main international rating agencies; and iii) client s financial statements to make an economic-financial analysis based on financial indicators. This methodology is based on market prices, external credit classifications and financial information of the counterparty, as well as qualitative information regarding the strategic position and history of the counterparties commercial relationship.

Whenever deemed appropriate, the quantitative credit analysis is complemented by a qualitative analysis which takes into consideration the payment history of that counterpart, the time of relationship with Vale and the strategic position of the counterpart in its economic sector, and other factors.

Depending on the counterpart s credit risk or the consolidated credit risk profile of Vale, risk mitigation strategies are used to minimize the Company credit risk in order to achieve the acceptable risk limit approved by the Executive Board. The main credit risk mitigation strategies include discount from non-collateralized receivables, insurance contracts, mortgage, credit letter and corporate and bank collaterals.

Vale has a well-diversified accounts receivable portfolio from a geographical standpoint, China, Europe, Brazil and Japan being the regions with more significant exposures. According to each region, different guarantees can be used to enhance the credit quality of the receivables.

The Company controls its account receivables portfolio through Credit Management and Cash Collection committees, in which representatives from risk management, cash collection and commercial departments periodically monitor each counterpart position. Additionally, Vale maintains credit risk systemic controls that block additional sales to counterparts with past due receivables or exposures that exceed approved limits.

The Credit and Collection Management Committees are internal committees of the Company, that were not established by the Board of Directors or the Company By-Laws, and which purpose is not the deliberation or consultation of Vale s managing bodies.

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Credit Risk Assessment for treasury operations (cash flow investments and derivative operations)

The control of the exposure from cash investments and derivatives instruments is done through the following procedures: annual approval by the Executive Board on credit limits by counterpart, control of portfolio diversification, counterparts spread variations and overall credit risk of treasury portfolio. There is also a monitoring of all positions, control of exposure versus limits, and periodical reporting to the Executive Board for Risk Management.

The calculation of exposure to a specific counterpart that has derivative transactions with Vale, we consider the sum of exposures of each derivative acquired with this counterpart. The exposure for each derivative is defined as the future value calculated by the due date, considering a variation of market risk factors affecting the value of the derivative instrument.

Vale also uses a risk assessment classification to evaluate the counterparts in treasury operations, following a method similar to that used for commercial credit risk management, for purposes of calculating the possibility of counterpart default.

According to the type of counterpart, different variables are used: i) the expected default frequency from the Expected Default Frequency (EDF) from Moddy s Investors Service model; ii) credit spreads found in CDS (*Credit Default Swaps*) or in the Bond Market; iii) credit ratings attributed by the main international rating agencies; and iii) client s financial statements to make an economic-financial analysis based on financial indicators.

Liquidity Risk

The liquidity risk arises from the possibility that Vale might not perform its obligations on due dates, as well as face difficulties to meet its cash flow requirements due to market liquidity constraints.

To mitigate such risk, Vale has a revolving credit facility to help manage short term liquidity and to enable more efficiency in cash management, being consistent with the strategic focus on cost of capital reduction. The revolving credit lines available were acquired from a syndicate of several global commercial banks

Credit Risk

Vale s credit risk, seen as Vale s ability to obtain credit in the market, may be indicated through public evaluations by rating agencies Moody s, Standard and Poor s, Fitch and DBRS.

Vale rigorously accompanies the main indicators that support the credit rating presented by these agencies and, in its financial strategy, aims to adjust its decisions in order to present performance within limits indicated in the methodologies of these agencies, aiming to maintain its investment degree.

Capital Management

The Company s capital management policy aims to find a structure that ensures the continuity of its businesses in the long term. In this view, the Company has been able to generate value to its shareholders, through the payment of dividends and capital gains, while it maintains an appropriate debt profile applicable to its activities, with average amortization term of 9.1 years, thus avoiding concentration in one specific period.

Operational Risk

Operational risk management is the structured approach Vale uses to manage the uncertainties related to the eventual deficiency or default in internal processes, personnel, systems, and external events, in compliance with the ISO 31000 s principles and guidelines.

The main operational risks are monitored periodically, securing the effectiveness of current key controls in of prevention/mitigation and the execution of risk treatment strategy (establishment of new controls and action plans, changes in environmental risk, transfer of part of the risk by acquiring insurance, etc.).

Therefore, it is Vale policy to maintain a clear perspective of the main risks, allocating capital to approach them systematically and efficiently way.

Insurance

Vale acquires several types of insurance policies, including: operational risk insurance, engineering (project) insurance, credit risk insurance, liability, life insurance for employees, etc. The coverage of these policies, similar to those used in general in the mining industry, are acquired according to company s defined goals, the corporate risk management practices and limitations imposed by the global insurance and reinsurance markets.

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Insurance management is done with the support of insurance management committees existing in different operational areas of the Company. Management instruments used by Vale include captive reinsurers that allow for the retention of part of the risk, acquiring insurances on competitive basis, as well as direct access to the main insurance and reinsurance international markets.

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6.1/6.2/6.4 Establishment of the Company. Company Lifetime and Date of Filing with CVM

Date of Establishment of Issuer	01.11.1943
Legal Form of the Issuer	Mixed economy Company
Country of Establishment	Brazil
Company Lifetime	Company lifetime Undetermined
Date of Filing with CVM	01.02.1970

6.3 Brief History

Vale was initially founded by the Brazilian Federal Government (Government of Brazil) on June 1, 1942, through Decree-Law No. 4352, and definitively on January 11, 1943, by the Assembly for the Definitive Constitution of the Companhia Vale do Rio Doce S.A., in the form of mixed economy company, aiming to mine, trade, transport and export iron ore from the Itabira mines, and run the Vitória-Minas Railroad (EFVM), which carried iron ore and agricultural products from Vale do Rio Doce, in south-eastern Brazil, to the port of Victoria, located in Espírito Santo.

The privatization process was initiated by the Company in 1997. Under Privatization Decree PND-A-01/97/VALE and the Resolution of the National Privatization Council - CND paragraph 2, of March 5, 1997, the Extraordinary General Assembly approved on April 18, 1997 the issue of 388,559,056 participatory non-convertible debentures, with a view to guaranteeing its pre-privatization shareholders, including the Federal Government itself, the right to participation in revenues from Vale s and its subsidiaries mineral deposits, which were not valued for purposes of fixing the minimum price in the auction for the privatization of Vale. The Participatory Debentures were allocated to the shareholders of Vale in payment of the redemption value of preferred class B shares issued as bonus, in the proportion of one share owned by holders of class A common and preferred shares at the time, through the part capitalization of Vale s revenue reserves. The Participatory Debentures could only be traded with prior authorization of CVM, as of three months from the end of Secondary Public Offering of Shares under the privatization process.

On May 6, 1997 the privatization auction was held, when the Brazilian government sold 104,318,070 Vale common shares, equivalent to 41.73% of the voting capital for Valepar SA (Valepar), for approximately R$ 3.3 billion.

Later, under the terms of the Bid, the Brazilian government sold another 11,120,919 shares representing approximately 4.5% of the outstanding common shares and 8,744,308 class A preferred shares, representing 6.3% of class A shares in circulation, through a limited offer to the employees of Vale.

On March 20, 2002 a Secondary Public Offering of Shares issued by Vale was held, in which the Brazilian Government and the National Bank for Economic and Social Development (BNDES) each sold 34,255,582 Vale common shares. The demand by investors in Brazil and abroad was substantial, exceeding supply by about three times, which led to the sale of the entire batch of 68,511,164 shares. A portion of about 50.2% was posted in the Brazilian market and the remainder was sold to foreign investors. Later, on October 4, 2002, the proper certification of the Participatory Debentures was obtained from CVM, the Securities Commission, allowing their trading on the secondary market.

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Vale in 1997

Vale in 2014

The following describes the most significant historical events in the history of the Company since its incorporation:

1942

• President Getulio Vargas, by Decree-Law nº 4352 of June 1, 1942, sets out the basis on which

Companhia Vale do Rio Doce SA would be organized. By Decree-Law, the Brazilian Company for Mining and Metallurgy and Mining Company Itabira would be expropriated.

1943

• Vale is constituted on January 11, 1943, as mixed economy Company, pursuant to Decree-Law nº 4.352/42.

• Listing of Vale shares on the Rio de Janeiro Stock Market (BVRJ) in October 1943.

1944

• First business with Vale shares on the BVRJ occurred in March 1944.

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1952

• The Brazilian Government takes definitive control of Vale s operational system.

1953

• First shipment of iron ore to Japan.

1954

• It revises its business practices abroad, and proceeds to directly contact steel mills, without the intermediation of traders.

1962

• Signed long-term contracts with Japanese and German steel mills.

1964

• Opening of Vale s first office outside of Brazil in Dusseldorf, Germany.

1966

• Opening of the Port of Tubarão, in Vitória, in Espírito Santo. This is connected to the iron ore mines by the Vitoria to Minas Railroad.

1967

• Geologists of the Southern Mining Co., a subsidiary of United States Steel Corp. (U.S. Steel), record the occurrence of iron ore in Carajás, Pará State.

1968

• Vale shares become part of the IBOVESPA index.

1969

• Inauguration of Vale s first Pellet Plant in Tubarão, in Espírito Santo, with capacity for 2 million tons/year.

1970

• Agreement makes Vale the majority shareholder of the Carajas venture in Para State, along with U.S. Steel.

1972

• Vale signs agreement with Alcan Aluminum Ltd. of Canada for a project to mine bauxite in Rio Trombetas, where Mineração Rio do Norte (MRN) was set up.

1974

• Vale becomes the largest exporter of iron ore in the world, with 16% of seaborne iron ore market.

1975

• For the first time, Vale issues bonds in the international market, worth 70 million marks, with the intermediation of Dresdner Bank.

1976

• Decree No. 77.608/76 grants Vale the concession to construct, use and operate the railroad between Carajás and São Luís, in Pará and Maranhão states, respectively.

1977

• Vale announces priority for the Carajas Project, in order, from 1982, to start the export of iron ore through the Port of Itaqui (MA).

1979

• Beginning of the effective implementation of the Carajás Iron Ore Project, adopted as the main goal of Vale s business strategy.

1980

• Federal Government approves the Carajas Iron Project and gives financial backing.

1982

• With the start of Valesul Aluminio SA operations in Rio de Janeiro, Vale joins the aluminum sector and helps to reduce imports of the metal into Brazil.

1984

• Inauguration of Vale office in Japan.

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1985

• On February 28, the Carajás railroad (EFC) is inaugurated and handed over to Vale.

• Inauguration of the Carajás Iron Ore Project, which increases the productive capacity of the company, now organized in two separate logistic systems (North and South).

1986

• Start of operation of the Port Terminal of Ponta da Madeira, in São Luís in the State of Maranhao.

1987

• The EFC begins operating on a commercial scale.

1989

• Implementation of the Profit Sharing Program (PR) for Vale employees.

1994

• In March, Vale launches its program for American Depositary Receipts (ADR) Level 1, negotiable on the OTC market of the United States.

1995

• Vale is included in the National Privatization Program by Decree No. 1510 of June 1, signed by the President.

1996

• On October 10, the National Privatization Council (CND) approves the model for privatization of Vale.

1997

• BNDES releases on March 6, the terms of the bidding for the privatization of VALE.

• On April 18, Vale issues 388,559,056 Participatory Debentures that can only be traded with prior authorization of the CVM, as of three months from the end of Secondary Public Offering of Shares under the terms of the privatization process.

• On May 6, Vale is privatized in an auction held at the Stock Exchange of Rio de Janeiro. Valecom consortium, put together by the Votorantim Group, and the Brazil Consortium, led by Companhia Siderurgica Nacional (CSN) took part in the auction. The Brazil Consortium buys 41.73% of common shares of VALE for US$ 3,338 million at present-day values.

1998

• In the first year after privatization, Vale reaches 46% growth in profit over 1997.

1999

• It has the largest profit in its history so far: US$ 1.251 billion.

2000

• On February 2, Vale opened the Container Terminal of the Port of Sepetiba.

• In May, Vale acquires Mineração Socoimex S.A. and S.A. Mineração da Trindade (Samitri), companies producing iron ore, initiating the consolidation of the market for Brazilian iron ore.

• On June 20, Vale announced the listing of its American Depositary Receipts (ADRs), representing preferred shares of the Company on the New York Stock Exchange (NYSE) in a DR Level II program approved by the CVM.

• On August 31, the Extraordinary General Meeting approves the merger of a wholly owned subsidiary Mineração Socoimex S.A, without issuing new shares, aiming to add to the assets of the Company the Gongo Soco mine, with reserves of high-grade hematite in the iron quadrangle in Minas Gerais.

2001

• In February, the Board of Directors of Vale authorizes the start of the process of divesting its holdings in the sector of pulp and paper.

• On February 19, the shares of S.A. Mineração da Trindade (Samitri) are incorporated by Vale, with no increase of capital and without issuing new shares, by using shares held in treasury, as authorized by the CVM.

• In March, shareholdings involving Vale and CSN are unwound.

• In April, Vale acquires 100% shareholding in Ferteco Mining SA, the third largest producer of iron ore in Brazil at the time.

• On October 1, the General Assembly of Shareholders approves the incorporation of wholly owned subsidiary S.A. Mineração da Trindade (Samitri), in line with guidelines for administrative and financial streamlining.

2002

• In March, the pellet plant in Sao Luis, in Maranhão state, is officially opened.

• On March 21, the comprehensive sale offer of 68,511,164 Vale common shares owned by the Brazilian Government and BNDES is concluded, of which approximately 50.2% was placed in the Brazilian market and the remainder sold to outside investors. The selling price in Brazil was R$ 57.28 per share and abroad US$ 24.50 per ADR.

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• Vale common shares start to be traded on the NYSE in the form of ADRs, in program level III.

• The Company s common shares also start to be traded on the Madrid Stock Exchange - Latibex.

• The foundation stone of the Sossego Copper Project, State of Pará, is laid.

• On October 4, VALE obtains from the CVM the registration of Publicly Traded Participatory Debentures.

• On December 16, the General Assembly of Shareholders approves Vale s Dividend Policy in order to increase both transparency and financial flexibility, taking into account the expected path of the Company s cash flow.

• On December 27, the Extraordinary General Meeting approves the Amendment to the Bylaws in order to (i) expand the Company s activities in energy and logistics, (ii) adjust the Statutes to the new rules introduced by Law No. 10303 of October 31, 2001 and (iii) introduce the principles of best corporate governance practices.

2003

• On February 14, Vale completes the acquisition of 100% stake in Elkem Rana AS (Rana), a Norwegian producer of ferroalloys, for the price of US$ 17.6 million.

• On March 31, Vale acquires 50% stake in Caemi Mineracao e Metalurgia S.A. (Caemi) for US$ 426.4 million.

• On August 29, Vale incorporates the wholly owned subsidiaries Celmar S.A. - Indústria de Celulose e Papel S.A. and Ferteco Mineração S.A.

• On November 7, Vale completes the restructuring of shareholdings in logistics companies, which was aimed at the elimination of the relationship between Vale and CSN in the shareholding structure of the Ferrovia Centro-Atlantica SA (FCA), Companhia Ferroviária do Nordeste (CFN) and CSN Aceros S.A. (CSN Aceros).

• On December 12, Vale adheres to Level 1 of the Program for Differentiated Corporate Governance Practices established by the BM&F Bovespa Exchange.

• Continuing the process of simplifying its operating structure, on December 30, Vale incorporates the following wholly owned subsidiaries: Rio Doce Geologia e Mineração S.A. Docegeo (Docegeo), Mineração Serra do Sossego S.A. (MSS), Vale do Rio Doce Alumínio S.A. Aluvale (Aluvale) and Mineração Vera Cruz S.A. (MVC).

2004

• On July 02, the Sossego mine, the first copper mine in Brazil, opens in the State of Pará. This project was completed in record time.

• In November, Vale wins an international bidding for coal mining in the Moatize region of northern Mozambique.

• In December, Vale signs a memorandum of understanding with ThyssenKrupp Stahl AG (ThyssenKrupp) for the construction of an integrated steel slab plant with a capacity of 5 million tons in the State of Rio de Janeiro.

2005

• Vale is the first Brazilian company to achieve a risk score greater than the host country and the only one to have this recognition for three different rating agencies: reaching, thus, Investment Grade , given by Moody s, and confirmed by Standard & Poor s and Dominion Bond.

• In July, Vale Belvedere Pty Ltd. signs an agreement with two Australian mining companies to carry out studies to exploit the Belvedere Underground Coal Project, located in the State of Queensland, Australia.

• On September 22, it launches *Vale Investir*, a program that allows investors to automatically reinvest Brazilian funds from shareholders payments - dividends and/or interest on capital - to buy shares of the Company.

• In November, Vale agrees to acquire a minority stake in Ceara Steel, a steel slab project aimed at exporting from the State of Ceará, with a nominal capacity of 1.5 million tons of slabs per year.

• The Company consolidates its entry into the copper concentrate industry, with the first full year of operation of the Sossego Mine and sales to 13 customers in 11 different countries.

• In the last quarter of 2005, Vale acquires 99.2% of Canico Resources Corp. (Canico), which owns the lateritic nickel project Onça Puma, located in Para State, for approximately US$ 800 million.

2006

• In January, Vale acquires mineral resources, land and mining equipment from the Rio Verde Mineração (Rio Verde) for US$ 47 million.

• In February, the acquisition of all shares of Canico is completed, these being removed from trading on the Toronto Stock Exchange.

• In March, it inaugurated the expansion of production capacity is inaugurated of alumina refinery Alunorte - Alumina do Norte do Brazil S.A. (Alunorte), located in Barcarena in the State of Pará.

• On May 3, Vale completes incorporation of shares of Caemi, now holding 100% of the shares.

• On July 3, Vale buys 45.5% stake in Valesul Aluminio S.A. and now owns 100% of the shares.

• On August 11, the Company announces that it intends to offer to acquire all common shares of Inco Limited (Toronto Stock Exchange - TSX and New York Stock Exchange - NYSE under the symbol N) (Inco). The offer is consistent with long-term corporate strategy and strategy for the non-ferrous metals business of Vale.

• In the third quarter, Vale divides the administration of former Southern System for production and distribution of iron ore into two departments: the South-eastern System and the Southern System, and began to report production separately for each system.

• In September, Mineracoes BR Holdings GmbH buys 25% stake in a joint venture, Zhuhai YPM, to build a new pellet plant in Zhuhai, in the region of Guandong, China.

• On October 5, Vale opens the Brucutu Project, the largest mine/plant complex in the world for initial production capacity of iron ore, located in São Gonçalo do Rio Abaixo in Minas Gerais.

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• On October 26, Vale concludes the financial settlement of a major part of the acquisition of Canadian miner Inco Ltd., the second largest nickel producer in the world, effecting payment of US$ 13.3 billion for the purchase of 174,623,019 shares issued by Inco. On November 6, Vale joins the control group of Usinas Siderúrgicas de Minas Gerais S.A. - Usiminas.

2007

• In January, Vale completed the expansion of iron ore production capacity in Carajás, which now reaches 100 million tons per year.

• On January 30, the acquisition of Inco (now Vale Canada Limited) is ratified at Vale Extraordinary General Meeting. The nickel business is now managed from Toronto as well as activities related to marketing and sales of metals. With the completion of its acquisition of Inco, Vale becomes the second largest mining and metals company in the world by market value.

• On February 16, Vale announces secondary public offering of shares of Log-In Logistica Intermodal SA (Log In).

• On February 26, Vale signs a sale and purchase agreement to acquire the Australian AMCI Holdings Australia Pty Ltd. (AMCI), which operates and controls coal assets through holdings in joint ventures.

• In March, Vale acquires an 18% stake in Ferro-Gusa Carajás S.A. (FGC), which belonged to Nucor do Brasil S.A for 20 million dollars, and now holds a 100% stake in FGC.

• In May, Vale signs a usufruct contract, and now controls the entire capital of the MBR, for the following 30 years.

• On May 2, Vale signs a freight contract for 25 years with Bergesen Worldwide (B.W. Bulk), which provides for the construction of the four largest bulk carriers in the world, each with a capacity of 388 thousand tons.

• On June 28, the Government of Mozambique approved the mining contract for the operation, by Vale, of the Moatize coal project in the province of Tete in the northwest of the country.

• On August 30, shareholders meeting at an Extraordinary General Meeting, ratify the acquisition of control of AMCI by the Company.

• On November 29, Vale begins to use the brand Vale in all countries where it operates and at the same time takes on a new global identity.

• On December 21, Vale signs an agreement for commercial exploitation for 30 years of 720 km of the Norte-Sul Railroad (FNS).

2008

• In the first half of 2008, Vale launches operations to increase capacity in the production of pellets in Samarco, a (50% -50%) joint venture with BHP Billiton in the Brazilian State of Espírito Santo.

• Vale leases three pellet plants in the Tubarão complex, in Vitória, State of Espírito Santo, owned by the JV s in which it participates (Itabrasco, Kobrasco and Nibrasco).

• On May 5, Vale signs a sale and purchase agreement to acquire the mining and surface rights in the municipalities of Rio Acima and Caeté, State of Minas Gerais.

• In July, Vale makes a global offering of 256,926,766 ordinary shares and 189,063,218 preferred shares, including ADSs, in order to promote investment and strategic acquisitions as well as maximizing the financial flexibility of the Company. The aggregate value of Vale s global offer, after underwriting discounts and commissions, including the values of the exercise of further stock options, was US$ 12.2 billion. In August, exercising the option of complementary lot, Vale issues 24,660,419 class A preferred shares.

• In connection with the offer above, Vale lists and trades its common and preferred ADSs on Euronext Paris.

• On August 3, Vale orders the building of 12 large ships for carrying iron ore, buys used vessels and signs long term freight contracts. The total investment was US$ 1.6 billion for the construction of new ships and US$ 74 million for the purchase of used ships.

• On August 14, Vale announces its intention to invest in building a new steel plant in Marabá in Para State, with an annual production capacity of 2.5 million metric tons of semi-finished steel.

• On October 31, Vale announces a reduction in its rate of production of iron ore, pellets, nickel, manganese, ferro-alloys, aluminum and kaolin, in the face of the impact of global economic crisis on the demand for minerals and metals.

• On December 16, Vale signs with African Rainbow Minerals Limited (ARM) and its subsidiary TEAL Exploration & Mining Incorporated (TEAL) a contract providing for the acquisition of 50% of the capital of a joint venture to hold TEAL subsidiaries for CAD $ 81 million, therefore increasing the strategic options for Vale to grow in the copper business in Africa.

• On December 23, Vale signs a sale and purchase agreement to acquire 100% of the coal exporting assets of Cementos Argos SA (Argos) in Colombia for US$ 306 million.

2009

• On January 30, Vale signs with Rio Tinto plc (Rio Tinto) a sale and purchase agreement for the acquisition, through cash payment, of iron ore and potash assets, located in Brazil, Argentina and Canada.

• On March 24, Vale completes the previously announced transaction, and creates a 50%-50% joint venture with ARM for future development and operation of the assets of TEAL, expanding in December 2008 the strategic options for growth in the copper business in Africa.

• On March 27, Vale initiates the construction of the Moatize project, in Tete province, Mozambique.

• On April 1, the Company concluded the acquisition of the assets of export thermal coal with Argos in Colombia.

• On April 16, Vale completes the sale of all of its 14,869,368 common shares issued by Usiminas and linked to the steel mill s existing shareholders agreement.

• On May 21, the Board of Directors of Vale approve the revised 2009 investment budget for US$ 9.035 billion as compared with the US$ 14.235 billion announced on October 16, 2008.

• On May 22, the Extraordinary General Meeting of Vale approves the proposal to change its name from Companhia Vale do Rio Doce SA to Vale SA.

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• On June 23, Vale launches a project to produce biodiesel to fuel its operations and projects in northern Brazil, to begin in 2014, using palm oil (dende oil) as feedstock, which will be produced by a consortium between Vale and Biopalma Amazonia SA (Biopalma).

• On July 13, the Company announces that its unionized employees in Sudbury and Port Colborne in Ontario, Canada, are on strike. The same happens on the 1st of August, with the unionized employees of its operation in Voisey s Bay in the province of Newfoundland and Labrador, Canada.

• On July 22, Vale signs a memorandum of understanding (MOU) with ThyssenKrupp to raise its stake in ThyssenKrupp CSA Siderurgica do Atlantico Ltda. (TKCSA) from 10% to 26.87% through a capital injection of EUR $ 965 million.

• On September 18, Vale completes the acquisition of the operations of iron ore in Corumbá, located in Mato Grosso do Sul, owned by Rio Tinto PLC (Rio Tinto) and other controlled entities.

• On October 19, the Board of Directors of Vale approves the investment budget for 2010, including expenditures of US$ 12.9 billion dedicated to sustaining existing operations and promoting growth through research and development (R & D) and project execution.

2010

• On January 22, integrated subsidiary Valesul Alumínio S.A. (Valesul) enters into an agreement to sell its aluminum assets located in Rio de Janeiro to Alumínio Nordeste S.A., a Metalis group company, for US$ 31.2 million.

• On the same date, Vale approves at a Special Shareholders Meeting the incorporation of integrated subsidiaries Sociedade de Mineração Estrela de Apolo S.A. (Estrela de Apolo) and Mineração Vale Corumbá S.A. (Vale Corumbá).

• During the first half of the year, Vale closes agreements with its customers in the iron ore business to shift from annual contracts to contracts with values adjusted on a quarterly basis. The new contracts offer more efficiency and transparency for iron ore prices and make it possible to differentiate qualities, which help stimulate long-term investment. Besides, customers can learn in advance the price to be paid in the following quarter.

• In the second quarter, Vale acquires a 51% interest in VBG - Vale BSGR Limited (VBG) (formerly BSG Resources (Guinea) Limited), which holds iron ore concession rights in Simandou South (Zogota) and iron ore exploration permits in Simandou North (Blocks 1 & 2), Guinea.

• Through a series of transactions in 2010, Vale acquires the phosphate operations of Vale Fertilizantes S.A. (Vale Fertilizantes, formerly Fertilizantes Fosfatados S.A. Fosfertil) and Vale Fosfatados S.A. (formerly Bunge Participações and Investimentos S.A.). The total cost of these acquisitions was US$ 5.829 billion. The sellers included Bunge Ltd., the Mosaic Company (Mosaic), Yara Brasil Fertilizantes S.A. and other Brazilian companies.

• In May, Vale Internacional S.A. enters into an agreement with Oman Oil Company S.A.O.C. (OOC), an integrated subsidiary of the government of the sultanate of Oman, for the sale of a 30% interest in Vale Oman Pelletizing Company LLC (VOPC), for US$ 125 million.

• In July, Vale sells to Imerys S.A. 86.2% of its interest in Pará Pigmentos S.A. (PPSA), a kaolin producer, along with other kaolin mining rights, for US$ 71.3 million (equivalent to R$ 126.1 million).

• In July, Vale concludes the transaction announced on March 31, 2010, by virtue of which it sells 35% of the total capital of MVM Resources International B.V. (MVM) to Mosaic for US$ 385 million, and 25% of the total capital of MVM to Mitsui, for US$ 275 million. MVM manages and operates Bayóvar phosphate rock project in Peru.

• In August, Vale Emirates Ltd. acquired 51% interest in Sociedade de Desenvolvimento do Corredor Nacala S.A. (SDCN) from the Mozambican company Insitec SGPS SA (Insitec) for US$ 21 million (equivalent to R$ 36.6 million on the date of disbursement).

• In the fourth quarter, Vale lists Depositary Receipts representing its common and preferred Class A shares (HDRs) on Hong Kong Limited Stock Exchange (HKEx). The HDRs start to be traded on December 8, 2010.

2011

• On February 28, Vale announces the completion of the operation with Norsk Hydro ASA (Hydro), announced on May 2, 2010, to transfer all its interests in Albras - Alumínio Brasileiro S.A. (Albras), Alunorte - Alumina do Norte do Brasil S.A. (Alunorte) and Companhia de Alumina do Pará (CAP), receiving in return, through the subsidiary Vale Austria Holdings GmbH, currently known as Vale International Holdings GmbH (Vale Austria), 22% of the outstanding common shares of Hydro and US$ 503 million in cash. Additionally, Vale Austria sold 60% of Mineração Paragominas S.A. (Paragominas) to Hydro for US$ 578 million in cash. For more information about these operations, see item 6.5 in this Reference Form.

• In February 2011, Vale pays US$ 173.5 million to acquire the control of Biopalma, in the State of Pará, to produce palm oil (dende oil) as feedstock to manufacture biodiesel.

• On April 28, the Board of Directors approves the acquisition, subject to certain conditions, of up to 9% of the capital of Norte Energia S.A. (NESA), a stake previously held by Gaia Energia e Participações S.A (Gaia). NESA is a company whose sole purpose is the implementation, operation and management of Belo Monte hydroelectric power plant in Pará. In June 2011, Vale concluded the acquisition of 9% of the equity of NESA.

• In June 2011, Vale Emirates Ltd. acquired additional 16% equity of Sociedade de Desenvolvimento do Corredor Nacala S.A. (SDCN) for US$ 8 million, equivalent to R$ 12.8 million. The acquisition is aligned with the Company strategy to develop the logistic corridor of Nacala, and continued with the acquisition of 51% of SDCN in September 2010. SDCN has a concession to create the required logistic structure for the flow resulting from coal production expansion in Moatize.

• In July 2011, Vale Logística Integrada S.A. signed an agreement to create a joint venture with Vale Fertilizantes for purposes of exploring the concession of Terminal Portuário da Ultrafértil (TUF), in the city of Santos, State of São Paulo, with imported cargos of sulfur, ammonia and fertilizers in general, being strategically linked to Vale s railroads, upon payment of R$150 million to Vale Fertilizantes and capital investment in the joint venture of R$432 million to fund TUF investment project.

• In December 2011, Vale concluded, by its wholly-owned subsidiary Mineração Naque S.A. a public offer auction (IPO) to acquire outstanding shares issued by Vale Fertilizantes. As a result of the IPO, Vale acquired 211,014 common shares and 82,919,456 preferred

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shares issued by Vale Fertilizantes, representing 83.8% of outstanding common shares and 94.0% outstanding preferred shares of Vale Fertilizantes. Common and preferred shares were acquired by the par value of R$25.00, in a total amount of R$2.078 billion.

2012

• On February 9, the Board of Directors approved the execution of a lease agreement of potassium mining rights and assets with Petróleo Brasileiro S.A. Petrobras, for 30 years, which allows continuing with potassium extraction in Taquari-Vassouras and development of the Carnalita Project in the State of Sergipe.

• In April, Vale sold its 61.5% interest in Cadam S.A. concluding the divestment operation by selling the kaolin business beginning in 2010 with the sale of the interest in Pará Pigmentos S.A.

• In June, together with Vale Internacional Holding GmbH and Vale Internacional S.A., Vale concluded the sale of its thermal coal operations in Colombia to CPC S.A.S., an affiliated company of Colombian Natural Resources S.A.S. (CNR), for US$ 407 million in cash.

• In May, Vale entered into an operational lease with its affiliate Hispanobras, where Vale leases its pelleting plants owned by Hispanobrás for three years, subject to automatic renewal. The operation was concluded in July 2012.

• On June 7, Vale Emirates Ltd. acquired an additional 18% interest in Sociedade de Desenvolvimento do Corredor Nacala S.A. (SDCN), holder of the concessions to create the logistic corridor of Vale in Nacala, Mozambique, for US$ 18.5 million. Consequently, Vale held at the time 85% of the shares of SDCN.

• On June 27, Vale was granted the prior license (LP) for the iron ore project Carajás S11D, the largest project in the history of Vale, and the largest project in the history of iron ore, with nominal capacity of 90 million annual metric tons (Mtpa) of iron ore. The LP is part of the first phase of licensing of this enterprise. This license signals the approval of its location, conception, and environmental feasibility, establishing the basic requirements to be complied with in the subsequent deployment phase.

• In August, Vale Internacional has informed that it signed a sale agreement for US$ 600 million for 10 large ore carriers with Polaris Shipping Co. Ltd. (Polaris).

• In October, Vale and Vale International completed the sale of its manganese and ferroalloy operations in Europe to subsidiaries of Glencore International Plc. (Glencore), for US$ 160 million in cash. Vale also retained Glencore as its marketing agent outside Brazil for metallurgic manganese ore for a five-year period.

• On October 4, the first copper concentrate was produced, upon conclusion of the commissioning of the copper mine processing plant in Lubambe, in the Konkola North project, that includes an underground mine, plant, and related infrastructure, located in the copper belt in Zambia, with estimate nominal capacity of 45,000 metric tons per year of copper concentrate. This operation is part of a joint venture with African Rainbow Minerals Limited, holding 80% of the operation, and the remaining 20% is held by Zambia Consolidated Copper Mines Ltd.

• On December 20, Vale concluded the annual evaluation of Onça Puma and aluminum assets, implying recognition of the impairment before tax of US$8.2 billion, with accounting impact on 2012 4Q.

2013

• On January 31, Vale concluded the option exercised in June 2010, acquiring an additional 24.5% interest in the Belvedere coal project (Belvedere) from Aquila Resources Limited (Aquila), for A$150 million (equivalent to US$ 156 million using the AUD/USD rate of 1.04). As a whole, Vale paid US$338 million for 100% of Belvedere. Belvedere is comprised of an underground coal mine located in the South of Bowen

Basin, close to the town of Moura, in the State of Queensland, Australia.

• On February 28, Vale concluded the final agreements with Silver Wheaton Corp. (SLW), Canadian company with shares negotiated at the Toronto Stock Exchange and the New York Stock Exchange, to sell 70% of payable gold flows produced as byproduct of some Sudbury nickel mines for 20 years and with Silver Wheaton (Caymans) Ltd. to sell 25% of payable gold flows produced as byproduct of the Salobo copper mine during the mine lifetime, for the initial payment of US$ 1.9 billion in cash, 10 million in SLW warrants with exercise price of US$ 65 and 10 year term. Additionally, Vale will receive cash payments in the future for each ounce (oz) of gold provided to SLW under the terms in the agreement, at the lowest value between US$ 400 per ounce (plus annual inflation adjustment of 1% starting in 2016 for Salobo) and the market price.

• On March 11, Vale informed the Government of the Republic of Argentina that the company had suspended deployment of the Rio Colorado project in Argentina.

• On March 14, Vale exercised the preemptive right provided for in the incorporation agreement of Consórcio Capim Branco, acquiring a 12.47% interest of Suzano Papel e Celulose S.A for R$ 223,030,470.52 in the capital of hydroelectric plants Capim Branco I & II. Consequently, Vale holds 60.89% on Capim Branco I & II, capable of generating 1,524 gigawatts hour per year of power by the end of the concession in 2036.

• On April 29, Vale received the environmental operation license (LO) for railroad terminal Ponta da Madeira (PDM), in the State of Maranhão, issued by the State Secretary of Environment and Natural Resources of Maranhão. The PDM railroad terminal is part of the North Logistic Capacity project (CLN 150), which allows expansion of Carajás capacity to 150 million annual metric tons.

• On May 6, Vale received the environmental installation license (LI) and authorization to remove vegetation for the railroad branch to connect Serra Sul de Carajás to Estrada de Ferro Carajás (EFC), in the State of Pará, issued by the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA), which allows beginning the construction of the 101 km railroad branch to connect the storage yard of S11D to EFC. The railroad branch is part of the logistic capacity S11D project, which allows expansion of Carajás logistic capacity to 230 million annual metric tons of iron ore.

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• On June 28, 2013, Vale and members of Consortium SF-T-80 received authorization by the National Agency of Petroleum ANP to return the blocks in the São Francisco Basin (SF-T-80, 82, 83 and 93);

• On September 18, Vale entered into agreements to sell 20% of the total capital of VLI S.A. (VLI) to Mitsui & Co. Ltd. (Mitsui) for R$ 1.5 billion and 15.9% of the capital of VLI for R$ 1.2 billion to the Investment Fund of the Severance Fund FGTS (FI-FGTS), which is managed by Caixa Econômica Federal.

• On November 7, 2013, Vale entered into an agreement with GDF, under which it granted to GDF (Gaz de France) its share in the blocks of Parnaíba Basin (BT-PN-2 and BT-PN3), for approximately R$24 million.

• On November 14, Vale announced the sale of all its 22% interest in Norsk Hydro ASA (Hydro) for NOK 25.00 per share, summing NOK 11.196 billion, equivalent to US$ 1.822 billion (equivalent to R$ 4.218 billion). Vale Austria has held these shares since 2011, when the company restructured the aluminum asset portfolio. After conclusion of this transaction, Vale Austria no longer holds equity in Hydro.

• On November 27, Vale announces adherence to the federal tax refinancing agreement (REFIS) related to the payment of income tax and social contribution on net profit of affiliates abroad on profit generated abroad in the period between 2003 and 2012, according to terms set forth by Law 12.865/2013 and Provisional Order no. 627/ 2013. Adherence to REFIS implied the payment to the Federal Revenue Secretariat of R$ 5.965 billion by the end of November and R$ 16.360 billion in 179 months, where monthly installments are adjusted according to the SELIC interest rate.

• On December 12, Vale concluded the sale of Sociedad Contractual Minera Tres Valles, cathode copper production company in the area of Coquimbo in Chile, for US$ 25 million (equivalent to R$ 54 million) to Inversiones Porto San Giorgio S.A (ISG), company controlled by the Chilean group Vecchiola S.A.

• On December 19, Vale entered into agreements with CEMIG Geração e Transmissão S.A. (CEMIG GT) to create two joint ventures: (i) Aliança Geração de Energia S.A., comprised by assets and power generation projects of both companies; and (ii) Aliança Norte Energia Participações S.A., comprised by the sale to CEMIG GT of 49% of the shares held by Vale in its 9% interest in Norte Energia S.A. (Norte Energia), company responsible for building, operating and exploring the hydroelectric plant of Belo Monte for approximately R$ 305 million.

• On December 20, Vale signed an agreement with Israel Chemicals Ltd. (ICL) to sell its 44.25% interest in Fosbrasil, company producer of purified phosphoric acid, located in Cajati, State of São Paulo, for US$ 52 million.

• On December 23, Vale entered into an agreement with a fund managed by Brookfield Asset Management (Brookfield) to sell 26.5% of its interest in the capital of VLI, for R$ 2 billion.

• On December 23, Vale informed that it filed with the Superior Court of Justice (STJ) on December 19, a petition for partial dismissal in the process discussing the legality of taxation of profit from affiliates abroad. This dismissal refers to the period between 2003 and 2012. Vale informed that it will continue questioning taxation applicable to the period between 1996 and 2002 and 2013. Should there be a winning decision, Vale will claim immediate return of values paid relative to the period between 2003 and 2012, according to installment payment under the terms in Provisional Order no. 627/2013 and as mentioned in relevant fact published on November 27, 2013, and it will suspend payments for outstanding installments.

• On December 26, Vale promoted an auction, under the terms in CVM Instruction no. 168/1991, as amended, to sell 28,737,367 common shares issued by Log-in Logística Intermodal S.A. (Log-in), company listed in BM&FBOVESPA (ticker symbol: LOGN3), corresponding to all common shares issued by Log-in then held by Vale, for R$ 8.11 per share, totaling R$ 233 million. This transaction was concluded on January 2, 2014.

2014

• In January, Vale updated its Code of Ethics and Conduct for purposes of obtaining better alignment with its mission, vision, and values, reinforcing ethical standards and updating aspects of the anticorruption and antitrust laws.

• On February 18, Vale closed the offer of infrastructure debentures for R$ 1 billion and funds from this offer are to be used on investments related to the Company infrastructure projects deemed to be priority, under the terms in article 2 in law no. 12.431/2011, as amended.

• In May, the National Bank of Social and Economic Development (BNDES) approved the funding agreement for R$ 6.2 billion for the deployment of the Carajás Serra Sul S11D and the logistic capacity project S11D projects. The funding term is for ten years and funds will be disbursed in up to three years, according to the project schedule.

• On April 14, the transaction announced on September 18, 2013 was concluded, with the transfer of 20% of the capital stock of VLI to Mitsui by R$ 1.5 billion and 15.9% to Fundo de Investimento do Fundo de Garantia do Tempo de Serviço FGTS (FI-FGTS), which assets are managed by Caixa Econômica Federal, for R$ 1.2 billion.

• In April, the Republic of Guinea revoked the mining rights for the Simandou and Zogota concession areas held by VBG.

• On June 4, Vale announced entering an agreement with a subsidiary of Suzano Papel e Celulose (Suzano Subsidiary), company that produces eucalyptus cellulose, to sell its entire share in the capital stock of Vale Florestar Fundo de Investimento em Participações, a reforesting investment fund, for R$ 205 million. On August 8, Vale concluded this operation. Simultaneously, BNDESPar, Petros and FUNCEF, other shareholders of the Investment Fund Vale Florestar, also sold their shares to Suzano Subsidiary and, with the conclusion of the transaction, the Investment Fund Vale Florestar was held, solely, by Suzano Subsidiary.

• On August 19, the transaction announced on December 23, 2013 was concluded, with the transfer of 26.5% of the capital of VLI to Brookfield for R$ 2 billion. As result of this transaction, Vale holds 37.6% of the capital of VLI.

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• On August 20, Vale informed the granting of the prior environmental license for the Global EIA, issued by IBAMA. The licensing of the Global EIA comprises the expansion of N4WS, N5S, Morro I and Morro II, containing 1.8 billion tons of reserves and permission to pile sterile in the North System in Carajás, Brazil. Additionally, on November 5, Vale obtained the operation license to expand N4SW.

• On September 12, Vale International SA and China Ocean Shipping Company (Cosco) entered a strategic cooperation agreement in maritime transportation of iron ore. Under the terms of this agreement, four VLOCs, with 400 thousand tons, currently owned and operated by Vale, will be transferred to Cosco. The transaction was concluded on May 19, 2015 in a total of US$ 445 million.

• On September 26, Vale International SA and China Merchants Group entered an agreement contemplating the strategic cooperation in maritime transportation of iron ore. Under the terms of this agreement, the companies agreed upon entering a freight agreement for 25 years to carry Vale Brasil s iron ore to China using 10 VLOCs to be built by the China Merchants Group.

• On October 17, Vale announced that PTVI entered into an amendment to the contract of work with the government of Indonesia, and the agreement will now terminate in 2025, with the option to extend operations until 2045 for two 10-year consecutive periods, subject to approval by the local government, if PTVI complies with the requirements in the amendment.

• On November 9, 2014, Vale Austria Holdings GmbH, currently known as Vale International Holdings GmbH (Vale Austria) sold to Norsk Hydro ASA (Hydro) shares issued by Mineração Paragominas S.A. representing 20% of its capital, as exercise of a *put option*. The remaining 20% interest held by Vale Austria in the capital stock of Mineração Paragominas S.A. is also subject to a Vale *put option*, which can be exercised starting on February 28, 2016.

• On December 9, Vale announced entering into an investment agreement with Mitsui, under which Mitsui will, subject to compliance with precedent conditions, hold 15% of Vale s 95% interest in Vale Moçambique (concessionaire of 95% of the Moatize mine) and 50% of Vale s interest in the Nacala Logistic Corridor.

• On December 18, upon compliance with precedent conditions and approval by CADE, the sale of Vale s entire share corresponding to 44.25% of the capital of Fosbrasil, company that produces purified phosphoric acid, located in Cajati, State of São Paulo, was concluded for US$ 52 million.

• On December 23, Vale incorporated its wholly-owned subsidiaries Sociedade de Mineração Constelação de Apolo S.A. and Vale Mina do Azul S.A.

2015

• On March 2, 2015, the amendment to the agreement entered with Silver Wheaton (Caymans) Ltd. On February 28, 2013, was entered, for purposes of determining that the agreement also encompasses the purchase of an additional flow of 25% of payable gold produced as byproduct of the copper mining at the Salobo mine, during the mine s use life.

• On March 13, 2015, Vale transferred its share in VBG back to BSG Resources Limited, due to the revocation by the Government of Guinea of the mining rights held by the joint venture in April 2014.

• On February 27, 2015, Vale concluded the transaction that started in December 2013 with CEMIG GT to establish the joint venture Aliança Geração de Energia S.A., by transferring its shares in some projects (Central Eólica Garrote Ltda., Central Eólica São Raimundo Ltda., Central Eólica Santo Inácio III Ltda., and Central Eólica Santo Inácio IV Ltda.) and operation assets (Consórcio da Usina Hidrelétrica de Igarapava, Consórcio AHE Porto Estrela, Consórcio AHE Funil, Consórcio UHE Candonga, Consórcio da Usina Hidrelétrica de Aimorés, and Consórcio Capim Branco Energia to Aliança Geração.)

• On March 31, 2015, Vale concluded the transaction that started in December 2013 with CEMIG GT for the sale of 49% of Vale s share on 9% of the project of the hydroelectric plant Belo Monte, for approximately R$ 305 million.

• On May 15, 2015, Vale concluded the contract of a revolving credit facility in the amount of US$ 3 billion, for five years.

• On May 19, 2015, Vale International SA and China Merchants Energy Shipping Co., Ltd. (CMES), a subsidiary of China Merchants Group, executed an amendment to the agreement that contemplates the long-term strategic cooperation between both companies for maritime transportation of iron ore. The first agreement was entered with China Merchants Group on September 26, 2014. Under the terms in this amendment, Vale will sell 4 VLOCs (very large ore carriers) to CMES.

Vale clarifies that there were no sector political or macroeconomic decisions that could have affected significantly the Company in the year ending on December 31, 2014 and by the annual filing date of this Reference Form.

6.5 Main corporate events of the Company, its subsidiaries and affiliates

2012

Lease of mining potash rights and assets

On April 23, 2012, Vale signed with Petróleo Brasileiro S.A. (Petrobras) the renewal of the lease agreement for potash mining rights and assets in Sergipe for a thirty-year period that allows continuing to mine potash in Taquari-Vassouras and the development of the Carnalita project. In the production phase, there is an estimate that Carnalita will be the largest potash operation in Brazil, with estimate production capacity of 1.2 million tons of potash per year. The agreement is in line with Vale s growth strategy to become one of the world leaders in the fertilizing industry.

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Sale of interest in CADAM

On April 26, 2012, Vale signed the sale agreement for its 61.5% interest in Cadam S.A (CADAM), for US$ 30.1 million (equivalent to R$ 58.0 million on the transaction date), to KaMin LLC (a North-American closed capital company). CADAM is a producer of kaolin operating with open pit mines in the State of Amapá, a processing plant and a private port, both in the State of Pará. The mine and the plant are connected by a 5.8 km pipeline. Under the terms of this agreement, Vale will receive US$ 30.1 million for the shareholding control of CADAM, to be paid in five years. Out of this total, US$ 11,0 have been received by Vale by December 31, 2014. Operation was concluded on May 7, 2012. The sale of CADAM is part of the Company s continuous efforts to optimize its asset portfolio. With the sale of Pará Pigmentos S.A. (PPSA), in 2010, the sale of CADAM consolidates the sale of the kaolin business. Vale s growth strategy to create sustainable value encompasses several options and active portfolio management is very important to optimize capital allocation and focus administration.

Sale of Coal Assets from Colombia

On May 25, 2012, with Vale International Holdings GmbH and Vale Internacional S.A., Vale signed an agreement to sell its thermal coal operations in Colombia to CPC S.A.S, a subsidiary of Colombian Natural Resource S.A.A (CNR), a private company, for US$ 407 million in cash (equivalent to R$ 843 million on the transaction date). On June 20, 2012, the transaction was approved by the competent regulatory authorities and the sale was concluded on June 25, 2012.

The thermal coal operations in Colombia are an integrated mine-railway-port system that consists of: (a) 100% of the El Hatillo coal mine and the coal deposit in Cerro Largo, both of which are located in Cesar s department; (b) 100% of Sociedad Portuária Rio Córdoba (SPRC), a coal port operation on Colombia s Atlantic Coast; and (c) participation in 8.43% of the Ferrocarriles Del Norte de Colombia S.A. (FENOCO) railway, which has the concession and operated the railways that connect the coal mines to SPRC.

The sale of the thermal coal operation in Colombia is part of continued efforts to optimize the company portfolio of assets. Vale s strategy for sustainable growth and value creation encompasses multiple options, and management of its portfolio of assets is important to optimize the allocation of capital and focus the attention of the administration.

Sale of manganese ferroalloy assets in Europe

On July 10, 2012, with Vale Internacional S.A., Vale signed an agreement to sell its manganese ferroalloy operations in Europe to Glencore Internacional Plc. subsidiaries, a company listed in the London and Hong Kong stock markets, for US$ 160 million (equivalent to R$ 325 million) in cash. The manganese ferroalloy operations in Europe consist of: (a) 100% of Vale Manganese France SAS, located in Dunkirk, in France; and, (b) 100% of the Vale Manganese Norway AS, located in Mo I Rana, Norway. The sale was concluded on October 31, 2012, upon checking compliance with all conditions. The sale of the manganese ferroalloy operations in Europe is part of continued efforts to optimize the company portfolio of assets. Vale s strategy for sustainable growth and value creation encompasses multiple options, and management of its portfolio of assets is important to optimize the allocation of capital and focus the attention of the administration.

Sale of marine transport assets

On August 31, 2012, Vale Internacional signed an agreement to sell, for US$ 600 million and posterior chartering, of 10 large ore carrier ships with Polaris Shipping Co. Ltd. (Polaris). These ships were acquired in 2009 / 2010 and converted from oil tankers to ore carriers, each with an approximate capacity of 300,000 DWT, so that Vale Internacional would have at its disposal a marine fleet dedicated to the transport of iron ore to its clients. In addition to freeing capital, the transaction preserves Vale s ability to transport iron ore by sea having ships at its disposal under freight agreements, and eliminates the risks involved in ownership and operation. This transaction is part of continued efforts to optimize the company portfolio of assets, improving capital allocation and reinforcing the balance sheet.

Sale of fertilizer assets

On December 18, 2012, Vale Fertilizantes S.A. signed with Petrobras an agreement to sell the company Araucária Nitrogenados, a nitrogen production operation located in Araucária in the State of Paraná, for US$ 234 million, subject to adjustment. On May 31, 2013, the transaction was closed with the transfer of Araucária Nitrogenados shares held by Vale Fertilizantes to Petrobras. As expected payment is made in quarterly payments in amounts that are equivalent to the royalties owned by Vale Fertilizantes, owner of Vale Potássio do Nordeste S.A. relative to the leasing of mining rights at Taquari-Vassouras and the Carnalita project.

The operation was approved without restrictions by CADE on May 15, 2013.

Sale of participation in oil and gas concession

On December 21, 2012, Vale signed an agreement with Statoil Brasil Óleo e Gás Ltda (Statoil) to sell its 25% participation in the BM-ES-22A concession in the Espírito Santo Basin for the amount of US$ 40 million (equivalent to approximately R$ 90 million), in cash. The completion

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of this transaction was on March 19, 2014. Vale s strategy for sustainable growth and value generation encompasses multiple options, and the active management of its portfolio is an important action to optimize the allocation of capital and to focus management efforts.

2013

Increase in interest on the Belvedere coal project

On January 31, 2013, Vale Belvedere Pty Ltd. signed agreements to conclude a purchase option exercised in June 2010, through which it acquired an additional 24.5% interest in the Belvedere coal project of Aquila Resources Limited (Aquila). The purchase price of A$ 150 million (equivalent to US$ 156 million using the AUD/USD rate of 1.04), is equivalent to the market value, based on the date when the option is exercised (June 2010), as determined by an independent evaluator retained by Vale and Aquila at the time. As result of this transaction, Vale Belvedere Pty Ltd. increased its interest in Belvedere to 100%. Additionally, Vale Belvedere Pty Ltd. agreed upon paying A$ 20 million (equivalent to US$ 21 million) to settle litigations and disputes related to Belvedere with Aquila.

As a whole, Vale paid US$338 million for 100% of Belvedere. Belvedere is a future opportunity of growth and is comprised of an underground coal mine located in the South of Bowen Basin, close to the town of Moura, in the State of Queensland, Australia. The project was approved by Vale s Board of Directors. According to preliminary estimates, the Belvedere project has the potential to reach a production capacity of 7.0 million metric tons per year, mostly of metallurgical coal.

Increased interest in hydroelectric plants of Capim Branco I & II

On March 14, with Cemig Capim Branco Energia S.A., upon exercising the preemptive right provided for in the incorporation agreement of Consórcio Capim Branco, Vale acquired for R$ 223,030,470.52 a 12.47% interest of Suzano Papel e Celulose S.A. and Suzano Holding S.A. in the capital of hydroelectric plants Capim Branco I & II. Consequently, Vale holds 60.89% on Capim Branco I & II, capable of generating 1,524 gigawatts hour per year of power by the end of the concession in 2036. The acquisition of additional interest in hydroelectric plants Capim Branco I & II adds value to the extent that it provides an immediate reduction in the power cost for Vale s operations, being a low risk investment and with return clearly higher than the capital cost for Vale.

Return and assignment of exploration blocks

On June 28, 2013, Vale and members of Consortium SF-T-80 received authorization by the National Agency of Petroleum ANP to return the blocks in the São Francisco Basin (SF-T-80, 82, 83 and 93).

Additionally, on November 7, 2013, Vale entered into an agreement with GDF (Gaz de France), under which it granted to GDF (Gaz de France) its share in the blocks of Parnaíba Basin (BT-PN-2 and BT-PN3), for approximately R$24 million. The conclusion of this transaction and the payment are subject to approval of assignment by ANP.

Sale of interest in VLI

On September 18, Vale entered into agreements to sell 20% of the total capital of VLI to Mitsui & Co. Ltd. (Mitsui) for R$ 1.5 billion and 15.9% of the capital of VLI for R$ 1.2 billion to the Investment Fund of the Severance Fund FGTS (FI-FGTS), which is managed by Caixa Econômica Federal. This transaction was concluded on April 14, 2014. Values arising out of the sale to FI FGTS and R$ 800 million of the sale funds to Mitsui will be comprised by a capital investment in VLI, who issued new shares for Mitsui and FI-FGTS. Values invested in VLI will be used to fund part of VLI investment plan. The remaining funds from this transaction, R$ 709 million, was paid directly to Vale by Mitsui.

Additionally, on December 23, 2013, Vale entered into an agreement with a fund managed by Brookfield Asset Management (Brookfield) to sell 26.5% of its interest in the capital of VLI, for R$ 2 billion. This transaction was concluded on August 19, 2014, and Vale holds 37.6 of the capital of VLI. Vale, Mitsui, FI-FGTS and Brookfield jointly control VLI, under the terms of a shareholders agreement. For further information see items 6.5 and 10.3 of this Reference Form.

Sale of all shares of Norsk Hydro

On November 14, Vale announced the sale of all its 22% interest in Norsk Hydro ASA (Hydro), held by its subsidiary Vale Austria Holdings GmbH, currently known as Vale International Holdings GmbH (Vale Austria), for NOK 25.00 per share, summing NOK 11.196 billion, equivalent to US$ 1.822 billion (equivalent to R$ 4.243 billion). Vale Austria has held such shares since 2011, when it restructured the portfolio of aluminum assets. Upon conclusion of this transaction, Vale Austria no longer holds interest in Hydro.

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Sale of interest in Tres Valles

On December 12, 2013, Vale concluded the sale of Sociedad Contractual Minera Tres Valles (Tres Valles) for US$ 25 million (equivalent to R$ 54 million) to Inversiones Porto San Giorgio S.A (ISG), company controlled by the Chilean group Vecchiola S.A.

Tres Valles is a cathode copper production company in the area of Coquimbo in Chile. The transaction included the entire 90% interest held by Vale in the capital of Tres Valles and some specific mining rights held by Vale in the area of Coquimbo. Tres Valles owns underground and open-air mines and has a production capacity of up to 18,500 metric tons per year of cathode copper.

Sale of power generation assets

On December 19, 2013, Vale entered into agreements with CEMIG Geração e Transmissão S.A. (CEMIG GT) to sell 49% of its 9% interest in Norte Energia S.A. (Norte Energia), company responsible for building, operating and exploring the hydroelectric plant of Belo Monte for R$ 305 million, and creation of a joint venture comprised of power generation assets.

For this purpose, two different enterprises were created to cover power generation projects and assets. In the first one, Aliança Norte Energia Participações S.A. . (Aliança Norte), created by Vale and CEMIG GT, respectively holding 51% and 49% of the capital stock. This company was created in two phases: initially, Vale transferred its 9% share held in Norte Energia to its subsidiary Aliança Norte and, subsequently, CEMIG GT acquired 49% of the shares of this company for approximately R$ 305 million. This transaction was concluded on March 31, 2015, and Vale reduced its share in the total capital of Norte Energia to 4.59%, although it remains entitles to acquiring 9% of the power produced by the plant, according to the terms in the long term power acquisition agreement entered in 2012.

The second enterprise, Aliança Geração de Energia S.A. (Aliança Geração de Energia), incorporated by Vale and CEMIG GT, respectively holding 55% and 45% of the total capital, upon investment of their interest on the following power generation assets: Porto Estrela, Igarapava, Funil, Capim Branco I & II, Aimorés, and Candonga. Such plants have attributable installed capacity of 1,158 MW and insured power of an average of 652 MW. The provision of power for Vale operations is ensured under a long term agreement with Aliança Geração de Energia, in order to maintain the same amount of power currently provided to its operations.

The transaction related to Aliança Geração de Energia was concluded on February 27, 2015, and such conclusion did not imply any financial disbursement or revenue and was enforced by means of investment of the above mentioned assets.

Sale of purified phosphoric acid assets

On December 20, 2013, Vale signed an agreement with Israel Chemicals Ltd. (ICL) to sell its 44.25% interest in Fosbrasil, company producer of purified phosphoric acid, located in Cajati, State of São Paulo, for US$ 52 million. This transaction was concluded on December 18, 2014, upon compliance with current prior terms and approvals, including approval by the Administrative Council of Economic Defense (CADE).

Sale of Log-in shares

On December 26, Vale promoted an auction, under the terms in CVM Instruction no. 168, dated December 23, 1991, as amended, to sell 28,737,367 common shares issued by Log-in Logística Intermodal S.A. (Log-in), company listed in BM&FBOVESPA (ticker symbol: LOGN3), corresponding to all common shares issued by Log-in then held by Vale, for R$ 8.11 per share, totaling R$ 233 million. This transaction was concluded on January 2, 2014.

2014

Sale of shares held in Vale Moçambique and the Nacala Logistic Corridor

On December 9, Vale entered into an investment agreement with Mitsui, under which Mitsui will, subject to compliance with precedent conditions, hold 15% of Vale s 95% interest in Vale Moçambique (concessionaire of 95% of the Moatize mine) and 50% of Vale s interest in the Nacala Logistic Corridor (Nacala Corridor). The transaction includes the capital increase and partial transfer of debt assumed by Vale Moçambique and by companies of the Nacala Corridor before Vale. Vale will indirectly hold 81% of the Moatize mine and approximately 35% of the Nacala Corridor, sharing control with Mitsui.

Mitsui s 15% share in Vale Moçambique is evaluated at US$ 450 million. Additionally, Mitsui may pay other US$ 30 million related to an *earn out* clause. On the other hand, there is a *claw-back* clause of up to US$ 120 million. Earn out as well as claw-back values are conditioned to mass recovery goals at the processing plant and production goals agreed upon between Vale /and a Mitsui. As a result of these clauses, the final value attributed to the 15% share in VM may vary between US$ 330 million and US$ 480 million. Additionally, Mitsui

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will be responsible for funding, *pro-rata,* its 15% share, its portion of the investment needed to complete expansion of the Moatize mine, which value is estimated at US$ 188 million.

Upon conclusion of this transaction, Mitsui will contribute with US$ 313 million to fund the Nacala Corridor and, therefore, will hold 50% of these instruments, sharing the control of the Nacala Corridor with Vale. Prior to the conclusion of the transaction and the investment by Mitsui, Vale will continue to fund the Nacala Corridor with loans made by Vale.

Conclusion of the transaction is subject to some precedent conditions, including applicable government and regulatory approvals and is scheduled to occure in 2015.

Sale of interest held in Vale Florestar

On June 4, Vale announced entering an agreement with a subsidiary of Suzano Papel e Celulose S.A. (Suzano Subsidiary), company that produces eucalyptus cellulose, to sell its entire share in the capital stock of Vale Florestar Fundo de Investimento em Participações (FIP Vale Florestar), for R$ 205 million. All the usual precedent conditions and approvals, including by the Administrative Council of Economic Defense (CADE) have been complied with and, thus, the transaction was in effect on August 8, 2014.

BNDESPar, Petros and FUNCEF, other shareholders of FIP Vale Florestar, also sold their respective shares to the Suzano Subsidiary, that now holds 100% of FIP Vale Florestar.

Sale of maritime transportation assets and cooperation agreement

In September 2014, Vale Internacional and China Ocean Shipping Company (Cosco) entered into a strategic cooperation agreement in maritime transportation of iron ore. Under the terms of this agreement, four VLOCs (Very Large Ore Carriers), with 400 thousand tons, currently owned and operated by Vale Internacional, will be transferred to Cosco. The transaction aims to decrease the asset base and release capital, protecting, under freight agreements, Vale s iron ore maritime transportation capacity. The transaction was conclude don May 19, 2015 in a total of US$ 445 million. The amount will be received by Vale upon delivery of ships to Costco.

2015

Restructure of power generating assets

On February 27, 2015, Vale concluded the transaction that started in 2013 with CEMIG GT to create a joint venture Aliança Geração de Energia S.A., and on March 31, 2015, Vale concluded the transaction with CEMIG GT to sell 49% of Vale s share in Norte Energia. Considering that these transactions are related to the agreement with CEMIG GT announced in December 2013, see item Sale of power generating assets above, related to fiscal year 2013, for more information.

Review of the iron ore project Simandou, in the Republic of Guinea.

On April 30, 2010, Vale acquired from BSG Resources Ltd. (BSGR) a 51% stake in BSG Resources (Guinea) Ltd. (currently named VBG Vale BSGR Limited (VBG), which at the time held concessions for iron ore in Guinea, Simandou South (Zogota) and exploration permits for Simandou North (Blocks 1 & 2), in the Republic of Guinea. On March 13, 2015, Vale transferred its share in VBG back to BSG Resources Limited, due to the revocation by the Government of Guinea of the mining rights for the concession areas of Simandou and Zogota, held by VBG. For more information, see item 7.5 (a) in this Reference Form.

Sale of maritime transportation assets and cooperation agreement

Vale International and China Merchants Energy Shipping Co., Ltd. (CMES), a subsidiary of China Merchants Group, on May 19, 2015, executed an amendment to the agreement that covers the long-term strategic cooperation between both companies in the maritime transportation of iron ore. The first agreement was entered with China Merchants Group on September 26, 2014. Under the terms in this amendment, Vale will sell 4 VLOCs (very large ore carriers) to CMES. Details and terms of this agreement are still under discussion.

6.6 Information on bankruptcy filing based on relevant values, or judicial or extrajudicial recovery

Not applicable. There are no bankruptcy filings based on relevant values, or judicial or extrajudicial recovery of the Company.

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6.7 Other relevant information

Sale of part of the gold flow produced as byproduct

On February 28, 2013, Vale Switzerland, after approval by the Board of Directors, concluded the contract with Silver Wheaton Corp. (SLW), a Canadian company with share traded in the Toronto Stock Exchange and in the New York Stock Exchange, for the sale of 70% of payable gold flow produced as a byproduct in certain nickel mines in Sudbury, for a period of 20 years, and with Silver Wheaton (Caymans) Ltd. for the sale of 25% of the payable gold flow produced as byproduct in the Salobo copper mine, for the extent of the mine s longevity. In addition to the initial payment of US$ 1.9 billion in cash, Vale Switzerland received 10 million in SLW warrants with a strike price of US$ 65 and a 10-year term. Additionally, Vale will receive cash payments in the future for each ounce (oz.) of gold delivered to SLW as per the agreement, at the lowest amount between US$ 400 per ounce (plus a 1% annual adjustments starting in 2016 in the case of Salobo) and the market price.

This transaction frees a considerable amount contained in Vale s world class basic metals assets, to the extent that it attributes to the payable gold produced in Salobo de amount of US$ 5.32 billion, in addition to the payments of US$ 400 per ounce delivered, given that there will be no additional cost to extract the gold contained in the condensed copper produced at Salobo. The execution of Vale strategic plan reinforces the Company s confidence in the high potential of its world-class basic metals and the belief that they will general significant value to shareholders across the cycles.

The agreement signed with Silver Wheaton (Caymans) Ltd. Was amended on March 2, 2015 for purposes of having the agreement cover the purchase of additional 25% flow of payable gold. Under the terms in the amendment, Vale will receive an initial cash payment in the amount of US$ 900 million, and future payments in cash per ounce (oz) of gold delivered to Silver Wheaton based on the lowest value between US$ 400 per ounce and market value. This amount will be adjusted annually at 1% starting in 2017. Additionally, Vale may also receive an additional payment in cash depending on the decision to expand the copper ore processing capacity in Salobo to 28 Mtpa more before 2036, provided that such additional payment may vary between US$ 88 million and US$ 720 million, depending on the time and size of the expansion).

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7.1 Description of activities engaged by the issuer and its subsidiaries

Vale is one of the largest mining companies in the world and the largest in the Americas by market value. The Company is the largest iron ore producer and second largest nickel producer in the world. Vale also produces manganese ore, ferroalloys, copper, thermal and metallurgical coal, phosphates, potash, cobalt, and platinum group metals (PGMs), gold and silver. To sustain its growth strategy, Vale is engaged in mineral exploration in 6 countries. The Company operates large logistics systems in Brazil and in other areas of the world integrated with its mining operations, including railroads, maritime terminals and ports. In addition, the Company has a portfolio of maritime freight, floating transfer stations and distribution centers to support distribution of iron ore worldwide. Vale also has significant investments in the sectors of energy and steel, directly or through subsidiaries and joint ventures.

The corporate purpose of the Company is (i) realize the enjoinment of mineral reservoirs in national territory and abroad though research, exploration, extraction, processing, industrialization, transportation, shipment, and sale of minerals; (ii) build railroads, operate and explore railroad traffic of its own and of third parties, (iii) build and operate maritime terminals, owned or third parties , as well as explore navigation and port support activities; (iv) provide load transportation integrated logistics services, including receipt, storage, transportation, distribution and delivery within the context of a multimode transportation system; (v) produce, process, carry, industrialize and sell each and every source and form of power, being entitled to act in the production, generation, transmission, distribution, and sale of its products, byproducts and subproducts; and (vi) engage, in Brazil and abroad, in other activities that may be directly or indirectly of in the interest of the company to perform its corporate purpose, including research, industrialization, sale and purchase, importing and exporting, as well as exploration, industrialization and sale of forest resources and provision of services of any nature; and (vii) incorporate or participate, under any model, of other companies, consortiums, entities which corporate purpose is directly or indirectly linked, assisting or instrumental to its corporate purpose.

For information about activities developed by the Company and its subsidiaries in its markets, see items 7.2 and 7.3 below.

7.2 Information on operational segments

a. Products and services marketed in each operating segment

(i) Ferrous Materials Includes extraction of iron ore and production of pellets, as well as the North, Southern and Southeastern transportation systems, including railroads, ports, maritime terminals, and ships linked to these operations. Exploration of manganese ore and the production of ferroalloys are also included in this segment.

(ii) Coal extraction of coal and related logistic services;

(iii) Base metals Includes the production of non-ferrous minerals, including production of nickel (co-products and by-products), copper and investments in aluminum partnerships.

(iv) Fertilizers Includes three important nutrient groups: potassium, phosphates and nitrogen. This is a business segment, reported as of 2010, that is being formed through acquisitions and organic growth.

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(iv) Other investments Includes investments in joint ventures and affiliates in other businesses.

The information presented to upper management regarding performance of each segment are usually originated from accounting records maintained according to generally accepted accounting principles in Brazil, with some minimum relocations between segments.

b. Revenue from the segment and its participation in the Company s net revenues

In R$ thousands	Fiscal year ending on December 31					
	2014		2013		2012	
Segment	Net Revenue	% of total	Net Revenue	% of total	Net Revenue	% of total
Ferrous Materials	60,395,000.00	68	75,668,000.00	74	67,260,000.00	74
Coal	1,740,000.00	2	2,188,000.00	2	2,109,000.00	2
Base Metals	18,137,000.00	21	15,746,000.00	16	13,933,000.00	15
Fertilizers	5,656,000.00	6	6,038,000.00	6	7,008,000.00	8
Others	2,347,000.00	3	1,850,000.00	2	959,000.00	1
Total Revenue	**88,275,000.00**	**100**	**101,490,000.00**	**100**	**91,269,000.00**	**100**

c. Profit or loss resulting from the segment and its participation in the Company s net income

In R$ thousands	Fiscal year ending on December 31					
	2014		2013		2012	
Segment	Profit/Loss	% of total	Profit/Loss	% of total	Profit/Loss	% of total
Ferrous Materials	1,109,000.00	116.20	7,588,000.00	6,593.04	22,829,000.00	230.79
Coal	(1,866,000.00)	(195.52)	(528,000.00)	(458.77)	(2,914,000.00)	(29.46)
Base Metals	4,793,000.00	502.21	(781,000.00)	(678.59)	(9,009,000.00)	(91.08)
Fertilizers	(2,206,000.00)	(231.14)	(6,088,000.00)	(5,289.73)	2,345,696.00	23.71
Others	(875,616.00)	(91.75)	(72,000.00)	(62.56)	(3,227,000.00)	(32.62)
Discontinued operations						
General load			(3,909.00)	(3.40)	(133,000.00)	(1.34)
Net Profit of the Period	**954,384.00**	100.00	**115,091**	100.00	**9,891,696.00**	100.00

7.3 Information on products and services related to the operating segments

a. Characteristics of the production process

b. Characteristics of the distribution process

c. Characteristics of the markets, in particular:

i. competition conditions in the markets

ii. participation in each market

d. Possible seasonality

1. Ferrous materials

The Company s ferrous materials business includes iron ore prospecting, pellet production, manganese ore prospecting, and ferroalloy production. Each activity is described below.

1.1 Iron Ore and pellets

1.1.1 Iron ore operations

Vale runs the majority of its iron ore operations in Brazil mainly through Vale S.A. and its wholly-owned subsidiary Mineração Corumbaiense Reunida S.A. (MCR) and its affiliate MBR. Vale s mines, which are all open-pit and their operations are concentrated

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essentially in three systems: the Southeastern System, the Southern System and the Northern System, each with its own transportation capacity. Vale also has mining operations in the Central western System through Samarco Mineração S.A. (Samarco), a joint venture with an affiliate of BHP Billiton plc, where Vale holds 50% interest. All iron ore operations in Brazil are held under concession by the federal government, which are granted for undetermined period.

Firm / Mining System	**Location**	**Description / History**	**Mining**	**Operations**	**Power source**	**Access / Transportation**
Vale Northern System	Carajás, in the State of Pará	Open-pit mines and ore processing plants. Divided into North Range, South Range, and East Range. Since 1985, we have been conducting mining activities in the Serra Norte, which is divided into three main mining bodies (N4W, N4E and N5) and two key processing plants. In the first quarter 2014, Vale started a new mine and a new processing unit in Serra Leste.	High-grade hematite ore (over 66% on average).	One-pit mining operations. The beneficiation process consists simply of sizing operations, including screening, hydrocycloning, crushing and filtration. The beneficiation process produces sinter feed, pellet feed, and granulated ore.	Power provided by the national power network, acquired from regional power companies or supplied by Aliança Geração de Energia S.A. (Aliança Geração Elétrica) or directly by Vale.	The iron ore is transported by the Carajás Railroad (EFC) to the Ponta da Madeira maritime terminal in the State of Maranhão. Iron ore from Serra Leste is carried by trucks from the mine to the EFC railroad.
Southeastern System	Iron Quadrangle region of the State of Minas Gerais	Three locations: Itabira (two mines, with three important processing plants), Minas Centrais (three mines, with three important processing plants and one secondary plant) and Mariana (three mines and four processing plants).	The ore reserves have high ratios of itabirite ore relative to hematite ore. Itabirite ore has iron grade between 35% and 60% and requires concentration to achieve shipping grade.	Open-pit mining operations. We generally process the run-of-mine (ROM) by means of standard crushing, followed by classification and concentration steps, producing sinter feed, lump ore and pellet feed in the beneficiation plants located at the mining sites.	Power provided by the national power network, acquired from regional utility companies or produced directly by Vale, or supplied by Aliança Geração de Energia, joint venture of Vale and CEMIG Geração e Transmissão S.A. (CEMIG GT).	The Vitória a Minas Railroad (EFVM) connects these mines to the Tubarão port.
Southern	Iron	Three	The ore reserves have	Provided by the	Power	MRS transports its

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Firm / Mining System	Location	Description / History	Mining	Operations	Power source	Access / Transportation
System	Quadrangle region of the State of Minas Gerais	major locations: Minas Itabirito (four mines, with three major beneficiation plants and three secondary beneficiation plants); Vargem Grande (three mines and two major beneficiation plants); and Paraopeba (four mines and three beneficiation plants).	high ratios of itabirite ore relative to hematite ore. Itabirite ore has iron grade between 35% and 60% and requires concentration to achieve shipping grade.	national power grid. Acquired from regional power companies or directly produced by Vale or supplied by Aliança Geração, de Energia.	provided by the national power network, acquired from regional power companies or produced directly by Vale, or supplied by Aliança Geração.	core products from the mines to Guaíba Island and Itaguaí maritime terminals in the State of Rio de Janeiro.
Central western System (1)	State of Mato Grosso do Sul	Comprised of Corumbá mines (two mines and two plants). Open-pit mining operations.	The iron ore reserves in Corumbá contain a high level of hematite ore that mainly generates granulated ore.	Open-pit mining operations. The mine operates through standard crushing, followed by classification, producing granulated and fine.	Power provided by the national power network, acquired from regional power companies.	Part of the sales is carried in barges through the Paraguay River to ports in Argentina, then going to the European and Asian markets. Another portion of the sales is carried by the clients, who take the products directly at the ports of Corumbá.
Samarco	Iron Quadrangle region of the State of Minas Gerais	Integrated system comprised of two mines, three processing plants, three pipelines, four pellet plants and a port.	Itabiriteore	Open-pit mining operations. Three processing plants located in the facility process ROM by means of standard crushing, classification and concentration steps, producing sinter feed, lump ore and pellet feed.	Power provided by the national power network, acquired from regional power companies or produced by Samarco.	Samarco mines serve Samarco processing plants by three pipelines of approximately 400 km. These pipelines transport the iron ore from the processing plants to the pelleting plants and from the pelleting plants to the port, in the State of Espírito Santo.

(1) Part of Vale s operations in the Central western System is conducted by MCR.

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1.2 Iron Ore Production

The following table sets forth information about Vale s iron ore production.

Mine/Plant	Type	Production for fiscal year ended on December 31 2012	2013	2014	Recovery Process	
		(million metric tons)			(%)	
Southeastern System						
Itabira	Open pit	37.7	34.0	35.5		58.4
Minas Centrais	Open pit	40.7	37.8	33.0		68.9
Mariana	Open pit	37.2	37.6	38.9		82.6
Total Southeastern System		**115.6**	**109.5**	**107.5**		
Southern System						
Minas Itabirito		31.8	31.0	33.0	71.5	
Vargem Grande	Open pit	22.6	22.0	25.0		82.7
Paraopeba	Open pit	25.8	26.0	28.2		92.8
Total Southern System		**80.3**	**79.0**	**86.3**		
Central western System						
Corumbá (MCR/Urucum)	Open pit	6.4	6.5	5.8		73.7
Total Centralwestern System		**6.4**	**6.5**	**5.8**		
Northern System						
Serra Norte	Open pit	106.8	104.9	117.4		94.4
Serra Leste	Open pit			2.2		98.1
Total Northern System		**106.8**	104.9	119.7		
Total of Vale		**309.0**	**299.8**	**319.2**		
Samarco (2)		10.9	10.9	13.1		55.1
Total		**320.0**	**310.7**	332.4		

(1) The mine and the Água Limpa plant are part of the Minas Centrais operations and are owned by Baovale, in which we own 100% of the voting shares and 50% of the total shares. Production figures for **Água Limpa were not adjusted to reflect Vale s ownership interest**

(2) Production figures for Samarco, in which we have a 50% interest, have been adjusted to reflect Vale s ownership interest.

1.1.3. Iron Ore Pellet Operations

Vale produces iron ore pellets in Brazil and in Oman, directly and by means of joint ventures, as shown in the table below. Vale also holds 25% in two iron ore pelleting plants in China, Zhuhai YPM Pellet Co., Ltd. (Zhuhai YPM) and Anyang Yu Vale Yongtong Pellet Co., Ltd. (Anyang). Vale s estimated total nominal capacity is 64.2 million tons per year (Mtpa), including the full capacity of its Oman pelleting plants, but without its joint ventures Samarco, Zhuhai YPM and Anyang. Of the total 2014 pellet production, including the production from joint ventures, 61.4% corresponded to blast furnace pellets, and 38.5% corresponded to direct reduction pellets, which are used in steel mills that employ the direct reduction process rather than blast furnace technology. The Company meets all the iron ore needs of its pelletizing plants and part of the iron ore needs for Samarco and Zhuhai YPM. In 2014, Vale sold 10.2 million metric tons of the mine production to Samarco and 0.7 million metric tons to Zhuhai YPM.

Firm / Plant	Description / History	Nominal capacity (Mtpa)	Power source	Other information	Our participation (%)	Partners
Brazil:						
Vale						
Tubarão (State of Espírito Santo)	Our Three wholly-owned pelleting units (Tubarão I, II, and VIII) and leasing of five plants. The iron ore is received from the mines in the Southeastern	36.7(1)	Power provided by the national power network, acquired from regional power	Pelleting operations held in Tubarão I and II were suspended on November 13, 2012, due to changes in the demand of the	100.0	

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Firm / Plant	Description / History	Nominal capacity (Mtpa)	Power source	Other information	Our participation (%)	Partners
	System and distribution is done by Vale s logistics infrastructure. The Tubarão VIII plant started operations in the first half ion 2014		companies, provided by Aliança Energia or produced directly by Vale.	steel industry for raw material , and they were replaced by operations at the Tubarão VIII plant, a more effective plant		
Fábrica (State of Minas Gerais)	Part of the Southern System. Receives iron ore from the João Pereira and Segredo mines. Production is transported through MRS and EFVM.	4.5	Power provided by the national power network, acquired from regional utility companies, provided by Aliança Energia or produced directly by Vale.		100.0	
Vargem Grande (State of Minas Gerais)	Part of the Southern System. Receives iron ore from the Sapecado, Galinheiro and Vargem Grande mines, and production is transported through MRS.	7.0	Power provided by the national power network, acquired from regional power companies, provided by Aliança Energia or produced directly by Vale.		100.0	
São Luís (State of Maranhão)	Part of the Northern System. Receives iron ore from Carajás mines and production is delivered to customers through Vale s Ponta da Madeira maritime	7.5	Power provided by the national power network, acquired from regional power companies, provided by Aliança Energia or produced directly by	On October 8, 2012, we suspended operations at the pelleting plant in São Luís, for reasons similar to the ones that led to the suspension of operations at the Tubarão I	100.0	

terminal.	Vale.	and II plants.

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Firm / Plant	Description / History	Nominal capacity (Mtpa)	Power source	Other information	Our participation (%)	Partners
Samarco	Four pelleting units with nominal capacity of 22.3 Mtpa. Pelleting units are located at Ponta Ubu, in Anchieta, Espírito Santo. The fourth pelleting plant started operations in the first half of 2014.	30.5	Power provided by the national power network, acquired from regional power companies or produced directly by Samarco.	In 2014, we started operation of a fourth pelleting plant with capacity of 8.3 Mtpa, to increase Samarco s pelleting nominal capacity to 30.5 Mtpa.	50.0	BHP Billiton Brasil Ltda.
Oman:						
Vale Oman Pelletizing Company LLC (VOPC)	Vale Industry Complex. Two pelleting plants (total capacity of 9.0 Mtpa for direct reduction pellets). Pelleting plants are integrated to Vale s distribution center with nominal capacity of 40.0 Mtpa.	9.0	Power provided by the national power network.		70.0	Oman Oil Company S.A.O.C.

(1) Vale s environmental operating licenses for pelleting plants in Tubarão provide for a capacity of 36.2 Mtpa.

1.1.4 Pellet Production

The table below provides information regarding Vale s main pellet production.

Firm	Fiscal year ending on December 31		
	2012	2013	2014

		(million metric tons)	
Vale(1)	43.3	39.0	43.0
Hispanobrás(2)	1.1		
Samarco (3)	10.7	10.6	12.1
Total Production	**55.1**	**49.6**	**55.1**

(1) The figure includes actual production, including the full production from Vale s pellet plants in Oman and four pelleting plants we leased in 2008. Vale signed a 10-year operating lease contract for Itabrasco s pellet plant in October 2008. Vale signed a five-year operating lease contract for Kobrasco s pellet plant in June 2008, renewed for another five years in 2013. Vale signed a 30-year operating lease contract for Nibrasco s two pellet plants in May 2008.

(2) On July 1, 2012, Vale signed a three-year operating lease contract for Hispanobrás pelleting plant, and started consolidating production.

(3) Production figures for Samarco, were adjusted to reflect Vale s ownership interest.

1.1.5. Clients, sales, and marketing

The company supplies all of its iron ore and pellets (including its share in joint-venture pellet production) to the steel industry. Prevailing and expected levels of demand for steel products affect demand for iron ore and pellets. Demand for steel products is influenced by several factors, such as global industrial production, civil construction and infrastructure investment.

In 2014, China accounted for 50% of Vale s iron ore and pellet shipments, and Asia, as a whole, accounted for 67%, while Europe, in turn, accounted for 16%, followed by Brazil with 12%. The ten largest customers of the Company collectively purchased 139.5 million metric tons

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of iron ore and pellets, representing 44% of the Company sales volumes of iron ore and pellets in 2014 and 44% of the total iron ore and pellet revenues. In 2014, no individual customer accounted for more than 10% of Vale s iron ore and pellet shipments.

In 2014, the Asian market (mainly Japan, South Korea, and Taiwan) and the European and Brazilian markets were the primary markets for Vale s blast furnace pellets, while the Middle East, North America and North Africa were the primary markets for direct reduction pellets.

Vale strongly emphasizes customer service in order to improve competitiveness. Vale works with its customers to understand their main objectives and to provide them with iron ore solutions to meet specific customer needs. Using the Company s expertise in mining, agglomeration and iron-making processes, Vale searches for technical solutions that will balance the best use of its world-class mining assets and the satisfaction of its customers. Vale believes that its ability to provide customers with a total iron ore solution and the quality of its products are very important advantages helping the Company to improve competitiveness in relation to competitors who may be more conveniently located geographically. In addition to offering technical assistance to customers, Vale operates sales support offices in Tokyo (Japan), Seoul (South Korea), Singapore, Dubai (UAE), and Shanghai (China) which support the sales made by Vale International. These offices also allow the Company to stay in closer contact with its customers, monitor their requirements and its contract performance, and ensure that the customers receive timely deliveries.

The Company sells iron ore and pellets under different agreements, including long-term agreement with customers and spot sales by means of auctions and business platforms. Vale s price determination is usually related to the IODEX, index of prices in the spot market and uses several mechanisms, including current spot prices and average prices for a specific period. When products are delivered prior to determination of the final price, Vale recognizes the sale based on a provisional price with subsequent adjustment to reflect the final price.

1.1.6. Competition

The global iron ore and iron ore pellet markets are highly competitive. The main factors affecting competition are price, quality and range of products offered, reliability, operating costs and shipping costs.

Vale s biggest competitors in the Asian market are located in Australia and include subsidiaries and affiliates of BHP Billiton PLC (BHP Billiton), Rio Tinto Ltd. (Rio Tinto), and Fortescue Metals Group Ltd (FMG). Vale is competitive in the Asian market for two reasons. First, steel companies generally seek to obtain the types (or blends) of iron ore and iron ore pellets that allow them to produce the intended final product in the most economical and efficient manner. Vale s iron ore has low impurity levels and other properties that generally lead to lower processing costs. For example, in addition to its high grade, the alumina grade of Vale s iron ore is very low compared to Australian ores, reducing consumption of coke and increasing productivity in blast furnaces, which is particularly important during periods of high demand. When demand is very high, the Company s quality differential usually is highlighted to customers. Second, steel companies often develop sales relationships based on a reliable supply of a specific mix of iron ore and iron ore pellets.

In terms of reliability, Vale s ownership and operation of logistics facilities in the Northern and Southeastern Systems help the Company to ensure that its products are delivered on time and at a relatively low cost. In addition, Vale continues developing a low-cost freight portfolio, aimed at enhancing its ability to offer products in the Asian market at CFR-based competitive prices, despite higher transportation costs, compared to Australian producers. To support this strategy, Vale built two distribution centers, one in Oman and the other in Malaysia, and two floating transfer stations (STFs) in the Philippines. Vale entered into medium and long-term freight contracts, and owns vessels, including large-size ore carriers, known as Valemax, which reduce power consumption and greenhouse gas emissions, carrying a larger amount of cargo in a single trip, offering lower freight rates. These investments increase the speed and flexibility for customization and reduce the market time required for its products.

Vale s main competitors in the European market are: Kumba Iron Ore Limited; Luossavaara Kiirunavaara AB (LKAB); Société Nationale Industrielle et Minière (SNIM); and Iron Ore Company of Canada (IOC), subsidiary of Rio Tinto. We are competitive in the European market for the same reasons we are competitive in Asia, but also due to the proximity of its port facilities to European customers.

The Brazilian iron market is also competitive. There are several smaller iron ore producers and new companies that are developing projects, such as Anglo Ferrous Brazil, Ferrous Resources and Bahia Mineração. Some steel plants, as Gerdau S.A. (Gerdau), Companhia Siderurgica Nacional (CSN), V&M do Brasil S.A. (Mannesmann), Usiminas, and ArcelorMittal, also have iron ore operations. Although price is important, quality and reliability are important factors as well. The Company believes that its integrated transportation systems, its high quality ore and technical support make it a strong competitor in the Brazilian market.

Regarding pelleting, Vale s main competitors are LKAB, ArcelorMittal Canada (formerly Quebec Cartier Mining Co.), Iron Ore Company of Canada (IOC), and Bahrain Stell (formerly Gulf Industrial Investment Co).

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1.2 Manganese ore and ferroalloys

1.2.1 Manganese ore production and operations

Vale conducts its manganese operations in Brazil through Vale and its wholly-owned subsidiaries Vale Manganês S.A. (Vale Manganês), and MCR. The Company s mines produce three types of manganese products:

- metallurgical ore used primarily in the production of manganese ferroalloys, raw material to produce carbon and stainless steel;
- natural manganese dioxide, suitable for the manufacturing of electrolytic batteries; and
- chemical ore used in various sectors for the production of fertilizers, pesticides and animal feed, and is also used as pigment in the ceramics industry.

Mining complex	Company	Location	Description / History	Mining	Operations	Power source	Access / Transportation
Azul (1)	Vale S.A.	Pará	Open pit mining operations and local processing plants.	High content ore (minimum manganese content of 40%)	Crushing, followed by classification, producing granulated and fine.	Power provided by the national power network, acquired from regional utility companies.	Manganese ore is carried in trucks and by EFC to Ponta da Madeira maritime terminal.
Morro da Mina	Vale Manganês	Minas Gerais	Open pit mining operations and a large processing plant.	Low content ore (24% of manganese).	Crushing, followed by average/screening classification, producing granulated and fine for ferroalloy plants in Barbacena and Ouro Preto.	Power provided by the national power network, acquired from regional utility companies.	Manganese ore is carried in trucks to the ferroalloy plants in Barbacena and Ouro Preto.
Urucum	MCR	Mato Grosso do Sul	Underground mining operations and local processing plants.	High content ore (minimum manganese content of 40%)	Crushing, followed by classification, producing granulated and fine.	Power provided by the national power network, acquired from regional utility companies.	The manganese ore is carried to the Rosario port (Argentina) in barges through the Paraguai and Paraná rivers.

(1) Vale Mina do Azul S.A. was incorporated by Vale S.A. on December 23, 2014.

The table below presents information on Vale s manganese production.

Mine	Type	Production during fiscal year ending December 31 2012	2013	2014	Process Recovery in 2014
		(million metric tons)			(%)
Azul	Open pit	1.9	1.9	1.7	52.4
Morro da Mina	Open pit	0.2	0.1	0.1	57.9
Urucum	Underground	0.3	0.4	0.6	81.4
Total		**2.4**	**2.4**	**2.4**	

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1.2.2 Ferroalloy production and operations

Vale conducts its manganese ferroalloy businesses through its wholly-owned subsidiary Vale Manganês.

The production of manganese ferroalloys consumes significant amounts of power, representing 7% of the Company total consumption in Brazil in 2014. The power supply for Vale s ferroalloy plants is provided through long-term power purchase contracts. For information on risks associated to possible power supply issues, see item 4.1 in this Reference Form.

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The Company produces several types of manganese ferroalloys, such as high carbon and medium carbon manganese and ferro-silicon manganese.

Plant	Location	Description / History	Nominal capacity	Power source
Minas Gerais Plants	Cities of Barbacena and Ouro Preto	Barbacena has 6 furnaces, two refinery stations and a crushing plant. Ouro Preto has 3 furnaces.	74,000 tons are processed per year at the plant in Barbacena and 65,000 tons per year at the plant in Ouro Preto.	Power provided by the national power network. Power also supplied by independent producers under long term agreements.
Bahia Plants	City of Simões Filho	Four furnaces, two conversion process and one sintering plant.	150,000 tons per year	Power provided by the national power network. Power also supplied by independent producers under long term agreements.

The table below presents information on Vale s production of ferroalloys.

Plant	Production during fiscal year ending December 31 2012	2013	2014
	(thousand metric tons)		
Barbacena	65	45	50
Ouro Preto	62	48	8
Simões Filho	79	82	113
Total	**206**	**175**	**171**

Vale has suspended operations at the Ouro Preto plant in February 2014, due to market conditions. In January 2015, the power purchase agreement, under which the Company purchases power to its plants in Barbacena and Ouro Preto terminated and the Company has suspended operations at the Barbacena plant as well. Vale is considering alternatives for power provision to these plants, considering power prices and current market conditions for manganese ferroalloys.

1.2.3 Manganese ore and ferroalloys: market and competition

The markets for manganese ore and ferroalloys are highly competitive. Competition in the manganese ore market takes place in two segments. High-grade manganese ore competes on a global seaborne basis, while low-grade ore competes on a regional basis. For some ferroalloys, high-grade ore is mandatory, while for others high- and low-grade ores are complementary. The main suppliers of high-grade ores are located in South Africa, Gabon, Australia and Brazil. The main producers of low-grade ores are located in Ukraine, China, Ghana, Kazakhstan, India and Mexico.

The manganese ferroalloy market is characterized by a large number of participants who compete primarily on the basis of price. The principal competitive factors in this market are the costs of manganese ore, power, logistics and reductants. Vale competes with stand-alone producers and integrated producers that also mine their own ore. The Company competitors are located mainly in countries that produce manganese ore or steel.

2. Base Metals

2.1 Nickel

2.1.1 Operations

Vale conducts its nickel operations mainly through its wholly-owned subsidiary Vale Canada, which operates two nickel production systems, one at the North Atlantic and one in Asia-Pacific. The Company also operates a third nickel production system, Onça Puma, in South Atlantic. Vale s nickel operations are presented in the table below.

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Mining System / Company	Location	Description / History	Operations	Mining license	Power source	Access / Transportation
North Atlantic						
Vale Canada	Canada Sudbury, Ontario	Integrated mining, crushing, smelting and refining operations to turn ore into refined nickel with nominal capacity of 66,000 metric tons of refined nickel per year and additional *feed* of nickel oxide to the refinery in Wales. Mining operations in Sudbury started in 1885. Vale acquired Sudbury operations in 2006.	Primarily underground mining operations with sulfate nickel with some copper, cobalt, PGMs, gold, and silver. The Company also conducts smelting and refining of nickel concentrate at its operations in Voisey s Bay. Additionally to producing finished nickel in Sudbury, Vale sends an intermediate product, nickel oxide, to its nickel refinery in Wales to process it into end products. The Company also has capacity to send nickel oxide to its Asian refineries.	Patented mining rights with no expiration date; mining leases end in 2015 and 2033; and mining license with undetermined validity term.	Power provided by the Ontario power network and produced directly by Vale.	Located at the TransCanada road and two main railroads cross Sudbury. Finished products are delivered to the North-American market by truck. For customers abroad, products are loaded in containers and travel in intermodal model (truck / train / cargo vessel) for ports in Canada s eastern and western coast.
Vale Canada	Canada Thompson, Manitoba	Integrated mining, crushing, *smelting* and refining operations to turn ore into refined nickel with nominal capacity of 50,000 metric tons of refined nickel per year. Mining at Thompson was discovered in 1956 and acquired by Vale in 2006.	Primarily underground mining operations with sulfate nickel. These resources also contain some copper and cobalt. The local concentrate with nickel concentrate at the operations in Voisey s Bay for smelting and refining aiming to achieve a high quality nickel plate product. Vale is considering eliminating *smelting* and refining processes in Thompson, due to new federal rules of sulfur dioxide emissions to be in force in 2015. Vale initially ensured an agreement with Environment Canada on emissions that could allow continuing with smelting and refining until 2019, subject to negotiation of an environmental performance agreement in 2015.	Application before the Lease Council matures between 2020 and 2030; mining leases end in 2034.	Power provided by public utilities at the province.	Finished products are delivered to the North-American market by truck. For customers abroad, products are loaded in containers and travel in intermodal model (truck / train / cargo vessel) for ports in Canada s eastern and western coast.

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Mining System / Company	Location	Description / History	Operations	Mining license	Power source	Access / Transportation
Vale Newfoundland & Labrador Limited	Canada Voisey s Bay, Newfound-land & Labrador	Open pit mine and ore processing into intermediate products nickel and copper concentrate. Voisey Bay operations started in 2005 and were acquired by Vale in 2006.	Comprised by the Ovoid open pit mine and deposits with potential for underground operations at a later moment. We extract sulfate nickel ore, which also contain some copper and cobalt. Nickel concentrates are currently sent to the operations in Sudbury and Thompson, for final processing (smelting and refinery), while copper concentrate is sold in the market. The Long Harbour refinery started operations in July 2014. Initially, Long Harbour is processing a mix of concentrate with high nickel content from Voisey s Bay with nickel matt from PT Vale Indonesia Tbk - PTVI.	Mining concession end in 2027, with right to later renewals, always for ten-year periods.	The power at Voisey s Bay is 100% provided by Vale diesel generators. The power at the Long Harbour refinery is provided by public utilities at the province.	Nickel and copper concentrates are carried to the port by trucks and then are shipped on solid bulk vessels for external markets or Vale s Canadian refining operations.
Vale Europe Limited	UK Clydach, Wales	Autonomous nickel refinery (producer of refined nickel), with nominal capacity of 40 thousand metric tons per year. The Clydach Refinery started operations in 1902 and was acquired by Vale in 2006.	Processes a nickel intermediate product nickel oxide, provided by Sudbury or Matsuzaka to produce refined nickel as powder or pellets.		Power provided by the national power network.	Transported for the end customer in the United Kingdom and the continental Europe by truck. Products are sent to customers abroad by truck to the ports in Southampton and Liverpool, and shipped into ocean containers.
Asia-Pacific						
PT Vale Indonesia Tbk (PTVI,)	Indonesia Sorowako, Sulawesi	Open pit mine and respective processing plant (producer of matte nickel, and intermediate product) with nominal capacity of approximately 80,000 metric tons of matte nickel per year. PTVI stock are traded at the Indonesia Stock Exchange. Vale indirectly holds 59.3% of the capital stock of PTVI and	PTVI extracts lateritic nickel ore and produces matte nickel which is sent to refineries in Japan. According to guaranteed sale agreements during the mine use life, PTVI sells 80% of its production to its wholly-owned subsidiary Vale Canada and 20% to Sumitomo.	The employment agreement ends in 2025, but there is an amendment entered with the Government of Indonesia in	Power produced at PVTI low cost hydroelectric power plants in the Larona River (there are currently three units). PTVI has thermal	Carried by truck for approximately 55 km to the river port, in Malili, and shipped in barges to load cargo ships to send to Japan.

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Mining System / Company	Location	Description / History	Operations	Mining license	Power source	Access / Transportation
		Sumitomo Metal Mining Co., Ltd (Sumitomo) holds 20.2% and Sumitomo Corporation hold 0.1% and the public holds 20.5%. PVTI was created in 1968, started operations in 1978 and was acquired by Vale in 2006.		2014, that grants to Vale the right to extend its operations until 2045, for two consecutive ten-year periods, subject to the approval of the Government of Indonesia, upon compliance with conditions in the amendment.	generators to complement its power supply with a power source that is not subject to hydrological factors.	
Vale Nouvelle-Calédonie S.A.S (VNC)	New Caledonia Southern Province	Mining and processing operations (producer of nickel oxide and cobalt carbonate). VNC shares are held by Vale (80.5%), Sumic (14.5%) and Société de Participation Minière du Sud Caledonien SAS (SPMSC) (5%).	Vale s nickel operations in New Caledonia are in *ramp-up*. VNC uses a high-pressure acid leaching process (HPAL) to handle lateritic limonitic and lateritic saprolitic ores. The Company expects to continue with the *ramp-up* in VNC in the next three years to reach nominal production capacity of 57,000 metric tons per year of nickel contained as nickel oxide, to be subsequently processed in its facilities in Asia, as hydroxide (IPNM) and 4,500 metric tons of cobalt as carbonate.	Mining concession ending between 2015 and 2051.	Power supplied by the national power network and independent producers.	Products are carried into containers and transported by truck for approximately 4 km to the Prony port.
Vale Japan Limited	Japan - Matsuzaka	Autonomous nickel refinery (producer of refined nickel), with nominal capacity of 60,000 metric tons per year. Vale holds 87.2% of shares, and Sumitomo holds the remaining stock. The refinery was	Produces intermediate products to be subsequently treated in Vale s refineries in Asia and the United Kingdom, and nickel end products using matte nickel provided by PTVI.		Power provided by the national power network. Acquired from regional utilities.	Products are transported by public roads to customers in Japan. For customers abroad, products are carried into containers in the

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Mining System / Company	Location	Description / History	Operations	Mining license	Power source	Access / Transportation
		built in 1965 and acquired by Vale in 2006.				plant and sent through the Yokkaichi and Nagoya ports.
Vale Taiwan Ltd	Taiwan - Kaoshiung	Autonomous nickel refinery (producer of refined nickel), with nominal capacity of 18,000 metric tons per year. The refinery started production in 1983 and was acquired by Vale in 2006.	Produces refined nickel for the stainless steel industry, using intermediate products from its operations in Matsuzaka and New Caledonia.		Power provided by the national power network. Acquired from regional utilities.	Products transported by truck on public roads for customers in Taiwan. For customers abroad, products are carried into containers at the plant and sent through the Kaoshiung port.
Vale Nickel (Dalian) Co. Ltd	China - Dalian, Liaoning	Autonomous nickel refinery (producer of refined nickel), with nominal capacity of 32,000 metric tons per year. Vale holds 98.3% of shares and a Ningbo Sunhu Chemical Products Co., Ltd. holds the remaining 1.7%. The refinery started production in 2008.	Produces refined nickel for the stainless steel industry, using intermediate products mainly from its operations in Matsuzaka and New Caledonia.		Power provided by the national power network. Acquired from regional utilities.	Product carried by truck on public roads and railroads for customers in China. Also provided by containers for some foreign and domestic customers.
Korea Nickel Corporation	South Korea Onsan	Autonomous nickel refinery (producer of refined nickel), with nominal capacity of 30,000 metric tons per year. Vale holds 25.0% of shares and remaining shares are held by Korea Zinc Co., Ltd, Posteel Co., Ltd, Young Poong Co., Ltd. and others. The refinery started production in 1989.	Produces mainly refined nickel for the local stainless steel industry in Korea, using mainly intermediate from Vale s operations in Matsuzaka and New Caledonia.		Power provided by the national power network. Acquired from regional utilities.	KNC production is transported by truck in public roads for customers in Korea and is exported in containers for customers abroad, starting at the Busan and Ulsan ports.
South Atlantic						
Vale/Onça Puma	Brazil - Ourilândia do Norte, Pará	Mining, smelting, and refining operations producing high quality ferro-nickel to be used in the stainless steel industry	The Onça Puma mine is built over a nickel deposit of lateritic and saprolitic ore. The operation produces ferro-nickel through a rotating electric furnace process. Vale is currently operating with one single line, which nominal capacity is estimated at 25,000	Mining concession for undetermined period.	Power provided by the national power network, acquired from regional utility companies or provided by Aliança	Ferro-nickel is transported by paved public road and by EFC to Itaqui maritime terminal, in the State of Maranhão. Exporting operations are done in ocean

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Mining System / Company	Location	Description / History	Operations	Mining license	Power source	Access / Transportation
			metric tons per year. The Company will consider opportunities to restart operations at the second line, depending on market perspectives and performance of the single- line furnace.		Geração or directly by Vale.	containers.

(1) Sumic is a joint venture between Sumitomo and Mitsui. Under the shareholders agreement between Vale Canada and Sumic, as amended, if VNC fails to start commercial production by December 2015, Sumic will sell its interest in VNC to Vale Canada for a predetermined price. If VNC starts commercial production by December 2015, Sumic will have the option to repurchase the shares held by Vale Canada in VNC equivalent to dilution of Sumic interest in VNC capital stock by up to 21%. SPMSC must increase its share in VNC to 10% in two years starting at the beginning of the commercial production.

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2.1.2 Production

The following table sets forth Vale s annual mine production by operating mine (or on an aggregate basis for mining areas, operating in Sulawesi, Indonesia, operated by PTVI because it has mining areas rather than mines) and the average percentage grades of nickel and copper. The mine production at Sulawesi represents the product from PTVI s dryer kilns delivered to PTVI s processing operations and does not include nickel losses due to drying and smelting. For Sudbury, Thompson and Voisey Bay operations, the production and average grades represent the mine product delivered to those operations respective processing plants and do not include adjustments due to processing, smelting or refining. For VNC operations, in New Caledonia, production and average content represent local ore production, without losses due to processing.

	Production during fiscal year ending December 31 (thousand metric tons, except percentages)								
	2012			2013			2014		
		Grade			Grade			Grade	
	Production	Copper (%)	Nickel (%)	Production	Copper (%)	Nickel (%)	Production	Copper (%)	Nickel (%)
Ontario operating mines									
Copper Cliff North	792	1.09	0.92	913	1.32	1.28	1,053	1.45	1.34
Creighton	797	1.80	1.84	915	2.01	2.19	903	1.81	2.47
Stobie	2,006,	0.56	0.66	1,887,	0.59	0.65	2,089	0.58	0.66
Garson	643	1.56	1.61	815	1.42	1.75	678	1.39	1.75
Coleman	1,062,	2.58	1.51	1,515,	3.15	1.52	1,385	3.10	1.52
Ellen	371	0.44	0.93	109	0.49	1.00	181	0.62	1.07
Totten	6	2.37	1.15	64	1.84	1.92	303	1.98	1.50
Gertrude	36	0.27	0.72	196	0.32	0.89			
Total Ontario operations	**5,714,**	**1.29**	**1.14**	**6,414,**	**1.61**	**1.33**	6,591	1.57%	1.36
Manitoba operating mines									
Thompson	1,160		1,86	1,175		2,07	1,184		1.95
Birchtree	643		1,34	613		1,39	545		1.39
Total Manitoba operations	**1,804**		**1,67**	**1,788**		**1,84**	1,729		1.78%
Voisey s Bay operating mines									
Ovoid	2,351	1,94	3,11	2,318	1,68	2,89	2,243	1.54%	2.58%
Sulawesi operating mining areas									
Sorowako	3,678		2,02	4,369		2,00	4,391		1.99%
Mine operations in New Caledonia									
VNC	1,179		1,27	1,860		1,36	2,134		1.44%
Mines in operation in Brazil									
Onça Puma	1,975		1,87	263		2,28	1,358		2.19%

The following table sets forth information about Vale s nickel production, including: (i) nickel refined at its facilities, and (ii) intermediates designated for sale. The figures below are reported on an ore-source basis.

Mine	Type	Production for fiscal year ending December 31 2012	2013	2014
			(Thousands of metric tons)	
Sudbury (1)	Underground	65.5	69.4	64.3
Thompson (1)	Underground	24.2	24.5	26.1
Voisey s Bay(2)	Open pit	61.9	63.0	48.3
Sorowako (3)	Open pit	69.0	78.8	78.7
Onça Puma(4)	Open pit	6.0	1.9	21.4
New Caledonia (5)	Open pit	4.5	16.3	18.7
External (6)		5.9	6.4	17.5
Total(7)		**237.0**	**260.2**	274,9

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(1) Primary nickel production only (i.e., does not include secondary nickel from unrelated parties).

(2) Includes finished nickel produced at its Sudbury and Thompson operations.

(3) These figures are not required to reflect Vale s share. Vale holds 59.2% interest in PTVI, which owns the Sorowako mines.

(4) Primary nickel production only. Nickel found in iron nickel.

(5) Nickel found in NHC and NiO. These figures are not required to reflect Vale s share. Vale holds 80.5% in VNC.

(6) Finished nickel processed at Vale s facilities using feeds purchased from unrelated parties.

(7) These figures do not include tolling of feeds for third-party.

2.1.3 Clients and sales

Vale s nickel customers are broadly distributed on a global basis. On December 31, 2014, 41% of the total nickel sales were delivered to customers in Asia, 30% to North America, 28% to Europe and 1% to other markets. The Company has short-term fixed-volume contracts with customers for the majority of its expected annual nickel sales. These contracts generally provide stable demand for a significant portion of its annual production.

Nickel is an exchange-traded metal, listed on the London Metal Exchange (LME), and most nickel products are priced according to a discount or premium to the LME price, depending primarily on the nickel product s physical and technical characteristics. Vale s finished nickel products represent what is known in the industry as primary nickel, meaning nickel produced principally from nickel ores (as opposed to secondary nickel, which is recovered from recycled nickel-containing material). Finished primary nickel products are distinguishable according to the following characteristics, which determine the product price level and the suitability for various end-use applications:

- Nickel content and purity level: (i) intermediate products present various levels of nickel content, (ii) nickel pig iron has 1.5% to 6% nickel, (iii) ferro-nickel has 10% to 40% nickel, (iv) finished nickel presenting less than 99.8% of nickel, including products such as Tonimet and Utility Nickel , (v) standard LME grade nickel has a minimum of 99.8% nickel, and (vi) high purity nickel has a minimum of 99.9% nickel and does not contain specific elemental impurities;
- Shape (such as pellets, discs, squares, strips and foams); and
- Size.

In 2014, the principal end-use applications for nickel were:

- Austenitic stainless steel (68% of global nickel consumption);
- Non-ferrous alloys, alloy steels and smelting (16% of global nickel consumption);
- Nickel plating (7% of global nickel consumption); and
- Specialty applications, such as batteries, chemicals and powder metallurgy (9% of global nickel consumption).

In 2014, 61% of Vale s refined nickel sales were made into non-stainless steel applications, compared to the industry average for primary nickel producers of 32%, offering better stability for its sales volumes. As a result of Vale s focus on such higher-value segments, the average realized nickel prices for refined nickel have constantly exceeded LME cash nickel prices.

The Company offers sales and technical support to its customers on a global basis. The Company has a well-established global marketing network for refined nickel, based in Toronto, Canada. Vale also has sales and technical support offices in St. Prex (Switzerland), Saddle Brook, New Jersey (United States), Tokyo (Japan), Shanghai (China), Singapore, and Kaohsiung (Taiwan).

2.1.4 Competition

The global nickel market is highly competitive. Vale s key competitive strengths include its long-life mines, low production costs compared to other nickel producers, sophisticated exploration and processing technologies, along with a diversified portfolio of products. The global marketing reach, diverse product mix, and technical support direct the products to the applications and geographic regions that offer the highest margins for its products.

Nickel deliveries represented 14% of global consumption for primary nickel in 2014. In addition to Vale, the largest suppliers in the nickel industry (each with their own integrated facilities, including nickel mining, processing, refining and marketing operations) are: Mining and Metallurgical Company Norilsk Nickel (Norilsk), Jinchuan Nonferrous Metals Corporation (Jinchuan), BHP Billiton, and Glencore Xstrata. Together with Vale, these companies accounted for about 46% of global finished primary nickel production in 2014.

While stainless steel production is a major driver of global nickel demand, stainless steel producers can use nickel products with a wide range of nickel content, including secondary nickel (scrap). The choice between primary and secondary nickel is largely based on their relative prices and availability. In recent years, secondary nickel has accounted for about 40% to 43% of total nickel used to manufacture stainless steels, and primary nickel has accounted for about 57% to 601%. Nickel pig iron is a low-grade nickel product made in China from imported lateritic ores (primarily from the Philippines and Indonesia) that is suitable primarily for use in stainless steel production. Starting in January 2014, the production of nickel pig iron in China was adversely affected by the restrictions on the exportation of unprocessed ore in Indonesia. Thus, there is an estimate that the nickel pig iron production dropped 8% year after year to approximately 460,000 metric tons, representing 23% of the global supply of primary nickel. The delivery of ore previously shipped and significant ore inventories stored in Indonesia and China minimized the effects of this drop in nickel pig iron production in 2014. Vale expects that the nickel pig iron production in China will drop even more in 2015 and 2016, with the end of ore inventories in Indonesia and China.

Competition in the nickel market is based primarily on quality, reliability of supply and price. Vale believes its operations are competitive in the nickel market because of the high quality of its nickel products and its relatively low production costs.

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2.2 Copper

2.2.1 Operations

The Company operates its copper businesses in Brazil at the parent-company level and in Canada through its wholly-owned subsidiaries.

Mining complex / Location	Location	Description / History	Mining / Operations	Mining License	Power source	Access / Transportation
Brazil						
Vale/Sossego	Carajás, State of Pará	Two main areas of copper, Sossego and Sequeirinho, and a processing facility to concentrate the ore. Sossego was developed by Vale and started production in 2004.	Copper ore is explored in an open pit mine and is processed by primary crushing and transportation, SAG milling (a semiautogene mill using a large rotating drum full of ore, water and steel crushing spheres transform the ore into a fine paste), milling, copper fluctuation in concentrate, waste is disposed of, concentrate, discharge filter.	Mining concession for undetermined period.	Power provided by the national power network, acquired from Eletronorte, under long term power purchase agreement, directly produced by Vale or provided by Aliança Geração.	The concentrate is transported by truck to the storage terminal in Parauapebas and, subsequently, is taken by the EFC to the Ponta da Madeira maritime terminal, in São Luís, Maranhão. Vale built an 85 km road connecting Sossego to Parauapebas.
Vale/Salobo	Carajás, State of Pará	Salobo I is in r*amp-up* to total capacity of 100,000 tpa of concentrate copper. Vale expects that Salobo will reach total capacity of 200.000 tpa in 2016, after expansion of Salobo II.	Vale s copper and gold mine in Salobo is an open pit mine and the mine operates by primary and secondary standard crushing, rollers, sphere milling, concentrate copper floating, residue disposal, concentrate closeness, disposal filter.	Mining concession for undetermined period.	Power provided by the national power network, acquired from Eletronorte under the terms of power purchase agreements or provided by Aliança Geração.	The concentrate is transported by truck to the storage terminal in Parauapebas and, subsequently, is taken by the EFC to the Ponta da Madeira maritime terminal, in São Luís, Maranhão. Vale built a 90 km road connecting Salobo to Parauapebas.
Canada						
Vale Canada				See table of nickel operations.		

	Canada Sudbury, Ontario	See Base metals Nickel - Operations	Vale generates two intermediate copper products: concentrate copper and copper anodes and cathodes of electrolytic copper as by product of nickel refining operations.	
Vale	Canada	See Base metals	At Voisey s Bay,	See table of nickel operations

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Mining complex / Location	Location	Description / History	Mining / Operations	Mining License	Power source	Access / Transportation
Canada/Voisey s Bay	Voisey s Bay, Newfoundland & Labrador	Nickel - Operations	Vale produces concentrate copper.			
Zambia						
Lubambe	Zambian Copperbelt	Lubambe copper mine (formerly known as Konkola North), includes an underground mine, plant and related infrastructure. TEAL (50/50 joint venture with ARM) indirectly holds 80% interest in Lubambe. Zambia Consolidated Copper Mines Investment Holding PLC Ltd. holds the remaining share (20%).	Nominal production capacity of 45,000 metric tons per year of concentrate copper. Production started in October 2012 and is currently as ramp-up.	Mining concessions end in 2033.	Long term power supply agreement with a Zesco (power supplier owned by Zambia).	Concentrate copper is transported by truck to local smelters.

2.2.2 Production

The following table provides information about Vale s copper production.

Mine	Type	2012	Fiscal year ending December 31 2013 (million metric tons)	2014
Brazil:				
Salobo:	Open pit	13	65	98
Sossego	Open pit	110	119	110
Canada:				
Sudbury	Underground	79	103	98
Voisey s Bay	Open pit	42	36	33
Thompson	Underground	3	2	2
External (1)		29	24	29
Chile:				
Tres Valles (2)	Open pit and underground	14	11	
Zambia:				
Lubambe (3):	Underground	1	9	10
Total		**290**	**370**	**380**

(1) Vale processes copper at its facilities using third party resources.

(2) Vale sold Tres Valles in December 2013. Production in 2013 refers to production by the end of October

(3) Vale s attributable production capacity of 40%

2.2.3 Clients and sales

The copper concentrate from Sossego and Salobo is sold under mid and long-term contracts executed with copper smelters in South America, Europe, India, and Asia. Vale maintains medium- and long-term copper distribution agreements with Glencore Canada, to sell anode copper and a significant part of copper concentrate produced in Sudbury. Copper concentrate from Voisey s Bay is sold through mid-term agreements with clients in Europe. Electrolytic copper from Sudbury is sold in North America through short-term sale agreement.

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2.2.4 Competition

The copper global market is highly competitive. Producers are mining companies and customized smelters that cover all areas of the world; the customers are mostly producers of copper wires, rods and alloy. Competition takes place mostly at a regional level, and is based mostly in production, quality, distribution reliability and logistics costs. The largest cathode copper producers in the world are Corporación Nacional del Cobre de Chile (Codelco), Aurubis AG, Glencore Xstrata, Freeport-McMoRan Copper & Gold Inc. (Freeport-McMoRan), Jiangxi Copper Corporation Ltd and Glencore, operating at the parent company level or through subsidiaries. Vale s participation in the global refined copper market is negligible, because the Company has adopted a more competitive market position for concentrate copper.

Copper concentrate and copper anodes are intermediate products in the copper production chain. The concentrate and anode markets are competitive, with several producers, but few participants and smaller volumes than the cathode copper market due to the high levels of integration of large copper producers.

In the copper concentrate market, the main producers are mining companies located in South America, Indonesia, and Australia, while the consumers are smelters located in Europe and Asia. Competition in the copper concentrate market takes place mostly at a global level, and is based mostly in product cost, quality, logistics costs and distribution reliability. Main competitors in the copper concentrate market are BHP Billiton, Antofagasta plc, Freeport-McMoRan, Glencore Xstrata, Codelco, and Anglo American, operating at a parent company level and through subsidiaries. Vale s market share in 2014 was approximately 3% of the total concentrate market.

The copper anode/blister market is very limited in this industry. In general, anodes are produced to supply the integrated refining of every company. Anode/blister trade is limited to facilities that have more smelting capacity than what the plant can handle or the financial situation regarding logistics costs is an incentive to purchase anodes from other smelters. The main competitors in the anode market in 2014 were Codelco, Glencore Xstrata, and China Nonferrous Metals, operating at a parent company level or through its subsidiaries.

2.3 PGM and other precious metals

As by-products of the Sudbury nickel operations in Canada, Vale recovers significant quantities of metals of the platinum group, as well as small quantities of gold and silver. The Company operates a processing facility in Port Colborne, Ontario, which produces PGMs, gold and silver intermediate products, using feeding from the operation in Sudbury. Vale has a refinery in Acton, England, where it processes intermediate products, as well as feeds purchased from unrelated parties and toll refined products. In the fiscal year ending on December 31, 2014, PGM concentrates from its Canadian operations account for 46.1% of its PGM production, which also includes metals purchased from unrelated parties. The base metal commercial department sells PGMs and other precious metals, as well as products from unrelated parties and toll-refined products, based on commission. Vale s copper concentrate from the Salobo and Sossego mines in Carajás, State of Pará, Brazil, also contain gold, which value is considered in the sale of such concentrates.

In February 2013, Vale Switzerland S.A. signed an agreement with Silver Wheaton Corp. to sell 70% of the gold produced as a byproduct at its nickel mines in Sudbury, in Canada, in the next 20 years, and with Silver Wheaton (Caymans) Ltd. to sell 25% of payable gold flows produced as byproduct at its copper mine in Salobo, in Brazil, during the mine use life. Under the terms in the gold flow agreement, Silver Wheaton received 74,325 troy ounces of gold in 2014.

Additionally, on March 2, 2015, Vale executed a contractual amendment with Silver Wheaton (Caymans) Ltd., a wholly-owned subsidiary for purpose of selling the additional 25% flow of payable gold, produced as subproduct of copper mining at the Salobo mine during the mine s use life. For further information on the contracts executed with Silver Wheaton Corp. and Silver Wheaton (Caymans) Ltd., see items 5.2(e), 6.7, and 10.3 (b) in this Reference Form.

The following table presents information on the Company s production of precious metals.

		Fiscal year ending December 31		
		2012	**2013**	**2014**
Mine(1)	**Type**		**(Thousand troy ounces)**	
Sudbury:				
Platinum	Underground	134	145	182
Paladium	Underground	251	352	398
Gold	Underground	69	91	83
Salobo:				
Gold	Open pit	20	117	160
Sossego:				
Gold	Open pit	75	78	78

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2.4 Cobalt

Vale recovers significant quantities of cobalt, classified as a minor metal, as a by-product of its nickel operations. In the year ending on December 31, 2014, the Company produced 362 metric tons of refined cobalt metal at the Port Colborne refinery 1,124 metric tons of cobalt in a cobalt-based intermediate at the nickel operations in Canada and New Caledonia, the remaining cobalt production consisted of 1,257 metric tons of cobalt contained in other intermediate products (such as nickel concentrates). As result of the ramp-up of VNC operations in New Caledonia, the production of intermediate cobalt as by-product of nickel production will increase. Vale sells cobalt on a global basis. Its cobalt metal, which is electro-refined at the Port Colborne refinery, has very high purity levels (99.8%), value higher than specified in LME contracts. Cobalt metal is used in the production of various alloys, particularly for aerospace applications, as well as the manufacture of cobalt-based chemicals.

The following table sets forth information on Vale s cobalt production.

Mine	Type	Fiscal year ending December 31 2012	2013	2014
			(Metric tons)	
Sudbury	Underground	589	853	833
Thompson	Underground	96	292	489
Voisey s Bay	Open pit	1,221	256	952
New Caledonia	Open pit	385	1,117	384
External sources (1)		52	13	84
Total		**2,343**	**3,532**	**743**

(1) These figures do not include unrelated-party tolling of feeds for unrelated parties.

3. Coal

3.1. Operations

Vale produces metallurgic and thermal coal by its subsidiaries Vale Moçambique, which operates the Moatize mine, and Vale Australia, which operates coal assets in Australia by wholly-owned subsidiaries and joint ventures. Vale also holds minority interest in two Chinese companies, Henan Longyu Energy Resources Co., Ltd. (Longyu) and Shandong Yankuang International Coking Company Limited (Yankuang), as presented in the table below.

Company / Mining complex	Location	Description / History	Mining / Operations	Mining license	Power source	Access / Transportation
Mozambique						

Vale Moçambique						
Moatize	Tete, Mozambique	Open pit mine developed directly by Vale. Operations started in August 2011 and should achieve nominal production capacity of 22 Mtpa, comprised mainly of metallurgic coal. Vale holds 95.0% interest and the remaining shares are held by Empresa Moçambicana de Exploração Mineira, S.A. Due to conclusion of the agreement executed in December 2014, Mitsui will acquire 15% of Vale s share in Vale Moçambique.	Produces metallurgic and thermal coal. The main brand product of Moatize is Chipanga premium hard coking coal, but there is operational flexibility for other products. The ideal product portfolio will come as result of market surveys. Coal from mines is processed at a coal	Mining concession ends in 2032, renewable after this date.	Power provided by local utility companies. Supply of local back-up.	Coal is transported from the mine through railroad Linha do Sena to the Beira port and in the future also through the Nacala Corridor to the Nacala port.

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Company / Mining complex	Location	Description / History	Mining / Operations	Mining license	Power source	Access / Transportation
			handling and preparation plant CHPP) with capacity of 4,000 metric tons per hour.			
Australia						
Integra Coal	Hunter Valley, New South Wales	Open pit and underground mine acquired with AMCI Investments Pty Ltd (AMCI) in 2007, located 10 km to the Northeast of Singleton, in Hunter Valley, in New South Wales, Australia. Vale holds 64.8% interest and the remaining shares are held by Nippon Steel (NSC), JFE Group (JFE), Posco, Toyota Tsusho Australia, Chubu Electric Power Co.	Produces metallurgic and thermal coal. Operations include a coal underground mine that produces through the *longwall* methods and an open pit mine. The coal is processed in a coal handling and preparation plant (CHPP) with capacity of 1,200 metric tons an hour. Operations of the Integra coal mine were suspended in May 2014 because they were not economically viable under current market conditions.	Mining licenses expire in 2023, 2026, 2030, and 2033.	Power provided by the national power network, acquired from regional utility companies.	Production is carried in trains carried for 83 km to the Newcastle Port, New South Wales, Australia.
Carborough Downs	Bowen Basin, Queensland	Acquired with AMCI in 2007, mining concessions in Carborough Downs include Rangal Coal Measures, from Bowen Basin, with the Leichardt and Vermont mines. Both mines offer cock and may be improved to produce metallurgic coal and pulverized injection coal (ICP). Vale holds 90.0% interest and	Metallurgic coal. The Leichardt mine is Vale s main development goal and comprises 100% of its reserve and the basis of current resources. The Carborough Downs coal is processed at Carborough Downs CHPP, with processing capacity of 1,000	Mining licenses expire in 2035 and 2039.	Power provided by the national power network, acquired from regional utility companies.	Product is carried in trains at the cargo railroad and carried for 163 km to the Dalrymple Bay Coal Terminal, in Queensland, Australia.

		the remaining shares are held by JFE, Posco.	metric tons an hour.			
Isaac Plains	Bowen	The Isaac Plains open pit	Metallurgic and	Mining	Power	Carried for

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Company / Mining complex	Location	Description / History	Mining / Operations	Mining license	Power source	Access / Transportation
	Basin, Queensland	mine, acquired with AMCI in 2007, is located close to Carborough Downs, in the center of Queensland. The mine is managed by Isaac Plains Coal Management, on behalf of the members of the consortium. Vale holds 50.0% of interest and the remaining shares are held by a Sumitomo subsidiary.	thermal coal. Coal is classified as medium-volatile bitumen coal, with low sulfur content. Coal is processed at Isaac Plains CHPP, with capacity of 500 metric tons per hour. Operations at the Isaac Plains mine were suspended in November 2014 as they were not economically viable under current market conditions.	licenses expire in 2025.	provided by the national power network, acquired from regional utility companies.	172 kilometers to the Dalrymple Bay Coal Terminal.

3.2 Production

The table below presents information on Vale s marketing coal production.

		Production during fiscal year ending December 31		
		2012	2013	2014
Operation	**Mine type**		(thousand metric tons)	
Metallurgic coal:				
Vale Australia				
Integra Coal(1)(4)	Underground and open pit	962	1.410	715
Isaac Plains(2)	Open pit	709	656	746
Carborough Downs(3)	Underground	911	2.447	1,857
Vale Moçambique				
Moatize(5)	Open pit	2,501	2.373	3,124
Total metallurgic coal		**2.766**	**6,885**	**6,443**
Thermal coal:				
Vale Australia				
Integra Coal(1)	Open pit	351	87	92
Isaac Plains(2)	Open pit	381	347	326
Vale Moçambique				
Moatize(5)	Open pit	1,267	1.444	1,784
Total thermal coal		**4.506**	**1,878**	**2,202**

(1) These figures correspond to Vale s participation of 61.2% in Integra Coal, a joint venture constituted as a partnership. Vale s interest in Integra Coal increased to 64.8 in December 2014

(2) These figures correspond to Vale s participation of 50.0% in Isaac Plains, a joint venture constituted as a partnership.

(3) These figures correspond to Vale s participation of 85.0% in Carborough Downs, a joint venture not constituted as a partnership. Vale s interest in Carborough Downs increased to 90% in December 2014.

(4) Operations at Integra Coal and Isaac Plains are suspended since May and November 2014, respectively Broadlea Coal has been under repair and maintenance since December 2009

(5) These figures refer to 100% production at Moatize, and are not adjusted to reflect Vale s portion.

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3.3 Clients and sales

Coal sales at Vale s operations in Australia are basically geared towards the Eastern Asian market. The coal sales from its Moatize operations, in Mozambique, aim global steel markets, including Asia, India, Africa, Europe and Americas. Vale s Chinese coal joint ventures directed their sales to the Chinese market.

3.4 Competition

The global coal industry, basically made up by the hard coal (metallurgical and thermal) and brown / lignite coal markets, is highly competitive.

The growing demand for steel, particularly in Asia, continues to promote a strong demand for metallurgical coal, while the increased power demand supports the demand for thermal coal. Vale expects a strong supply and lower prices for metallurgical coal in the coming years, reducing investments in greenfield projects, which may cause unbalance in the long term supply. Significant port and railroad limitations in some of the countries where Vale s main providers are located, which cannot be solved with significant capital investment, may lead to a limited availability of additional metallurgical coal.

Competition in the coal industry is based mostly in production cost savings, coal quality, and transportation cost. Vale s main strong points are ownership of a transportation corridor, proximity compared to the Atlantic and Indian markets (compared to its main competitors) and low production costs (compared to other producers).

The main participants in the transoceanic coal market are subsidiaries and affiliates and joint ventures BHP Billiton, Glencore Xstrata, Anglo American, Rio Tinto, Teck Cominco, Peabody, Walter Energy, and Shenhua Group, and others.

4. Fertilizers

3.1. Phosphates

Vale operates its phosphate business through its subsidiary and joint venture, as presented in the table below.

Firm	System	Voting	Our participation (%)	Total (%)	Our partners

Vale Fertilizantes	Uberaba, Brazil	100.0	100.0	
MVM Resources International, B.V	Bayóvar, Peru	51.0	40.0	Mosaic, Mitsui & Co.

Vale Fertilizantes is a company that produces phosphate rock, phosphate fertilizers (P), (e.g. monoammonium phosphate (MAP), dicalcium phosphate (DCP), triple superphosphate (TSP) and single superphosphate (SSP)) and nitrogen (N) fertilizers (e.g., ammonia and ammonium nitrate). It is the largest producer of phosphate and nitrogen crop nutrients in Brazil. Vale Fertilizantes operates the following phosphate rock mines by means of concessions for undetermined term: Catalão, in the State of Goiás, Tapira and Patos de Minas and Araxá, in the State of Minas Gerais, and Cajati, in the State of São Paulo, all in Brazil. In addition, Vale Fertilizantes has nine processing plants for the production of phosphate and nitrogen nutrients located in Catalão, Goiás; Araxá, Patos de Minas, and Uberaba, in Minas Gerais; Guará, Cajati, and three plants in Cubatão, in Sao Paulo.

Since 2010, we also operate the Bayovar phosphate rock, in Peru, with nominal production capacity of 3.9 Mtpa, by means of one concession for undetermined term.

The following table contains information regarding Vale s phosphate rock production.

Mine	**Type**	**Fiscal year ending December 31** **2012**	**2013**	**2014**
		(million metric tons)		
Bayóvar	Open pit	3,209	3,546	3,801
Catalão	Open pit	1,026	1,057	1,055
Tapira	Open pit	2,068	1,869	2,055
Patos de Minas	Open pit	44	53	73
Araxá	Open pit	1,084	1,111	883
Cajati	Open pit	550	640	605
Total		**7,982**	**8,277**	**8,421**

The following table contains information regarding Vale s production of phosphate and nitrogen nutrients.

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Product	Fiscal year ending December 31 2012	2013 (million metric tons)	2014
Monoammonium phosphate (MAP)	1,201	1,128	1,065
Triple superphosphate (TSP)	913	905	910
Single superphosphate (SSP)	2,226	2,102	1,854
Bicalcium phosphate (DCP)	511	444	502
Ammonia(1)	475	347	178
Urea(2)	483	219	0
Nitric acid	478	416	469
Ammonium Nitrate	490	419	485

(1) After the sale of Araucária in June 2013, Vale produces ammonia only in the plant in Cubatão.

(2) After the sale of Araucária in June 2013, Vale no longer produces urea.

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4.2 Potash

Vale s potash operations are concentrated in Brazil and are carried out by the group comptroller, Vale S.A., at the parent-company level, by means of mining concessions for undetermined term. We entered a leasing agreement for Taquari-Vassouras, the only potash mine in Brazil (in Rosario do Catete, in the State of Sergipe), with Petrobras since 1992. In April 2012, we extended the concession for other 30 years. The following table sets forth information on Vale s production of potash:

Mine	Type	2012	Fiscal year ending December 31 2013 (Thousands of metric tons)	2014	Process Recovery in 2014 (%)
Taquari-Vassouras	Underground	549	492	492	82.9

4.3 Clients and sales

All potash sales from the Taquari-Vassouras mine are to the Brazilian market. In 2014, Vale sales represented close to 5% of total potash sold in Brazil. Vale has a presence and long-standing relationships with the major players in Brazil, with more than 50% in 2014 of the sales allocated to four traditional clients.

Vale s phosphate products are sold mainly to the fertilizer industry. In 2014, the sales represented near 27% of the total phosphate sold in Brazil, with imports representing close to 58% of total supply. In the high concentration segment, Vale s production represented 86% of the total production in Brazil, with products such as MAP, and TSP. In the low phosphate concentration nutrients segment, Vale s production represented near 71% of total consumption in Brazil with SSP and DCP products.

4.4. Competition

The sector is divided into three major groups of nutrients: potash, phosphate and nitrogen. There are limited resources of potash around the world with Canada, Russia and Belarus being the most important suppliers, each one with a small number of producers. The sector presents a high level of investment and requires long time for a project to mature. In addition, the potash segment is highly concentrated, with 4 major producers holding over 83% of the total global production capacity. While potash is a scarce resource, phosphate is more available, but major exporters are located in the northern region of Africa (Morocco, Algeria and Tunisia) and in the United States. The five major producers of phosphate rock (China, Morocco, United States, Russia, and Jordan) hold 77% of global production in 2014, of which around 11% is exported. Meanwhile, products with great added value, such as MAP and DCP are usually marketed instead of phosphate rock, due to cost-benefit relationship.

Brazil is one of the largest agribusiness markets in the world due to its high production, exportation and consumption of grains and biofuel. It is the fourth-largest consumer of fertilizers in the world and one of the largest importers of phosphates, potash, urea and phosphoric acid. Brazil imports 95% of its consumed potash, which corresponds approximately to 9 Mtpa of KCL (potassium chloride) in 2014 from Belarussian, Canadian, Russian, German, and Israelis in descending order, which represents a 14% increase compared to 2013. In terms of global potash consumption, China, the United States, Brazil, and India represent approximately 61% of global consumption, where Brazil is responsible for 15% of this total. Vale s fertilizer projects are highly competitive in terms of cost and logistics to meet the demand in the Brazilian market.

Most phosphate rock concentrate is consumed locally by downstream integrated producers, while logistics with the seaborne market correspond to 14% of total phosphate rock production. Major phosphate rock exporters are concentrated in North Africa, mainly through State-owned companies, with the Moroccan OCP Group holding 33% of the total seaborne market. Brazil imports 58% of the total phosphate nutrients needed as phosphate fertilizer products. The phosphate rock imports supply non-integrated producers of phosphate fertilizers such as SSP, TSP and MAP.

Nitrogen-based fertilizers are basically derived from ammonia (NH3), which, in turn, is produced from the nitrogen that is present in the air and in natural gas, making it a nutrient with high level of energy. Ammonia and urea are the main consumables of nitrogen based fertilizers. The consumption of nitrogen-based fertilizers presents a regional profile due to the high cost associated with transportation and storage of ammonia, which requires refrigerated and pressurized facilities. Consequently, only 10% of ammonia produced in the world is traded. Asia receives the largest volume of imports, with 37% of the global market. Major exporting countries are Russia, Trinidad y Tobago, and Saudi Arabia.

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5. Infrastructure

5.1. Logistics Services

Vale has developed its logistics business based on the transportation needs of its mining operations, while Vale also provides transportation services for other customers.

Vale conducts its logistics businesses at the parent-company level, through subsidiaries, affiliates, and joint ventures, as set forth in the following table.

Vale	Railroad (EFVM and EFC), port, and maritime operations	Brazil			
VLI (1)	Port, maritime and railroad operations in land terminals. Holding general cargo assets.	Brazil	37,6	37,6	FI-FGTS, Mitsui and Brookfield
MRS	Railroad operations	Brazil	46.8	47.6	CSN, Usiminas and Gerdau
CPBS	Port, maritime and railroad operations	Brazil	100.0	100.0	
PTVI PTV	Port, maritime and railroad operations	Indonesia	59.3	59.3	Sumitomo, public investors
Vale Logística Argentina	Maritime operations.	Argentina	100.0	100.0	
CEAR(2) (4)	Railroad.	Malawi	43.4	43.4	Mozambique, P.E. ports and railroads
CDN(3) (4)	Maritime and railroad operations.	Mozambique	43.4	43.4	Mozambique, P.E. ports and railroads
CLIN	Maritime and railroad operations	Mozambique	80.0	80.0	Mozambique, P.E. ports and railroads
Vale Logistics Limited	Railroad operations.	Malawi	100.0	100.0	
Transbarge Navigación	River system in Paraguai and Paraná rivers (Comboios).	Paraguay	100.0	100.0	

VNC	Port and maritime terminal operations	New Caledonia	100,0	80,5	Sumic, SPMSC
VMM	Port and maritime terminal operations	Malaysia	100,0	100,0	

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(1) BNDES holds debentures issued by Vale, exchangeable in part to Vale s share in VLI. If BNDES exercises its right on these debentures, Vale s share in VLI will be reduced by 8%

(2) Vale holds control of its participation in CEAR through 85% interest in SDCN, holding 51% of CEAR.

(3) Vale holds control of its participation in CDN through 85% interest in SDCN, holding 51% of CDN.

(4) *Upon conclusion of transactions with Mitsui, Vale holds 21.7% of the voting capital of CEAR, 21.7% of the voting capital of CDN, 40% of the voting capital of CLN, and 50% of the voting capital of VLL.*

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5.1.1. Railroads

- Brazil

- Vitória a Minas railroad (EFVM). The EFVM railroad links Vale s Southeastern System mines in the Iron Quadrangle region in the State of Minas Gerais to the Tubarão Port, in Vitória, in the State of Espírito Santo. Vale operates this 905-kilometer railroad under a 30-year renewable concession, which expires in 2027. The EFVM railroad consists of two lines of track extending for a distance of 601 kilometers to permit continuous railroad travel in opposite directions, and single-track branches of 304 kilometers. Industries are located in this area and major agricultural regions are also accessible to it. VLI holds rights to use the railroad transportation capacity at Vale s EFVM line. In 2014, EFVM carried daily an average of 326,8 metric tons of iron ore, or a total of 79.4 billion ntk of iron ore and other cargo, of which 17.2 billion ntk, or 21.7%, consisted of cargo transported for customers, including iron ore for Brazilian customers. The EFVM railroad also carried 955 thousand passengers in 2014. On December 31, 2014, Vale had a fleet of 323 locomotives and 15,146 wagons at EFVM.

- Carajás railroad (EFC). The EFC railroad connects Vale s mines in the Northern System in the Carajás region in the State of Pará to the maritime terminal Ponta da Madeira, in São Luís, in the State of Maranhão. Vale operates the EFC railroad under a 30-year renewable concession, which expires in 2027. EFC extends for 892 kilometers from mines in Carajás to the Ponta da Madeira maritime terminal located near the Itaqui Port. Its main cargo is iron ore, principally carried mainly for the Company. VLI holds rights to use the railroad transportation capacity at Vale s EFC line. In 2014, EFC carried daily an average of 319,0 metric tons of iron ore. In 2014, the EFC railroad carried a total of 105.9 billion ntk of iron ore and other cargo, 3.5 billion ntk of which was cargo for customers, including iron ore for Brazilian customers. EFC also carried 307 thousand passengers in 2014. EFC supports the largest capacity train in Latin America, which measures 3.5 kilometers, weighs 42,01 gross metric tons when loaded and has 330 cars. In 2014, EFC had a fleet of 277 locomotives and 16,158 wagons.

The principal items of cargo of the EFVM and EFC railroads are:

- Iron ore, iron ore pellets, and manganese ore, carried for the Company and its customers;
- Steel, coal, pig iron, limestone and other raw materials carried for customers with steel mills located along the railroad;
- Agricultural products, such as grains, soybean meal and fertilizers; and
- Other general cargo, such as pulp, fuel and chemical products.

We charge market prices for customer freight, including iron ore pellets originating from joint ventures and other enterprises in which we do not have 100% equity interest. Market prices vary based on the distance traveled, the type of product transported and the weight of the freight in question, and are regulated by the Brazilian transportation regulatory agency, ANTT (Agência Nacional de Transportes Terrestres). VLI provides logistic integrated solutions through 7,920 km of railroads in Brazil (Centro-Atlântica Railway and Norte-Sul Railway), five land terminals with total capacity of storage of 240,000 tons and three maritime terminals and port operations. Vale holds 37.6% interest in VLI and is party in a shareholders agreement with FI-FGTS, Mitsui, and Brookfield.

Main railroads owned by VLI are:

• Centro-Atlântica Railway. Central-east regional railway network of the Brazilian national railway system under a 30-year renewable concession, which expires in 2026. The central east network has 7,220 kilometers extending into the States of Sergipe, Bahia, Espírito Santo, Minas Gerais, Rio de Janeiro, Goiás and the Federal District.

• Norte-Sul Railway. A 30-year renewable sub concession for commercial operation of a 720-kilometer stretch of the North-South railroad, in Brazil, between the cities of Acailandia, in the State of Maranhão, and Porto Nacional, State of Tocantins. This railroad is connected to EFC, creating a new corridor for the transportation of general cargo, mainly for the export of soybeans, rice and corn produced in the center-northern region of Brazil.

In 2014, VLI carried a total of 31.95 billion tku load, including 18.7 billion tku of Centro-Atlântica Railway and Norte-Sul Railway and 13.3 billion tku through Vale s operational agreements.

Additionally, Vale holds direct and indirect interest in MRS Logística S.A. (MRS), company that holds the concession to operate the railroad connecting the States of Rio de Janeiro, São Paulo and Minas Gerais, which is 1,643 km-long. In 2014, the MRS railroad carried a total of 164 million metric tons of cargo, including 70.5 million metric tons of iron ore and other cargo from Vale.

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- Africa

The Nacala logistic corridor, currently in the ramp up phase, connects the Moatize unit to the Nacala-à-Velha maritime terminal, located in Nacala, Mozambique, crossing the Republic of Malawi. The Nacala corridor is a railroad and a port infrastructure, including greenfield railroads and existing portions in Mozambique and Malawi and a new port for coal in Mozambique. The Nacala Corridor will allow the Moatize mine expansion and will offer support to Vale s operations in the Southern Africa. In Mozambique, Vale operates under two concession agreements maintained by Vale s subsidiary Corredor Logístico Integrado de Nacala S.A. (CLN), which mature in 2043. In addition, Vale is refurbishing existing railroads under the concession granted by Vale s subsidiary Corredor de Desenvolvimento do Norte S.A. (CDN), which matures in 2035. In Malawi, Vale operates under the concession held by its subsidiary Vale Logistics Limited (VLL), which matures in 2041. Vale is rehabilitating existing railroads under the concession held by its subsidiary Central East African Railway Company Limited (CEAR), which was extended to 2013, with automatic renewal for a 30-year period starting from the beginning of railroad services under concession of VLL railroad.

In December 2014, Vale entered into an investment agreement under which Mitsui acquired Vale s share in the Nacala Corridor. Vale s indirect interest in CLN, CDN, VLL and CEAR will be transferred to a controlling company jointly held (50% each) and controlled by Vale and Mitsui. Mitsui will invest US$ 313 million on this controlling company, in *equity* and *quasi-equity instruments, to be used to fund the project*. Vale and Mitsui are looking for project funding in the Project finance modality, to fund other capital expenses required by the Nacala Corridor project and to replace part of the funds application provided by Vale. The transaction is subject to certain conditions precedent and the closure is expected to 2015.

5.1.2. Ports and maritime terminals

- Brasil

Vale operates a port and maritime terminals principally as means to conclude the delivery of its iron ore and pellets to bulk carrier vessels serving the seaborne market. For more information, see item 1.1 Iron Ore and Pellets in this section of the Reference Form. Vale also uses its port and terminals to handle customers cargo. Tubarão Port. The Tubarão Port, which covers an area of approximately 18 square kilometers, is located near the Vitória Port, State of Espírito Santo, and contains: the iron ore maritime terminal and general cargo terminals (the Praia Mole Terminal and the Terminal de Produtos Diversos). The Iron Ore Maritime Terminal has two piers.

- The Iron Ore Maritime Terminal has two piers. Pier I can maintain two anchored vessels at a time, one of up to 170,000 DWT on the southern side and one of up to 200,000 DWT on the northern side. Pier II can accommodate one vessel of up to 405,000 DWT at a time, limited at 23 meters draft plus tide. In Pier I, there are two ship loaders, which can load up to a combined total of 13,500 metric tons per hour each. In Pier II there are two ship loaders that could work alternately and can each load up to 16,000 metric tons per hour continuously. In 2014, 101.5 million metric tons of iron ore and pellets were shipped through the terminal. The iron ore maritime terminal has a storage yard capacity of 3.4 million metric tons.

- Praia Mole Terminal is principally a coal terminal and handled 11.3 million metric tons in 2014. VLI is entitled to use the terminal capacity of Praia Mole.

- Terminal de Produtos Diversos handled 7.4 million metric tons of grains and fertilizers in 2014. VLI is entitled to use the terminal capacity of Produtos Diversos.

- *Ponta da Madeira Maritime Terminal.* The Ponta da Madeira Maritime Terminal is located near the Itaqui Port, State of Maranhão. Pier I can accommodate vessels displacing up to 420,000 DWT and has a maximum loading rate of 16,000 tons per hour. Pier III, with two berths and three ship loaders, can accommodate vessels of up to 200,000 DWT on the south berth and 180,000 DWT on the north berth or two 180,000 DWT ships simultaneously), depending on tide conditions, with maximum loading rate of 8,000 metric tons per hour in each. Pier IV (south berth) can accommodate vessels displacing up to 420,000 DWT and two ship loaders operating alternately with maximum loading rate of 16,000 tons per hour. Cargo shipped through Vale s Ponta da Madeira maritime terminal consists of its own iron ore production. Other cargo includes manganese ore produced by Vale and pig iron and soybeans for unrelated parties. In 2014, 112.3 million metric tons of iron were handled through the terminal. The Ponta da Madeira maritime terminal has a storage yard with capacity of 8.9 million metric tons, to be expanded to 10.7 million metric tons.

- *Itaguaí maritime terminal Cia. Portuária Baía de Sepetiba (CPBS).* CPBS is a wholly owned subsidiary that operates the Itaguaí terminal, in the Sepetiba Port, State of Rio de Janeiro. Itaguaí s maritime terminal has docks that allow the loading of ships up to 17.8 meters of draft and up to 200,000 DWT. In 2014, the terminal loaded approximately 23.8 million metric tons of iron ore

- *Guaíba Island maritime terminal.* We operate a maritime terminal on Guaíba Island in the Sepetiba Bay, in the State of Rio de Janeiro. The iron ore terminal has a pier (with two branches) that allows the loading of ships of up to 350,000 DWT. In 2014, the terminal loaded approximately 40.6 million metric tons of iron ore.

- VLI also operates the *Inácio Barbosa maritime terminal (TMIB* ., owned by Petrobras, in the State of Sergipe; the Maritime Terminal TIPLAM, in the State of São Paulo, owned jointly by VLI and Vale Fertilizantes; and Pier II in the port of Itaqui, that can receive vessels of up to 155,000 DWT with load rate of a maximum of 8,000 tons per hour

- Argentina

Vale Logistica Argentina S.A. (Vale Logistica Argentina) operates a terminal at the San Nicolas port located in the province of Buenos Aires, Argentina, where it has been authorized to use a 20,000 square meters storage yard until October 2016 and has executed an agreement with unrelated parties to an additional 15,000 square meters storage yard. We handled 1.12 million metric tons of iron ore and manganese through this port in 2014, from Corumbá, Brazil, and carried through the Paraná and Paraguay rivers to be transported to Brazilian, Asian and European markets. The loading rate at this port is 24,000 tons per day and unloading rate of 13,200 tons per day.

- Oman

Vale Oman Distribution Center LLC (VODC) operates a distribution center in Liwa, Oman. The maritime terminal has a 1.4 km deep water pier, which is integrated to a storage Yard with movement and processing capacity of 40 Mtpa of iron ore and pellets per year. The nominal loading capacity of this port is 10,000 tons/hour and nominal unloading of 9,000 tons/hour.

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- Indonesia

PTVI owns and operates two ports in Indonesia to support its nickel mining activities.

The Balantang Special Port is located in Balantang Village, in the South Sulawesi, and has two types of piers with total capacity of 10,000 DWT: two resources for barges of up to 4,000 DWT each for bulk dry volume and a dock for general cargo of up to 2,000 DWT.

The Harapan Tanjung Mangkasa Special Port is located in Lampia Village, in the South Sulawesi, with armoring buoys that can accommodate vessels displacing up to 20,000 DWT, and a terminal that can accommodate fuel tankers with displacing up to 2,000 DWT, with total capacity of 22,000 DWT.

- New Caledonia

We have and operate a port in Prony Bay, South Province, New Caledonia. This port has three terminals, including a passenger boat terminal for two vessels of up to 50 meters, a dock for dry bulk material for vessels of up to 55,000 DWT to unload at 8,000 tons a day and a general cargo dock for vessels of up to 215 meters. The general cargo dock can receive containers at 10 units per hour, liquid fuels (GLP, BPF, Diesel) at 350 cubic meters per hour, and *break-bulk*. The containers patio, a covered area of about 13,000 square meters, can receive up to 1,000 units. A bulk storage patio is linked to the port by a belt with storage capacity of 94,000 tons of limestone, 95,000 tons of sulfur and 60,000 tons of coal.

- Malaysia

The Maritime Terminal Teluk Rubiah (TRMT) is located in the State of Perak, Malaysia, and has one dock and two moors that allow unloading vessels with approximate capacity of 400,000 DWT and loading ships with capacity of up to 220,000 DWT. In 2014, the terminal unloaded 3.09 million metric tons of iron ore and loaded 2.58 million metric tons of iron ore.

5.1.3. Navigation

Vale continues to develop and operate a low cost fleet of vessels, comprised of company-owned vessels and freight vessels through mid and long-term lease agreements, to carry its cargo from Brazil to its markets. Vale has 32 vessels in operation, including 19 Valemax vessels, with capacity of 400,000 DWT, and other 13 capesize vessels, with capacities varying between 150,000 to 250,000 DWT. Vale also operates 16 Valemax vessels under long-term agreements. To support its strategy to deliver iron ore, Vale holds and operates two floating transfer stations in the Subic Bay, the Philippines, that transfers iron ore from Valemax vessels to smaller vessels that deliver the cargo to its destination. With this service, the Company expects to improve its ability to offer iron ore products to the Asian market at competitive prices and to increase its market share in China and the global seaborne market. In 2014, the Company carried approximately 158 million metric tons of iron ore and pellets on

CFR and CIF basis. (cost and freight) .

In 2014, Vale entered into cooperation agreements for the transportation of iron ore with carriers and financial institutions, located in China and in Hong Kong. Under these agreements, Vale is negotiating (i) long-term freighting agreements to guarantee long-term loading capacity to transport iron ore from Brazil to Asia and protect Vale against the volatility of freight costs, and (ii) the sale of six ore carrying 400,000 DWT ships.

On the Paraná and Paraguay fluvial system, the Company carries transport iron ore and manganese through (i) its subsidiary, Transbarge Navigacion, which transported by rivers 2.35 million tons in 2014 and (ii) freighted vessels. Barges are unloaded at the terminals of our local clients at contracted terminals in Argentina or at the facilities of its subsidiary, Vale Logistica Argentina, which carries ore in ocean vessels. Vale Logística Argentina carried 1.05 million tons of ore (out of a total capacity of 3 million tons) though the port of Saint Nicolas in seaborne vessels in 2014. In 2010, Vale acquired two new tugboats, named Morro Alto and Morro Azul, which started operating in 2015.

Vale manages a fleet with 26 tugboats, owning 25 vessels and one vessel is leased. Vale directly operates ten tugboats in the ports of Vitória and Mangaratiba, in the States of Espírito Santo and Rio de Janeiro, respectively. Six tugboats in the port of São Luis and Aracaju, in the States of Maranhão and Sergipe, respectively, are operated by consortium companies, in which Vale holds 50% interest. Other ten tugboats are freighted to and operated by third parties, under their responsibility, in other ports in Brazil.

5.1.4. Energy

Vale manages its power generation portfolio based on the current and projected energy needs of its operations, with the goal of reducing energy costs and minimizing the risk of energy shortages.

- **Brazil**

Energy management and efficient supply in Brazil are priorities for us, given the uncertainties associated with changes in the regulatory environment, and the risk of rising prices. In 2014 Vale s total installed energy capacity in Brazil was 1.3 GW. Vale uses the electricity produced by these plants for its internal consumption needs. Vale currently has interest in nine hydroelectric power plants and four small-sized hydroelectric plants in operation. The hydroelectric power plants of Igarapava, Porto Estrela, Funil, Candonga, Aimorés, Capim Branco

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I, Capim Branco II and Machadinho are located in the Southern and Southeastern areas and the Estreito plant is located in the Northern area. Small hydroelectric plants of Melo, Nova Maurício, Ituerê and Glória are located in the Southeast. The Aliança Geração joint venture is held by Vale and CEMIG Geração e Transmissão S.A. (CEMIG GT) at the following hydroelectric plants: Porto Estrela, Igarapava, Funil, Capim Branco I e II, Aimorés and Candonga.

By means of Vale s subsidiary Aliança Norte Energia Participações S.A., Vale indirectly holds 4.59% of the stocks in Norte Energia S.A. (NESA), a company incorporated with the sole purpose of deploying and operating the Belo Monte Hydroelectric Plant, in the State of Pará. Vale s interest grants it the right to acquire 9% of the power generated by the plant, under a long term power purchase agreement, signed in 2012. For more information on this operation, see item 6.5 in this Reference Form.

Vale also produces palm oil in the State of Pará, which will be used to produce biodiesel, through an extraction plant with installed capacity of 100,000 tons of palm oil per year. Biodiesel will be mixed with regular diesel to produce a fuel known as B20 (with 20% biodiesel), to be used in its fleet of locomotives, trucks, and heavy machinery used in operations of the North System.

- **Canada**

In 2014, Vale s hydroelectric power plants in Sudbury generated 17% of the electricity requirements of its Sudbury operations. The power plants consist of five separate generation stations with an installed capacity of 56 MW. The output of the plants is limited by water availability, and by restrictions imposed by a water management plan regulated by the Government of the Province of Ontario. In 2014, the average requirements for power was 195 MW to all surface plants and mines in the Sudbury area.

In 2014, diesel generation provided 100% of the electric requirements of Vale s Voisey s Bay operations. We have six diesel generators on-site producing an average of 12 MW.

- **Indonesia**

Energy costs are a significant component of Vale s nickel production costs for the processing of saprolitic lateritic ores at PTVI operations in Indonesia. A great portion of the PTVI s electric furnace power requirements are supplied at low-cost by its three hydroelectric power plants located in the Larona River: (i) the Larona plant with average generation capacity of 165 MW, (ii) the Balambano plant with average generation capacity of 110 MW; and (iii) the Karebbe plant with average generation capacity of 90 MW. These plants help reducing the costs by replacing the diesel used in power generation for hydroelectric power, reducing CO2 emissions, replacing non-renewable power generation, which allow us to increase current nickel production capacity in Indonesia.

6. Other Investments

Vale holds 25% in iron ore pelleting plants in China: Zhuhai YPM and Anyang. The remaining shares of Zhuhai YPM are held by Zhuhai Yueyufeng Iron and Steel Co. Ltd. and Halswell Enterprises Limited, while the remaining shares of Anyang are held by Anyang Iron & Steel Co., Ltd.

Vale holds 25% in the coal operations in China, in Longyu (Henan Province) and Yankuang (Shandong Province). Longyu produces metallurgic and thermal coal and other related products, and the remaining capital is held by Yongmei Group Co., Ltd. (formerly known as Yongcheng Coal & Electricity (Group) Co. Ltd.), Shanghai Baosteel International Economic & Trading Co., Ltd. and other minor shareholders. Yankuang produces metallurgic coal coke, methanol, tar oil, and benzene, and the remaining shares are held by Yankuang Group Co. Ltd. and Itochu Corporation.

Vale owns 50.0% of capital stock of California Steel Industries, Inc. (CSI), a producer of flat rolled steel and pipes, located in California, in the United States. The remaining 50% belongs to JFE Steel. CSI s annual production capacity is of about 2.8 million metric tons of flat products and pipes. Additionally, Vale holds a 26.9% stake in ThyssenKrupp Companhia Siderúrgica do Atlântico (TKCSA), an integrated producer of steel plates located in the State of Rio de Janeiro. The plant was commissioned in 2010, and produced 4.1 Mt in 2014. The final production capacity of TKSCA is 5.0 Mtpa of plates and will require 8.5 million metric tons per year of iron ore and pellets, while working in full capacity, supplied exclusively by Vale.

We are also engaged in two other steel projects in Brazil: Companhia Siderúrgica do Pecém (CSP), which is being constructed, and Aços Laminados do Pará (Alpa), which is under analysis considering discussions with the Brazilian government.

Additionally, we hold minor interest in two bauxite mining companies, both in Brazil: Mineração Rio do Norte S.A. (MRN) and Mineração Paragominas S.A. (Paragominas), and we have agreed upon transferring Vale s interest in Paragominas to Hydro in two equal installments in 2014 and 2016. For more information on this transaction, see item 6.5 in this Reference Form. Vale concluded the transfer of the 2014 portion in December and is currently holding indirectly 13.63% in Paragominas.

Lastly, we have an onshore and offshore hydrocarbon exploration portfolio in Brazil and in Peru, which is currently under review, and, consequently, some concessions may be terminated or granted, provided that there is compliance with appropriate regulatory terms.

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e. Key consumables and raw materials:

i. Description of the relationships with suppliers, including whether they are subject to governmental control or regulation, identifying the institutions and applicable legislation

The Company is committed to build a sustainable business model and contribute to a just, environmentally balanced and economically prosperous society. The Company adopts the strategy in relation to its suppliers to maintain a long-term relationship in order to promote partnerships aimed at gains for both parties, through continuous innovation and development and supply of goods and quality services at a compatible cost.

In order to achieve continuous improvement and contribute to advances in the production chain, the management of relationships with its suppliers comprises the following steps:

(i) Certification and registration of suppliers based on Vale s values, taking into account also the identification and analysis of supply risks (environmental, institutional, labor, social security, financial, health and safety, ethics, and social responsibility);

(ii) Third party Due Diligence aiming to mitigate reputation risks, arising out of eventual engagement by Vale s commercial partners with events that violate human rights or anticorruption laws applicable to Vale, as the *Foreign Corrupt Practices Act FCPA* and the *UK Bribery Act* and the Brazilian law against corruption (Federal Law no. 12.846, dated August 1, 2013);

(iii) Monitoring the financial health of Vale s main suppliers of material, equipment, and services;

(iv) periodic performance evaluations to ensure compliance with applicable requirements and as defined in the contracting stage, as well as adherence to agreement expectations;

(v) Development and support in suppliers training; and

(vi) Promotion and prospection of new suppliers.

Under the UN s Universal Declaration of Human Rights, Vale respects and promotes human rights in its activities, through its production chain and in regions where the Company operates.

In this sense, Vale aims to establish commercial relationships with suppliers who share its principles and values and who respect human rights.

Vale s principles and values are disclosed to its suppliers in its Suppliers Code of Ethics and Conduct, document signed by all the companies that have entered into a supply agreement with Vale. Note that this Code is available at the Company website (www.vale.com).

The suppliers agreements are preceded by a search in the list disclosed at the website of the Ministry of Labor and Employment (MTE) that includes individuals or legal entities found to be engaged in employing workers under slave work or analogous conditions and the list CEIS (National Registry of Suspected Companies) that lists companies with no good standing and suspended by the federal government.

The guidelines and criteria Vale adopts to evaluate its suppliers are based on the above mentioned environmental legal requirements applicable to suppliers whose operational processes involve the use of natural resources or are potentially polluting or likely to cause environmental degradation. In addition to these legal aspects, its Environmental Management criteria and the principles of its Sustainable Development Policy are considered.

With regard to recipients of waste generated in its production processes, they all are subject to audit by the Department of the Environment and Sustainable Development during their initial approval and periodic revalidation.

The main environmental laws applicable to this process are:

a) Environmental Permit

• Federal Law 6938/81 - National Environmental Policy

• CONAMA Resolution (National Council for the Environment) 237/97

• Complementary Law 140/11

• CONAMA Resolution (National Council for the Environment) 01/86.

• Federal Law 10165/00

• Federal Law 12651/12

• IBAMA (Brazilian Institute of Renewable Natural Resources) Normative Instructions 96/06 and 97/06.

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b) Pesticides

• Federal Law 7802/99

• Federal Decree 4047/02

• Law 6360/76 - ANVISA - National Agency for Sanitary Surveillance

c) Transportation of Dangerous Goods

• Decree 96044/88

• ANTT Resolution (National Ground Transportation Agency) 420/02

d) Radioactive Material

• CNEN Resolution (National Nuclear Energy Council) NE 2.01

• CNEN Resolution (National Nuclear Energy Council) NE 5.02

e) Explosive Materials

• Federal Decree 3665/00

f) Controlled Chemicals

• Ministry of Justice Decree 1274/2003.

ii. Potential dependence on few suppliers

The main consumables purchased by us in fiscal year ending on December 31, 2014 were: (i) materials and other equipment, including tires, conveyor belts, parts and components, mining equipment, railroad gear, industrial installations and maintenance workshops, which, (ii) fuel and gas, and (iii) electricity. Moreover, the main rendering of services included operational services, maintenance of equipment and facilities, and transportation services.

The main categories of equipment purchased by the Company were transportation locomotive equipment and wagons. Vale s largest group of suppliers of these types of equipment are General Electric, Catterpillar, Astra Vagoane Calatori and Amsted-Maxion, accounting jointly for 4% of total purchases of supplies for the Company in the year ending on December 31, 2014.

Fuel consumption is quite intense, especially in operations and transport of iron ore. Vale s main supplier of this consumable item is Petrobras Distribuidora, which accounted for approximately 80% of its purchase of fuels in the year ending on December 31, 2014.

In 2014, the Company used 58% of the electricity provided by self-production in Brazil and the remaining portion was consumed through purchase of power in the market, which main suppliers were Cemig, Eletronorte, and Enertrade.

The 10 largest input, equipment and service providers represented 23% of the total purchases of the Company by December 31, 2014.

iii. Possible volatility in their prices

We have some contracts where prices are pegged to market indexes (parametric formulas) and therefore subject to these volatilities. Prices can also vary in relation to historical prices depending on offer versus demand in the market at the time of competition.

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7.4 Customers that accounted for more than 10% of total net revenues

In 2014, no customers accounted for more than 10% of Vale s net revenue.

7.5 Relevant effects of State regulation on the Company s activities

a. Need for government authorization for the exercise of activities and long-standing relationship with the government to obtain such permit*s*

Vale is subject to a wide range of governmental regulations in all jurisdictions where we operate worldwide. The following discussion summarizes the regulations that have the most significant impact on Vale s operations.

Mining rights

Mining and mining processing are subject to specific regulations and private and public permits, which differ depending on the jurisdiction. These permits usually include concessions, licenses, prospecting applications, permits, releases, authorizations or franchises (all of which we generically refer to below as concessions). Some concessions have indefinite duration or duration linked to depletion of the reserve, but many have specific expiration dates, and may be renewable or not. The legal and regulatory regime governing concessions differs among jurisdictions or even locations, and there are differences between applicable legal and regulatory regimes, depending on the jurisdiction. In many jurisdictions, mineral resources belong to the State and may only be extracted upon obtaining the appropriate federal government approval (see Regulation on mining activities). In other jurisdictions, as Canada, a substantial part of our mining operations is conducted pursuant to mining rights or leases, often from government agencies.

The table below summarizes Vale s principal mining concessions and other similar rights. In addition to the concessions described below, we have exploration licenses and applications covering 5.1 million hectares in Brazil (out of which, 4.32 million are already under application) and 10.7 million hectares in other countries.

Location	Concession or other right	Approximate area covered (in thousand hectares)	Expiration date
Brazil			
	Exploration Concession (including applications)	662,932	Undetermined
Canada			
	Exploration Concession (name varies according to the province)	278,208	2015-2035
Indonesia (1)			

	Employment Agreement (*Contract of Work*)	118,435	2025
Australia			
	Exploration Concession (*Mining concessions*)	19.209	2015-2041
New Caledonia			
	Exploration Concession (*Mining concessions*)	20,157	2015-2051
Peru (2)			
	Exploration Concession (*Concesión de Exploración*)	199,398	Undetermined
Argentina (3)			
	Exploration Concession (*Manifestación de Descubrimiento*)	40,108	Undetermined
Mozambique (4)			
	Exploration Concession (Mining Concession)	23.780	2032

(1) Entitled to two 10-year extensions subject to approval by the government of Indonesia. Concessions with no production have maturity dates between 2023 and 2028.

(2) The Peruvian mining regime includes only one type of license.

(3) Vale has returned part of its mining rights in Argentina, due to market conditions. Vale has paid and will continue paying its commitments related to potash concessions in Rio Colorado and will examine alternatives to increase perspectives in the project.

(4) Entitled to 25-year extensions subject to the approval by the Government of Mozambique.

(5) In Sudbury, maturity is subject to the current renewal applications that take years to be approved, but are ongoing. In Newfoundland & Labrador, mining licenses were reorganized and some of them terminated in 2014.

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Many concessions impose specific obligations on the concessionaire governing such matters as how operations are conducted and what investments are required. Vale s ability to maintain its mining rights depends on meeting these requirements, which often involve significant capital expenditures and high operating costs.

Regulation of mining activities

- *Brazil.* Mining activity in Brazil is currently ruled by the 1967 Brazilian Mining Code, which provides for different enjoinment regimes for mineral substances, which differ according to the mineral to be explored and the size of the Project to be developed. Currently, there are five mining enjoinment regimes, namely: Research Authorization, Concession, License Registry or Mining Licensing, Permission to Explore and Monopoly. The Federal Government has sent to the National Congress in June 2013, the proposal for a new Brazilian Mining Code, which is under discussion. This proposal includes, among others, maintenance of the main rights on mining licenses existing until the date of promulgation, a review on royalties, new regime for concessions for exploration for a period of up to 40 years (renewable for periods of up to 20 years) through bidding processes, and creation of a Mining Agency aiming to simplify the process to grant mining rights. This proposal is being discussed at the Congress.

- *Indonesia.* As required by the mining law that come into effect in 2009, PTVI renegotiated the terms in its labor agreement with the government, resulting in the execution of an amendment in October 2014. The purpose of the renegotiation was divided into six strategic points identified by the government: (1) size of the area under the labor agreement; (2) continuity of commercial operations; (3) State revenue; (4) domestic processing and refining; (5) divestments; and (6) priority use of local labor, assets and services. The amendment ensures the future of PTVI and Vale s commercial strategy, ensuring its rights and obligations. According to the terms in the amendment, the PVTI labor agreement matures in 2025, and PTVI may request two extensions for its operations, each one for a ten-year period, under a commercial license, upon approval by the Indonesian government. Under the terms in the amendment, Vale ensures a detailed agricultural project, reduced the work area from 190,510 hectares to 118,435 hectares, increased its divestment obligation by Vale in PTVI to 15% in the next five years and agreed upon paying a right to use fee related to the nickel market price, varying 2% to 3% over market price. Additionally, the amendment describes investment commitments consistent with PTVI growth strategy, reflecting PTVI commitment to prioritize local labor, assets, and services.

- *New Caledonia*. The mining law that passed in 2009 requires that new mining projects should obtain formal authorization from government authorities rather than a declaration, as required by the pervious legislation. We filed a new license application updated in March 2014, and it is expected that the authorization will be issued by April 2015. A recent bill, if approved, may postpone the approval of Vale s authorization to April 2016. Vale s current license will remain valid and in force until the application is approved. Although we believe it is unlikely that the authorization application will be rejected, the governmental entities may impose new conditions regarding the authorization. Additionally, in 2014, local authorities of New Caledonia proposed the creation of a protected swamp zone covering 27% of the total area of VNC, with potential to affect mining activities. This swamp zone is adjacent to the area close to the facility to store disposals, which could raise the need of additional investments by Vale.

- *Guinea*. Vale held 51% interest in VBG Vale BSGR Limited (VBG), that held iron ore concession rights in South Simandou (Zogota) and exploration licenses in North Simandou (Blocks 1 and 2), in Guinea. Upon approval of the Guinea Mining Code in 2011 (amended in 2013), the government started in 2012, a process to review existing agreements, aiming standardization under the new code. VBG suspended the works in the areas, after the technical commission established by the government started this process of review. In April 2014, the Government of Guinea revoked VBG mining rights according to technical recommendations by such commission, concluding that VBG rights were acquired by means of corrupt practices engaged by BSGR, partner of Vale in the *joint venture* VBG, prior to Vale s participation in the project. Vale acquired its interest in VBG following conclusion of comprehensive *due diligence* carried out by external consultants and based on representations that VBG had acquired its mining rights legally and with no guarantees or undue payments. The government decision does not indicate any engagement of Vale in alleged corruption practices and does not prohibit Vale s engagement in any redistribution of mining titles in the future. Vale is evaluating its rights and legal options against BSGR. In March 2015, Vale transferred its share in VGB to BSGR. This transfer does not represent any type of agreement with BSGR, and Vale is still entitled to enforce to BSGR the losses of investments in VBG.

Mozambique. The Parliament approved a new mining law in August 2014. Although the new mining law has revoked the previous law, this law established a stability clause applicable to rights acquired under the previous law and also maintained in effect the agreements executed under the other law. Changes brought by this law include (i) imposition of a new legal regime for the acquisition of assets and services *(procurement*), which should occur by means of trending processes when such acquisition exceeds a previously defined amount (which is still under discussion) and (ii) the change in the legal regime applicable to the transfer of mining rights and obligations related to mining companies, which now requires prior approval by the Government of Mozambique for this transfer to branches of the Company and third parties. Except for main changes above, Vale does not expect its operations to be affected adversely by the approval of the new mining

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law. It is important to also note that the parties holding mining rights granted according to the prior regime are entitled to convert their shares into mining rights subject to the regime of the new mining law. Regulation of the new mining law is pending.

Environmental regulations

Environmental aspects associated to Vale s activities, products, services and projects are subject to the environmental regulation. This regulation imposes the need to obtain specific environmental licenses, authorizations, and permits required to approve projects, install and operate the activities, which are subsidized by several studies on environmental impact and mitigation measures required by environmental entities. Likewise, each significant change to the company s activities and operations require submission of information to competent environmental entities to maintain legal conformity.

Environmental licenses issued for each operation, as well as the environmental legislation, set control measures and performance standards that should be met by the Company during its activities, demanding specific investments for environment preservation and legal compliance.

For purposes of improving the environmental licensing process, Vale developed the Best Practice Guide that offers (i) closer integration between the environment and project teams, for purposes of anticipating possible opportunities and obstacles that may rise reviewing projects; (ii) the use of fully-qualified technical teams; (iii) greater interaction with environmental entities; and (iv) deployment of an Executive Committee to respond for decisions on licensing processes.

Vale s activities, products and services are related to the sue of natural resources, mostly, protected by law, as for instance, water consumption, and evaluation of their impact on different ecosystems like, for instance, hydrographic basins and their surroundings, cavities, forests, sea, coasts. The Brazilian legal system provides for the possibility of administrative, civil and criminal responsibility, with sanctions in case of non-compliance with the legislation. Regarding environmental civil liability, financial guarantees may be used in some cases, as in case of decommissioning of assets held by the Company and remediation of possible environmental liabilities arising out of these procedures.

Legislation on Environmental Infringements

Federal Decree no. 6.514/08, that deals with environmental infringements and regulates the Environmental Crimes Law (Law no. 9.805/98), sets forth about infringements to flora and other protected areas, determining penalties for non-compliance with legislation that could vary from warning, suspension of work, stoppage of activities, and fine, which may vary from R$5,000.00 to R$50,000.00.

Legislation on protected areas

Protection of forests and other vegetation forms is regulated by Federal Law no. 12.651/12, that created the new Forest Code and a set of federal, state and municipal regulations.

Federal Law 12.651/12 sets forth the obligation of owners or holders of rural properties to maintain a Legal Reserve area duly protected, which will vary according to the bioma where the rural property is located, and may be equal to 80% in the Legal Amazon area. Recently, the Rural Environmental Registry was created, tool used to register electronically the Legal Reservation areas and other protected areas in the property.

The creation and protection of Conservation Units (UCs), in turn, are established in Federal Law 9.885/00, which sets forth the National Conservation Unit System (SNUC). UCs are governed by the creation decrees and management plans, and interferences within their limitations without approval of the applicable managing entity may characterize administrative infringement and cause application of penalties.

Waste Management and Contaminated Areas

Separation, collection, storage, transportation, treatment, and final disposal of residues, are regulated by the National Policy for Solid Residues, created by Law no. 12305/10. This law requires that appropriate transportation, treatment, and final disposal activities are performed by companies licensed by competent environmental authorities.

If the activity causes contamination of the ground and underground water, the Company may be required to remediate and repair such areas, and may be subject to the application of other administrative and criminal sanctions and indemnities in the civil sphere.

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The holder of a contaminated property must automatically repair any environmental damage or adverse impact, regardless of the contamination cause, which may cause significant expenses (obligation bound to the property, and not the party exploring it). Note that the responsibility for an environmental damage is not subject to the statute of limitations, that is, it never matures over time.

Cavities

Natural underground cavities represent fragile ecosystems that comprise the national speleological assets. Intervention in natural underground cavities is regulated by Federal Decree 6.640/2008, which sets forth about the means to intervene in such areas, according to the degree of relevance of the cavity. Interference in cavities imposes the need of carrying out broad technical studies and is subject to complex discussions with applicable entities. The occurrence of natural underground cavities may be determining in planning and deployment of mining projects, and limit or alter exploration plans, as well as generate additional costs related to the preservation of the cavity or compensation measures arising out of impacts to such cavities.

Archeological sites and historical and cultural interest areas

The Federal Constitution provides that the government and the civil society are responsible for protecting the cultural heritage. In areas with the potential of having archeological sites and historic and cultural interest areas, the Company must obtain the appropriate authorization from the National Institute of Historical and Artistic Heritage (IPHAN) at project planning. Non-authorized interference on cultural, historical, and archeological areas is considered to be an administrative infringement, subject to penalties.

Hydric resources

The Company must obtain and pay to use hydric resources, and should pay for their use. According to the National Policy of Hydric Resources, the following rights on the following uses of hydric resources are subject to the grant by the Public Authority: (1) derivation or capture of portion of water existing in a water body for final consumption; (2) extraction of water from underground water reserve for final consumption or as input of productive process; (3) release of sewage in water bodies, as well as other liquid or gas effluents, whether or not treated, for purposes of diluting, transporting, or final disposition of them; (4) use of hydroelectric potential, and (5) other uses that alter the regime, the quantity, and quality of the water existing in a water body.

Carbon emissions and climate change

Climate changes may adversely affect technical requirements of Company projects, the use of equipment and the provision of services, that may have impact on the schedule and cost of Company activities.

Gas emissions that cause the greenhouse effect may, for instance, impact the operations of the Company by imposing taxation over greenhouse gas emission and/or the establishment of emission limits. These measures will demand more intense power effectiveness actions and the Company should search for a power matrix based on renewable sources.

There is a global trend to tax effects arising out of climate changes, that could affect new businesses in the future, especially initiatives aiming carbon taxation in navigation, which could raise our freight costs, namely for the Asian market.

The Company maintains policies and plans to prevent and mitigate climate changes, adopted in its operations around the world and applicable to the suppliers chain.

Environmental Liability

Environmental liability may occur in three different and independent spheres: (i) civil; (ii) administrative

and (iii) criminal.

• *Civil Liability:* the entrepreneur, regardless of the existence of guilt, must compensate or repair damages caused to the environment and third parties affected by its activities. The environmental legislation sets forth the joint responsibility between polluting agents (Federal Law 6.938/81), which implies responsibility of all parties engaged in an event that causes environmental damages.

• *Administrative Responsibility:* Administrative responsibility arises out of an action or omission those results in violation against any rule related to environmental protection (Federal Decree 6.514/08). Sanctions against an administrative infraction may include warning, fine, non-use of product, suspension of sale and manufacturing of product, suspension of work or activity, demolition of work, suspension of tax benefits and cancellation or interruption of credit facilities granted by State banks, as well as prohibition to be hired by public entities.

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- *Criminal Responsibility:* In the criminal sphere, Federal Law 9.605/98 (Environmental Crime Law) causes any person, individual or legal entity engaged in conducts deemed to be damaging to the environment to be subject to its effects. The Law also provides for the possibility of piercing the corporate veil of the entity causing the environmental infringement in some cases. Applicable sanctions to legal entities may be (i) partial or total suspension of the activity; (ii) temporary interdiction of establishment, work, or activity; and, (iii) prohibition of contracting with Public Authorities, as well as obtain subsidies, subventions, or donations.

Environmental legislation is becoming increasingly stricter worldwide, which consequently will lead to greater investments in Vale projects. In particular, there is expectation for heightened attention from various governments to reducing greenhouse gases, as result of concerns with climate changes. There are several examples of environmental regulations and compliance initiatives that may affect Vale s operations.

- *Canada and Indonesia*. In Canada, more strict rules on liquid effluents have been proposed, which may demand changes to the current control systems. In Indonesia, in turn, the existence of specific regulation on the emission of Sulphur oxides, particulate materials and metals imposes to the Company the need to make significant investments on infrastructure (control processes and equipment) in order to ensure legal conformity of the processes with the regulation.

- *China*. An amendment to the environmental protection law has been approved in April 2014, establishing stricter obligations on the prevention and control of pollution for companies while setting forth more severe penalties.

- *New Caledonia*. A new law, approved in the South Province in New Caledonia, will impose more rigid limits to emissions of nitrogen and Sulphur oxide and particles from large electric burning plants, impacting the power station that provides power to Vale s operations in New Caledonia. In order to be in conformity with the new law, investments must be made by the Company to improve the control system for such emissions..

- *United Kingdom*. A recent regulatory change on effluents was issued, causing significant impact on the control systems for final treatment and other activities associated to decommission of industrial landfills, which consequently resulted in substantial increase of operation costs in Clydach

Royalties and other taxes on mining activities

In many jurisdictions, we must pay royalties or fees on the Company revenues or profits from extraction and sale of minerals. These payments are an important element in the economic development of a mining operation. The following royalties and fees apply in some of the jurisdictions in which Vale has its largest operations:

- Brazil. In Brazil, we pay a royalty known as the CFEM (Compensação Financeira pela Exploração de Recursos Minerais or Financial Compensation for Exploration of Mineral Resources) on the revenues from the sale of minerals we extract, net of taxes, insurance costs and costs of transportation. The current annual CFEM rates on Company products are: 2% for iron ore, copper, nickel, fertilizers and other materials; 3% on bauxite, potash and manganese ore; and 1% on gold. The Federal Government sent to the Congress in June 2013, a proposal for the new Brazilian Mining Code, which is under discussion. This proposal includes, among other issues, preservation of key rights for existing mining licenses until the date of publication, review of royalties, new exploration concession regime for a period of up to 40 years (renewable for periods of up to 20 years) though bidding process and establishment of a Mining Agency for purposes of simplifying the process of granting of mining rights. Vale is currently engaged in several administrative and legal proceedings that relate to the non-payment of amounts due as CFEM. See item 4.3 in this Reference Form for further information.

- Brazilian States. Several Brazilian states created a mining production tax (Taxa de Fiscalização de Recursos Minerais [Mining Resources Supervision Tax] TFRM) with rates that vary between R$ 0.50 to R$ 2.5697 per metric ton of ore produced or transferred out of the state.

- Canada. The Canadian provinces in which we operate charge us a tax on profit from mining operations. Profit from mining operations is generally determined by reference to gross revenue from the sale of products of mine output and deducting certain costs, such as mining and processing costs and investment in processing assets. The rates are 10% in Ontario; up to 17% in Manitoba; and a combination of mining fee and royalties equal to 16% in Newfoundland and Labrador. The mining fee paid is deductible for corporate income tax purposes.

- Indonesia. Our subsidiary PTVI pays royalties on, without limitation, nickel production on the concession area. The payment of royalties is based on sales volume (US$78 per metric ton of nickel in matte, and US$ 140 per metric ton for total production below 500 tons or US$ 156 per metric ton for total production above 500 tons of contained cobalt). In 2014, the payment of royalties corresponded to 1.13% of the revenue from the sale of matte nickel, while the annual average of royalties paid for the 2011-2014 period corresponded to 0.80% of the revenue from the sale of matte nickel, including the payment of additional royalties in 2014 for the production above 160 million pounds in 2013, as agreed upon in the previous regime. After execution of the amendment to

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the Employment Agreement in October 2014, PTVI started to pay mining royalties corresponding to 2% over its matte nickel revenue, when LME nickel price is lower than US$ 21,000 per metric ton; 3% over its matte nickel revenue, when LME nickel price is equal or higher than US$ 21,000 per metric ton.

- Australia. In Australia, royalties are paid on the revenues from sales of minerals. In the State of Queensland, royalty applicable to coal is 7% of the net income (deducting freight costs and other costs) up to A$100 per ton and 12.5% of the amount between A$100 and A$150 per ton and 15% subsequently. In the State of New South Wales, the royalty applicable to coal is the percentage on the total production or total revenue (which is net of some expenses and fees) minus permitted deductions, equal to 6.2% for deep underground mines, 7.2% for underground mines, and 8.2% for open pit mines. There is also an additional 1.95% royalty (for coal recovered between December 1, 2012 and June 30, 2013) and 1% (for coal recovered after July 1, 2013) from the value of recovered coal, paid only by the titleholders of exploration concessions that are subject to the payment of tax for the leasing of natural resources.

- Mozambique. The Congress approved in September 2014 a new tax regime for the mining and oil sectors, that could affect mining projects in Mozambique. The new law guaranteed stability and security of tax regimes provided for in mining agreements executed prior to the new tax law. Vale is analyzing the effects of this change to its operations in Mozambique.

- *Zambia.* The government of Zambia recently introduced substantial changes to the tax regime for the mining industry, which came into effect on January 1, 2015. The government replaced the income tax of mining companies for a mining royalty corresponding to 8% of the income from underground mine operations, and a 20% mining royalty of the income from open pit mines. Operations generating income from the transportation or processing of ore, concentrate or other semi-processed minerals, will be subject to 30% income tax. Previously, the royalty fee for underground and open pit mine operations were 6% for every ore. The impact of these changes on mine operations will depend on operational costs, with royalty increase based on the market price for minerals, placing a greater burden on high cost operations, compared to the previous system based on operational profit. Considering operations of Vale s joint venture in Zambia are underground, these operations will be subject to an 8% mining royalty fee.

Regulation of other activities

In addition to mining and environmental regulation, we are subject to comprehensive regulatory regimes for some of our other activities, including rail transport, port operations, and electricity generation. We are also subject to workers health and safety legislation, safety and support of communities near mines, and other matters. Descriptions below relate to some regulatory regimes applicable to our operations:

- Brazilian railroad and ports regulation. Aiming to ensure the reliability on the railroad and port logistics aimed to meet specific needs to more large volumes with operation efficiency, Vale acts in these sectors by means of its assets Estrada de Ferro Carajás, Estrada de Ferro Vitória a Minas and its port terminals detailed in this Reference Form. For that end, Vale holds the concession of railroad services and authorizations to explore its Private Port Terminals, and under lease preceded by bidding process to explore the Private Terminal, in the case of the wholly owned subsidiary, Companhia Portuária Baía de Sepetiba (CPBS).

In these activities, Vale is subject to regulatory inspection by the National Agency of Land Transportation (ANTT), linked to the Ministry of Transportation for railways; and the National Agency of Water Transportation (ANTAQ), linked to the Secretary of Ports of the Presidency of the Republic, for port activities. Both Agencies were created in 2001 by Federal Law no. 10.233/01, that established attributions to inspect compliance with the granting contracts and establish complementary rules to regulate the railroad and port sectors. Regulatory acts issued by the ANTT in recent years include rules dealing with User Regulations, rules for determination of goals, rules for sharing infrastructure in 2011 and independent railroad operator in 2014. In terms of ports, Law 12.815/2013 presented substantial changes, for instance, the end of restrictions associated to third party cargo, and ANTAQ promoted adaptation of adherence agreements and issued new resolutions with procedures for new grants, inspection of private terminals, and applicable penalties.

- Regarding prices, railroads are subject to tariff tables determined by ANTT, with annual adjustments, applicable to third party users of railroad services. When carrying own cargo, a transfer price was set merely for purposes of accompaniment of the concession. In case of port terminals, this is a private economic activity exercised with free prices. For own cargo, there is no price asked, considered to be production cost, except for the service provided by CPBS to Vale, as this is a specific purpose company, it asks for fee for port movements.

- Regulation of chemical products. Some of our products are subject to regulations applicable to the marketing, distribution and use of chemicals in their compositions. For example, the European Commission has adopted a European Chemicals Policy, known as REACH (Registration, Evaluation, and Authorization of Chemicals). Under REACH, manufacturers and importers are required to register substances prior to their entry into the European market and in some cases may be subject to an authorization process. A company that fails to comply with the REACH regulation could face fines and penalties.

- Regulation in Transocean transportation of iron ore and iron ore fines. Vale is subject to rules issued by the International Maritime Organization (IMO) that governs the safe shipment of products, including iron ore. IMO is discussing the prejudicial impact of

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certain substances to the marine environment, that could cause changes to the waste management procedures currently adopted in maritime transportation.

b. Environmental policy of the Company and costs incurred for compliance with environmental regulation and, where appropriate, other environmental practices, including adherence to international standards of environmental protection

Vale s governance structure is based on policies with guidelines and principles that direct the strategy, the process and the actions taken by the Company. Key policies related to the environment are the Sustainable Development Policy, the Security and Health Policy, the Climate Global Change Policy, and the Human Rights Policy. These policies, with specific plans and programs for each Vale unit provide the necessary guidance to achieve its sustainability goals and its short, medium, and long term business decisions.

Vale s Environmental Management System determines the development and implementation of effective control, monitoring, conservation, environmental protection and rehabilitation, aimed at ensuring the minimization of the environmental impacts on the ecosystems in which it operates. Vale s management system is based on ISO 14001 (*International Organization for Standardization*) guidelines, to which it adds additional requirements that make up Vale s standard of environmental quality, which, in some cases, establish more restrictive requirements to the list of applicable legal requirements, for purposes of promoting continuous improvement of environmental management. Aiming to assess the effectiveness of the environmental management system, Vale submits the operations, periodically, to internal and external audits.

Listed below are our units with ISO 14001:

- Iron ore: Ferrosos Sul, Ferrosos Sudeste, Ferrosos Centro-Oeste, Ferrosos Norte and Complexo de Tubarão;
- Manganese: Conselheiro Lafaiete (Morro da Mina);
- Nickel: Onça Puma, Vale Europa (Refineries Acton and Clydach), Vale Dalian (China), Vale KNC (South Korea), Vale Taiwan (Taiwan) and Vale Matsusaka (Japan);
- Logistics: Port and railway operation at Complexo de Tubarão;
- Copper: Minas do Sossego and Salobo;
- Fertilizers: Cubatão (1, 2 and 3), Catalão, Araxá, Tapira and Uberaba.

In the last three years, US$3,757.80 million was invested in environmental management actions; these actions were focused on compliance with regulations or other environmental practices.

As Vale is a mining company, air emissions is one a significant environmental aspect inherent to its operations and impose to the Company the need to deploy specific control actions in order to ensure conformity of its activities with legal requirements (emission standards and air quality in neighboring communities) and Vale s performance standards. Vale s systems and equipment related to pollution control include: a water aspersion system for unpaved roads, as well as the use of chemical inhibiting substances to control dust, filters and electrostatic precipitators complemented by integrated monitoring systems and online control software. For more details, see Vale s 2014 Sustainability Report, on page 77.

Another relevant aspect of the Environmental Management System is the rational use and quality of the water resources where we have control systems for the effluents generated, as well as programs and development of technologies for continual reduction of consumption and/or re-use. For more details, see Vale s 2014 Sustainability Report, on pages 85 and 90.

The waste management program is another initiative that prioritizes minimization of generation, as well as re-use and recycling procedures, as well as adequate disposal practices.

The orientation for decommissioning of assets include practices and procedures implemented over the project life cycle. These procedures are aligns with the guidelines of the *Comissão de Valores Mobiliários* - CVM and the Securities Exchange Commission - SEC (IAS 37) for the annual estimates of asset demobilization costs and provisioning of resources for future deactivation and recovery of the area. The definition of future use of each unit is established in the Closing Plan, considering environmental, social and economic aspects, according to the specific operational procedure, noting that the Sustainability Report reflects the percentage of compliance with these guidelines. For more details, see Vale s 2014 Sustainability Report, on page 78.

In regards to risk management, the tailings dams are highly relevant and are submitted to periodic safety audits, as well as to operation and monitoring practices to evaluate geotechnical stability.

Vale s environmental program also includes management of recovery of degraded areas (RAD) in the territories where the Company has activities, whether or not these areas were degraded by operational activities. RAD management also covers the preparation of restoration and repair projects aimed at protection of water resources, harmonization of scenery, geotechnical stability, increasing, gene flow and the

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well-being of human populations. We have partnerships with universities, institutions and governmental research agencies to optimize methods of protecting the ecosystem. For more details, see Vale s 2014 Sustainability Report, on page 95.

Vale acts in several areas, including areas of high cultural value and high relevance for biodiversity. In all the stages of our projects, we develop and support actions that encourage the conservation and sustainable use of natural resources through the adoption of good practices to mitigate negative impacts and promote positive impacts in the locations where we act.

For preservation of biodiversity and ecosystem services, Vale contributes to the maintenance of protected natural areas, whether its own or in partnership with local governments, intended for conservation, and promotion of engagement with communities, scientific institutions, governments and other relevant actors. For more details, see Vale s 2014 Sustainability Report, on pages 91 to 95.

In order to build a positive legacy, in the past 25 years, Vale has offered support to indigenous communities in education, health, infrastructure development and technical assistance to improve the quality of life and self-sufficiency of these communities. For more details, see Vale s 2014 Sustainability Report, on page 73.

c. Reliance on patents, trademarks, licenses, concessions, franchises, contracts, royalties for the development of relevant activities.

We operate mines, railways, ports, marine terminals and power plants, in general, through concessions granted by federal and State governments in several countries. Accordingly, we depend greatly on the concession of operating licenses for such assets for the development of our activities. For more information on our permits and concessions, see item 9.1 b of this form.

Additionally, our intangible assets portfolio, as a whole, generates added value for our operating units in different aspects, whether by the commercial side, which includes technology transfer, open innovation, and economic exploration, whether as unique competitiveness tool, as it creates technological barriers to competitors, or even as instrument to increase productivity and/or reduce personal and environmental risks, as patents related to employee health and security in strategic areas. Among our intangible assets, we consider our registrations for the brand VALE as the most relevant ones for our activities which, with other assets, offer direct technical and financial benefits for our activities in different production fronts.

7.6 Relevant revenue from abroad

	Fiscal year ending on December 31, 2014	
Revenue from customers attributed to:	**Revenue (R$ thousands)**	**% In total income**
China	29,762,000	40
Japan	8,530,000	12
United States	3,210,000	4
Europe	15,732,000	21

Middle East/Africa/Oceania	4,410,000	6
Other countries	12,685,000	17
Total income from abroad	74,329,000	100

7.7 Effects of foreign regulations on activities

For information on the effects of foreign regulations on our activities see item 7.5 in this Reference Form.

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7.8 Relevant long-term relationships

Sustainability

The Company, with the support by its Board of Directors, reaffirms in the document available at http://www.vale.com, its commitment with the United Nations Global Pact and reports, in such document, the progress in the deployment of its principles.

The focus of Company investments is the development of world-class assets, with long use life, low cost, high-quality products, employing state of the art technology and expansion capacity, taking into account value generation linked to commitments assumed with people at different sites where the Company acts and with the planet.

The pillar Incorporate Sustainability into Business **is one of the five pillars in Vale s environmental strategy and in order to leverage progress in its management the Company established global policies as the Sustainable Development Policy, the Human Rights Policy, and the Health and Security Policy. Additionally, Vale (i) maintains the Sustainability Action Plan (PAS), which indicators are related to issues that aim continuous improvements of Company performance regarding sustainability aspects; (ii) established priority environmental aspects as diminishing the issuance of greenhouse gas effects, preservation of the quality of water resources and protection of natural areas, and (iii) is committed to promoting the sustainability agenda with its vendors and clients and to acting to promote the sustainable development in partnership with governments and the society.**

Additionally, Vale s variable compensation program binds the economic and financial performance to operational excellence and sustainability which in turn are linked to issues that aim continuous improvement. These indicators are focused on the environment, and starting in 2014, incorporate social issues of the operational units as well. Environmental indicators consider water, residues, emissions, direct and indirect power, and the recovery of damaged areas. Social indicators contemplate issues addressed at the integrated demand management model.

In 2015, Vale was selected, for the fifth consecutive year, to be part of the BM&F Bovespa ISE Corporate Sustainability Index and also continued to be part of the ICO2 Efficient Carbon Index.

The Company is part of the group of companies of the United Nations Lead Global Pact and is committed with the promotion of its principles, in issues related to human rights, labor rights, fight against corruption, and environment protection. The Company is also member of the ICMM Council, which provides an important exchange aiming continuous improvement of sustainability in our activity sector.

The Company obtained the best grade, regarding quality in transparency related to the disclosure of information on climate changes, among Latin American companies that respond to the CDP questionnaire.

In issues as sustainability practices, Vale continued to deploy measures to reduce the incurrence of accidents in 2014. In Brazil, the Lost Work Case Frequency Rate (LWCFR), measured in number of accidents with lost work per million man/hours worked, was 0.50. The Total Recordable Injury Frequency Rate (TRIFR), in number of accidents per million man/hours worked was 1.49, decreasing 26.24% compared to the year before. Global indicators reflect, likewise, progress in our goals, with a 13.04% reduction in LWCFR, reaching 0.60 in 2014, and 20.61% reduction in TRIFR compared to 2013, totaling 2.08 in 2014.

Sponsorship and Social Activity Policy

The Company has a global sponsorship policy for projects that contemplates the following foundations:

- Cultural: the Company acknowledges in culture a genuine form to express life in society, rich in its ability to reveal histories, values, expressions, and costumes. Furthermore, the Company believes that cultural diversity is an essential asset to be protected. Based on this view, the company looks for projects that acknowledge, value, protect, and promote material and non-material cultural assets, especially music.

- Technical Institutional: the Company supports projects and partnerships that contribute to the theoretical and practical evolution of knowledge aiming sectors the company Works with, whether directly connected to its business and other areas of institutional interest or areas related to its mission.

Additionally, the Company follows a specific policy for social actions in the Brazilian territory, that sets forth base rules for this investment and defines as priority areas health, education, and job and income generation, although the rules also apply, similarly, to the cultural area, including cultural equipment management.

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7.9 Other relevant information

Lei 12.973

On May 13, 2014, Law 12.973 (regulated by Normative Instructions 1515 and 1520) was issued, significantly altering the federal tax legislation in effect, broadly affecting taxation in Brazilian companies. Issues addressed by Law 12.973, include:

- new mechanism to tax in Brazil profits generated abroad by direct and indirect subsidiaries abroad, by the competence regime and affiliates by cash regime, calculated in the balance sheet according to local practices, with the ability to discount taxes paid abroad with limitations. When specific terms set forth by the law are met, there could be (1) consolidation of results (profits and losses) from direct and indirect subsidiaries qualified for taxation purposes by 2022, and (2) payment differed for up to 8 years of taxes due over the profit of qualified foreign companies. This change may case increase of income tax starting in 2015;

- extinction of the Transitory Tax Regime (RTT), by adapting tax rules in effect to new accounting rules in effect in Brazil. In general, Law 12.973 regulated the tax treatment applicable to revenue, costs, expenses, and equity changes recognized by Brazilian companies according to new accounting criteria adopted in Brazil, which are the result of the process of convergence between accounting rules then in effect in Brazil to international standards (IFRS).

- changes to the rules of tax amortization for impairment paid in the acquisition of corporate interest. Among different new rules related to impairment in the acquisition of interest, Law 12.973 determined that the only impairment entitled to be deducted from the IRPJ and CSLL calculation base is impairment generated between independent parts, and deduction of impairment generated between companies of the same group or by the exchange of shares (between the respective issuers), is no longer accepted. Additionally, Law 12.973 established the order in which the PPA (purchase price allocation) will appear in acquisitions and corporate reorganizations.

- new concept of gross income, for purposes of incurrence of PIS and COFINS. Law 12.973 has also broaden the concept of gross income, which may impact calculation of PIS and COFINS, incurring on the gross income of corporations.

- treatment given to dividends and interest on own capital (JCP). Law 12.973 recognized exemption of profits or dividends distributed by November 12, 2013, date when MP 627 was published, exceeding the profit calculated based on accounting criteria in effect in 2007. To calculate the JCP deductible limit, Law 12.973 authorized the use of the net equity value of the respective Brazilian company, as calculated based on the terms in Law 6.404/76.

New rules arising out of Law 12.973 have been in in effect on January 1, 2015.

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8.1 -Description of the Economic Group

a. direct and indirect controllers

Valepar S.A. is a holding company that has direct control of Vale, with a participation, on December 31, 2014, of 33.12% of the Company s capital stock. Valepar is controlled by: (i) Litel Participações S.A., a holding company (52.340%); (ii) Bradespar S.A., a holding company (17.23%); (iii) Mitsui & Co., Ltd, a trading company (15.09%); (iv) BNDES Participações S.A., a holding company (9.60%); and (v) Eletron S.A., a holding company (0.02%).

Litel Participações S.A. is a holding company controlled by BB Carteira Ativa (80.13%), an investment fund, administered by BB Gestão de Recursos Distribuidora de Títulos e Valores Mobiliários S.A., whose shares are 100% owned by Previ Caixa de Previdência dos Funcionários do Banco do Brasil (Previ). Previ is a closed, private pension fund and its participants are employees of the Banco do Brasil and of Previ itself. Previ management is divided between the Advisory Board and the Board of Directors. The Board of Directors is composed of six members: President, Director of Administration, and Directors for Investments, Social Security, Share Participation, and Planning. The Advisory Board is composed of six members and their substitutes. Three are elected by the participants and users of the pension fund, and three others are indicated by the Banco do Brasil. According to the Charter of Previ, the Advisory Board is the highest body of the organizational structure of Previ and responsible for defining the general policy for the administration of the entity.

Bradespar S.A. is a holding company controlled by: (i) Cidade de Deus Companhia Comercial de Participações S.A., a holding company (12.93%); (ii) NCF Participações S.A., a holding company (9.33%); and (iii) Fundação Bradesco, a non-profit entity with the objective of providing education and professional training for children, youths, and adults (5.20%). The Cidade de Deus Companhia Comercial de Participações S.A. is controlled by: Nova Cidade de Deus Participações S.A., a holding company (45.05%); Fundação Bradesco (33.31%), and Mmes. Lina Maria Aguiar (8.54%) and Lia Maria Aguiar (6.72%)]. NCF Participações S.A. is controlled by: Fundação Bradesco (60.41%); Cidade de Deus Companhia Comercial de Participações S.A. (39.51%); and Nova Cidade de Deus Participações S.A. (0.08%). Nova Cidade de Deus Participações S.A. is controlled by Fundação Bradesco (73.93%) and BBD Participações S.A. (26.07%). BBD Participações S.A. has its capital dispersed among multiple shareholders, and NCD Participações S.A. is the largest of them, with 21.86% of the total share capital. In accordance with the terms of the Statute of the Fundação Bradesco, all directors, Executive Directors, and members of the Board of Directors of Bradespar, as well as all directors and members of the Board of Cidade de Deus Companhia Comercial de Participações S.A., act as members of Fundação Bradesco highest decision-making body, known as the *Mesa Regedora*.

Mitsui & Co., Ltd is a trading company, headquartered in Japan, which has its capital spread among many shareholders, but whose largest shareholders are the following Japanese banks: (i) the Master Trust Bank of Japan, Ltd. (trust account) with 8.07% of the share capital; and (ii) Japan Trustee Services Bank, Ltd. (trust account) with 5.89% of the share capital.

BNDES Participações S.A. is a holding company 100% owned by Banco Nacional de Desenvolvimento Econômico e Social (BNDES), holding direct (5.21% of the capital stock on December 31, 2014) and indirect interest on the Company, as shareholder of Valepar, as detailed above.). BNDES is a public company endowed with legal personality under private law, whose shares are 100% owned by the Federal Government.

Eletron S.A. is a holding company controlled by Opportunity Anafi Participações S.A. (99.99%), a holding company controlled by Belapart S.A. (21.73%), Opportunity Holding FIP (56.54%), and Valetron S.A. (21.73%). Belapart S.A. and Valetron S.A. [sic] are corporate holding companies controlled by Ms. Verônica Valente Dantas, who owns 56.16% of the total share capital of each of the above-mentioned companies]. Opportunity Holding FIP is an equity investment fund, managed by Opportunity Private Equity Gestora de Recursos Ltda.

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b. subsidiaries and affiliates

On December 31, 2014, Vale controls or holds relevant participation, under the corporate law in force and according to the case, in the following companies (for a detailed description of the subsidiaries and affiliates of the Company which carry out relevant activities for the business of Vale, see Item 9 of this Reference Form):

Aceros Del Orinoco S.A.
Aços Laminados do Pará S.A. ACW Power Moatize Limited
Aliança Geração de Energia S.A. Aliança Norte Energia Participações S.A.
Associação Brasileira dos Investidores em Auto Produção de Energia ABIAPE
Associação de Terminais Portuários Privados - ATP
Anyang Yu Vale Yongtong Pellet Co., Ltd.
Associação Instituto Tecnológico Vale - ITV
Associação Itakyra
Associação Memorial Minas Gerais Vale
Associação Museu Ferroviário Vale do Rio Doce - AMFVRD
Associação Vale para Desenvolvimento Sustentável - Fundo Vale
Australian Coal Inter Holdings (NL) I B.V.
Baldertonn Trading Corporate
Baovale Mineração S.A.
Belcoal Pty Ltd
Belvedere Australia (BP) PTY Ltd
Belvedere Coal Management Pty Ltd. (ACN 112 868 461)
Belvedere JV (Unincorporate)
Biopalma da Amazônia S.A. - Reflorestamento Indústria e Comércio
Bowen Central Coal JV (Unincorporate)
Bowen Central Coal Pty Limited - (ACN107 198 676)
Bowen Central Coal Sales Pty Limited - (ACN 107 201 230)
Broadlea Coal Management Pty Limited - (ACN 104 885 994)
Broadlea JV (Unincorporate)
Caemi Holdings GmbH
California Steel Industries, Inc.
Camberwell Coal Pty Limited - (ACN 003 825 018)
Canico Resources Corp.
Carborough Downs Coal Management Pty Ltd. - (ACN 108 803 461)
Carborough Downs Coal Sales Pty Ltd. - (ACN 108 803 470)
Carborough Downs JV (Unincorporate)
Central Eólica Garrote Ltda.
Central Eólica Santo Inácio III Ltda.
Central Eólica Santo Inácio IV Ltda.
Central Eólica São Raimundo Ltda.
Charlotte, Ltd
Charlotte Unit Trust
CMM Overseas Limited
Companhia Coreano-Brasileira de Pelotização - KOBRASCO
Companhia Ferro-Ligas do Amapá S.A. - CFA
Companhia Hispano-Brasileira de Pelotização - HISPANOBRAS
Companhia Italo-Brasileira de Pelotização - ITABRASCO
Companhia Nipo-Brasileira de Pelotização - NIBRASCO
Companhia Paulista de Ferro-Ligas - CPFL
Companhia Portuária Baia de Sepetiba - CPBS

Companhia Siderúrgica Ubu
Companhia Usina Tecpar
Compañia Minera Andino-Brasileira Ltda - CMAB
Compañia Minera Miski Mayo S.Ac.
Consórcio AHE Funil*

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Consórcio AHE Porto Estrela
Consórcio BM-ES-27
Consórcio BM-PAMA-10
Consórcio BM-PAMA-11
Consórcio BM-PAMA-12
Consórcio Candonga
Consórcio Capim Branco Energia - CCBE
Consórcio da Hidrelétrica de Aimorés
Consórcio da Usina Hidrelétrica de Igarapava
Consórcio de Rebocadores da Baia de São Marcos - CRBSM
Consórcio de Rebocadores da Barra dos Coqueiros - CRBC
Consórcio Estreito Energia - CESTE
Consórcio Gesai - Geração Santa Isabel
Consórcio Machadinho
Consórcio Railnet
Consórcio SF-T-81
Consórcio Tup Mearim - Graneis Sólidos
Copperbelt (B) Inc.
Corredor do Desenvolvimento do Norte SRL - CDN
Corredor Logístico Integrado de Nacala, S.A. - CLN
CPP Participações S.A
CSP - Companhia Siderúrgica do Pecém
Cubatão Nitrogenados S.A.
Cubatão Fertilizer B.V.
CVRD Venezuela S.A.
Docepar S.A.
Eagle Downs Coal Management PTY Ltd
Eastern Star Resources PTY Ltd - ESR
Ellensfield Coal Management Pty Ltd. - (ACN 123 542 754)
Empreendimentos Brasileiros de Mineração S.A. - EBM
Epícares Empreendimentos e Participações Ltda.
Exide Group Incorporated
Ferrovia Centro-Atlântica S.A. - FCA
Ferrovia Norte Sul S.A
Ferteco Europa S.à.r.l
Florestas Rio Doce S.A
Fortlee Investments Limited
Fundação Estação do Conhecimento Moçambique
Fundación Vale Colombia
Fundação Vale
Fundação Zoobotânica de Carajás
GEVALE Indústria Mineira Ltda.
Glennies Creek Coal Management Pty Ltd. - (ACN 097 768 093)
Glennies Creek JV (Unincorporate)
Globalore PTE Ltd
Henan Longyu Energy Resources Co. Ltd.
Heron Resources limited
Hunter Valley Coal Chain Coordinator Limited
IFC - Indústria de Fosfatados Catarinense Ltda
Instituto Ambiental Vale - IAV
Integra Coal JV (Unincorporate)
Integra Coal Operations Pty Ltd. - (ACN 118 030 998)
Integra Coal Sales Pty Ltd. - (ACN 080 537 033)
Integrated Logistics Company Pty Ltd.
Internacional Iron Company. Inc - IICI
Isaac Plains Coal Management Pty Ltd. - (ACN 114 277 315)

Isaac Plains Coal Sales Pty Ltd. - (ACN 114 276 701)
Isaac Plains JV (Unincorporate)
Isac Plans Sales & Marketing PTY Ltd.

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Kaolin Overseas Limited
Kaserge Serviços Gerais Ltda. - KSG
Katanga (B) IncTeal Mineral (Barbados)
Konnoco (B) Inc Korea Nickel Corporation
Lubambe Copper Mine Ltd.
Maitland Main Collieries Pty Ltd. - (ACN 000 021 652)
MBR Overseas Ltd.
Lukali Holdings (B) Inc
Minas da Serra Geral S.A. - MSG
Mineração Corumbaense Reunida S.A. - MCR
Mineração Dobrados S.A. Indústria e Comércio
Mineração Guanhães Ltda.
Mineração Guariba S.A.
Mineração Manati Ltda.
Mineração Mato Grosso S.A
Mineração Ocirema Indústria e Comércio Ltda
Mineração Paragominas S.A
Mineração Rio do Norte S.A. - MRN
Minerações BR Holding GmbH
Minerações Brasileiras Reunidas S.A. - MBR
Monticello Insurance Ltd.
MRS Logística S.A
MS Empreendimentos e Participações Ltda. - MSEP
MSE - Serviços de Operação, Manutenção e Montagens Ltda.
Vale Canada Limited
Nebo Central Coal Pty Ltd - (ACN 079 942 377)
NORPEL - Pelotização do Norte S.A
Norte Energia S.A. (NESA)
Pineland Timber Company Limited
Ponta Ubu Agropecuária Ltda
Plum Combustion, Inc. - PLUM
Porto Norte S.A.
Potássio Rio Colorado S.A. - PRC
Prairie Potash Mines Limited
Prony Nickel S.A.S.
PT Sumbawa Timur Mining (PT STM)
PT Vale Eksplorasi Indonesia
PT Vale Indonesia Tbk
Qld Coal Holdings Pty Ltd - (ACN 081 724 129)
Railvest Investments Inc
Retiro Novo Reflorestamento Ltda.
Rio Doce Amsterdam BV
Rio Doce Australia Pty Ltd
Rio Doce International S.A
Salobo Metais S.A
Samarco Mineração S.A.
SDCN - Sociedade de Desenvolvimento do Corredor de Nacala S.A.R.L
Seamar Shipping Corporation
Shandong Yankuang International Coking Company Limited
SL Serviços Logísticos Ltda
Sociedad de Desenvolvimento de Estudos e implantação do Corredor de Nacala Limitada, SDEICN
Societe d Exploration Minière Vior Inc(VIOR)
Société Industrielle et Commercial Brasil-Luxembourgoise - BRASILUX
SRV Reinsurance Company S.A.
Startec Iron LLC
Tao Sustainable Power Solutions (BVI)

Tao Sustainable Power Solutions (UK)

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Teal Minerals (Barbados) Incorporated
Tecnored Desenvolvimentos Tecnológicos S.A
Tecnored Tecnologia de Auto-Redução S.A.
The Central East African Railways Company Limited
ThyssenKrupp Companhia Siderúrgica do Atlântico
ThyssenKrupp Slab International B.V
Tiebaghi Nickel S.A.S.
Transbarge Navegacion S.A. - TBN
Transporte Ferroviário Concessionária S.A. - TFC
Transporte Ferroviário Inversora Argentina S.A. - TFI
Troy Resources Limited
TUF Empreendimentos e Participações S.A.
Turbo Power Systems Inc.
Turbo Power Systems Limited
Ultrafértil S.A
Vale Africa Investments (Proprietary) Limited
Vale Americas Inc
Vale Asia Kabushiki Kaisha - Vale Asia K.K.
Vale Australia (CQ) Pty Ltd - (ACN 103 902 389)
Vale Australia (EA) Pty Ltd - (ACN 081 724 101)
Vale Australia (GC) Pty Ltd - (ACN 097 238 349)
Vale Australia (IP) Pty Ltd - (ACN 114 276 694)
Vale Australia Ellensfield Pty Ltd - (ACN 123 542 487)
Vale Australia Holdings Pty Ltd (ACN 075 176 386)
Vale Australia Pty Ltd (ACN 062 536 270)
Vale Belvedere (BC) Pty Ltd
Vale Belvedere (SEQ) Pty Ltd
Vale Belvedere Pty Ltd (ACN 128 403 645)
Vale Canada Holdings Inc.
Vale Canada Limited
Vale China Holdings (Barbados) Ltd.
Vale Coal Exploration Pty Ltd - (ACN 108 568 725)
Vale Colombia SAS
Vale Comercio International SE - VCI
Vale Cubatão Fertilizantes Ltda
Vale Emirates Limited
Vale Energia Limpa S.A.
Vale Energia Limpa Moçambique Ltd
Vale Energia S.A
Vale Europa SE
Vale Europe Limited
Vale Europe Pension Trustees Ltd.
Vale Evate Moçambique Limitada
Vale Exploración Argentina S.A. - VEA
Vale Exploraciones Chile Ltda
Vale Exploraciones Mexico S.A. de C.V.
Vale Exploration Canada Inc.
Vale Exploration Peru SAC
Vale Exploration Philippines Inc
Vale Exploration Pty Ltd (ACN 127 080 219)
Vale Explorations USA, Inc.
Vale Fertilizantes S.A.
Vale Fertilizer Austrália PTY Ltd
Vale Fertilizer International Holding B.V
Vale Fertilizer Netherlands B.V
Vale Holdings AG

Vale Inco Atlantic Sales Limited
Vale Inco Australia Ltd. Partnership
Vale Inco Europe Holdings

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Vale Inco Management Advisory Services (Shangai) Co., Ltd.
Vale Inco Resources (Australia) Pty Ltd.
Vale India Private Limited
Vale International Holdings GmbH
Vale International SA
Vale Investments Ltd.
Vale Japan Ltd.
Vale Limited
Vale Logística Africa Ltda.
Vale Logística da Argentina S.A - VLA
Vale Logística do Uruguay S.A
Vale Logistics Limited
Vale Malaysia Minerals Sdn. Bhd
Vale Malaysia Sdn. Bhd.
Vale Manganês S.A
Vale Mauritius Ltd.
Vale Metais Básicos S.A
Vale Minerals China Co. Ltd
Vale Moçambique S.A.
Vale Newfoundland & Labrador Ltd.
Vale Nickel (Dalian) Co. Ltd
Vale Nouvelle-Calédonie S.A.S.
Vale Oil & Gas Peru S.A.C.
Vale Óleo e Gás S.A
Vale Oman Distribution Center LLC
Vale Oman Pelletizing Company LLC
Vale Overseas Ltd.
Vale Pecém S.A.
Vale Potash Canada Limited
Vale Projectos e Desenvolvimento Moçambique Limitada
Vale Shipping Company Pte Limited
Vale Shipping Enterprise Pte. Ltd
Vale Shipping Holding Pte. Ltd
Vale Shipping Singapore Pte. Ltd
Vale Slab S.A
Vale Soluções em Energia S.A - VSE
Vale South Africa (Proprietary) Ltd.
Vale Switzerland S.A.
Vale Taiwan Limited
Vale Technology Development (Canada) Limited
Vale Trading (Shanghai) Co. Ltd - VTS
Vale Zambia Limited
ValeServe Malaysia Sdn. Bhd.
Valesul Alumínio S.A.
VBG - Logistics (Vale BSGR Logistics) Corp.
VBG - Vale BSGR BVI Limited
VBG - Vale BSGR Guinea
VBG - Vale BSGR Liberia Limited
VBG - Vale BSGR Limited
VEL (ME) Ltd
VEL Holdings GmbH
VLI Multimodal S.A.
VLI Operações de Terminais S.A. - VOT
VLI Operações Portuárias S.A. - VOP
VLI Operações Portuárias S.A.
VLI S.A.

Wiggins Island Coal Export Terminal Pty Ltd. (WICET)
YPF S.A. - Potasio Rio Colorado S.A., Unión Trasitoria de empresas - Segmento 5 Loma La Lata - Sierra Barrosa

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Zhuhai YPM Pellet Co. Ltd.

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*Companies that terminated upon closure of the transaction with CEMIG Geração e Transmissão S.A., on February 27, 2015. For more information, see Section 6 in this Reference Form.

c. participation of the Company in companies of the group

On December 31, 2014, Vale did not hold interest in other companies of the group, except for its subsidiaries and affiliates.

d. participation by companies in the Company group

On December 31, 2014, none of the companies of the group, that is not direct or indirect controlling shareholder of Vale, held direct or indirect interest in the Company.

e. companies under common control

Vale is an equity company controlled by Valepar, whose indirect and indirect controlling shareholders are Litel, BNDESPar, Bradespar, Mitsui, and Eletron.

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8.2. - Holding s Organization Chart

Vale has chosen not to present its holding s organization chart, grounded in CVM Instruction no. 480, on December 7, 2009.

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8.3 Restructuring operations

Justification for not filling out the table:

See item 6.5 of this Reference Form, given that there were no restructuring operations in Vale s economic group besides those involving the Company and its controlled companies already described in the referred item.

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8.4 Other information which the Company judges to be relevant

As Mitsui & Co. Ltd., a direct controller of Valepar S.A., has capital shares spread among many shareholders with no clearly defined control

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9.1 Relevant non-current assets others

Items 9.1 (a), 9.1 (b), and 9.1(c) of this Reference Form, describe the principal non-current assets of the Company.

The main fixed assets of the Company consist of various buildings, facilities, equipment, and mining rights, as described in item 9.1 (a) of this Reference Form.

The following table describes the book value of fixed assets of the Company in December 31, 2014 by category and geographic location:

On December 31, 2014	Brazil	Canada	New Caledonia	Asia	Mozambique	Other	Total
Buildings	18,883,873	8,483,766	2,893,636	2,632,873	694,209	204,836	33,793,193
Facilities	18,172,253	4,306,101	5,612,861	14,838	33,999	581,502	28,721,554
Equipment	12,476,292	2,063,436	246,348	3,181,724	3,613,660	3,087,568	24,669,028
Mining	14,098,681	20,099,931	490,651	2,698,205	225,178	2,041,435	39,654,081
Others	14,045,099	5,727,032	666,497	6,493,332	286,115	1,877,613	29,095,688
Ongoing	31,149,730	5,743,881	1,085,549	3,685,929	9,426,390	482,042	51,573,521
Total	108,825,928	46,424,147	10,995,542	18,706,901	14,279,551	78,274,996	207,507,065

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9.1 Relevant non-current assets / 9.1.a Fixed assets

Description of the fixed asset	Location Country	Location State	Location Municipality	Type of Property
Integrated iron ore production system in North System	Brazil	Various	Various	N/A
Integrated iron ore production system in Southeast System	Brazil	Various	Various	N/A
Integrated iron ore production system in South System	Brazil	Various	Various	N/A
Pelletizing plant - Tubarão I	Brazil	Espírito Santo	Vitória	Own
Pelletizing plant - Tubarão II	Brazil	Espírito Santo	Vitória	Own
Pelletizing plant Tubarão III	Brazil	ES	Vitória	Lease
Pelletizing plant Tubarão IV	Brazil	ES	Vitória	Lease
Pelletizing plant Tubarão V	Brazil	ES	Vitória	Lease
Pelletizing plant Tubarão VI	Brazil	ES	Vitória	Lease
Pelletizing plant Tubarão VII	Brazil	ES	Vitória	Lease
Pelletizing plant Tubarão VIII	Brazil	ES	Vitória	Own
Pelletizing plant - Fábrica	Brazil	Minas Gerais	Congonhas	Own
Pelletizing plant - São Luiz	Brazil	Maranhão	São Luis	Own
Pelletizing plant - Vargem Grande	Brazil	Minas Gerais	Nova Lima	Own
Integrated nickel production system: mine, processing plant, smelter	Canada		Sudbury	N/A
Integrated nickel production system: mine, processing plant, smelter	Canada		Thompson	N/A
Nickel mine and processing plant	Canada		Voisey s Bay	N/A
Manganese Mines	Brazil	Various	Various	N/A
Thermal and metallurgical coalmine	Australia		Hunter Valley	N/A
Thermal and metallurgical coalmine	Australia		Bowen Basin	N/A
Iron ore mines various Central West system	Brazil	Mato Grosso do Sul	Various	N/A
Pelletizing plant - Oman	Oman			Own
Nickel mine and processing plant	New Caledonia		Noumea	N/A
PVTI nickel mine	Indonesia		Sorowako	N/A
Nickel refinery Clydach	Wales		Clydach	Own
Sossego mine	Brazil	Pará	Various	N/A
Salobo mine	Brazil	Pará	Various	N/A
Onça Puma mine	Brazil	Pará	Various	N/A

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Thermal and metallurgical coalmine - Moatize	Mozambique		Various	N/A
Potash mine Taquari-Vassouras	Brazil	SE	Various	Own
Phosphorite mine - Bayóvar	Peru		Piura	N/A
Phosphorite mine and processing plant	Brazil	Various	Various	N/A
Port Colborne smelter of precious metals	Canada		Ontario	Own
Ferroalloys plant	Brazil	Various	Various	Own
Platinum Refinery	Great Britain		Acton	Own
Nickel refinery Taiwan	Taiwan		Kaoshing	Own
Nickel refinery Matsuzaka	Japan		Matsuzaka	Own
Nickel refinery Dalian	China		Dalian	Own

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9.1 - Relevant non-current assets / 9.1.b - Patents, trademarks, licenses, concessions, franchises, and contracts for technology transfer

Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Concessions	Mining concessions in Brazil	662,932 hectares	Undetermined	Persistent breach of current mining legislation: predatory mining; mining stopped without notice to, and consent of, the competent agency; not answering repeated requests for routine inspections.	Interruption and/or cancellation of mining operations in Brazil
Concessions	Lease license to mining in Canada	278,208 hectares	2015-2035	Failure to pay taxes (mining tax or rental fees), non-compliance with regulation, failure to present renewal application. Rejection of application for renewal, noncompliance with renewal requirements.	Interruption and/or cancellation of mining operations and/or mineral exploration in Canada

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Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Concessions	Contract of Work in Indonesia	118,435 hectares	2025	End of the term of the contract; cancellation due to errors or irregularity in the procedure for or in the act of its granting; and in the case of the bankruptcy or dissolution of the concessionaire. Breach of legislation. The Contract of Work of mines that Vale has in Indonesia expires in 2025. However, according to the new Mining Law, Vale may request at least one extension of 10 years.	Interruption and/or cancellation of mining operations in Indonesia.
Concessions	Mining concessions in Australia	19,209 hectares	2015-2041	Non-payment of lease/royalties; failure to submit report on activities. Breach of legislation.	Interruption and/or cancellation of mining operations in Australia.
Concessions	Mining concessions in New Caledonia	20,157 hectares	2015-2051	Non-payment of fees, non-payment of lease/royalties; non-submission of report on activities; lack of activity on the concessions. Breach of legislation.	Interruption and/or cancellation of mining operations in New Caledonia; impossibility of adding mineral resources that allow expanding our mining activities outside the area of the VNC project.

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Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Concessions	Mining concessions in Peru	199,398 hectares	Undetermined	Non-payment of fees for more than two consecutive years and non-payment of fines. Breach of legislation.	Interruption and/or cancellation of mining operations in Peru.
Concessions	Mining concessions in Guinea	40,108 hectares	Undetermined	Failure to present the request for measurement, failure to use legal labor (LL), non-payment of fee (*canon minero*)	Interruption and/or cancellation of mining operations in Argentina.
Concessions	Mining concessions in Mozambique	23,780 hectares	2032	In this country, the reasons for loss of the concession are, above all, related to: (i) the abandonment or the mine; (ii) the performance of mining activities under health and safety conditions that are not compatible with the requirements of local legislation; (iii) the lack of payment of fees regarding production of minerals and other levies due as a result of carrying out mining activity; and (iv) bankruptcy of the company, failure to demarcate the area, failure to pay specific taxes, failure to present working reports, and non-performance of work in accordance with the mining plan.	Interruption and/or cancellation of mining operations in Mozambique.

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Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Concessions	Rail concession for passenger and freight transport on the EFC Railroad	892 km (MG, SP, ES, RJ, GO, BA, SE, and DF)	2027 (extendible for 30 years)	The concession will be terminated if one of the following takes place: the end of the contractual period, nationalization, forfeiture, rescission, cancellation, or bankruptcy or dissolution of the concessionaire	Interruption and/or cancellation of the railroad operations, which make up the Northern System of Vale.
Concessions	Rail concession for passenger and freight transport on the Vitória a Minas Railroad	Extension of 905 km in the States of Espírito Santo and Minas Gerais	2027 (extendible for 30 years)	The concession will be terminated if one of the following takes place: the end of the contractual period, nationalization, forfeiture, rescission, cancellation, or bankruptcy or dissolution of the concessionaire.	Interruption and/or cancellation of the railroad operations, which make up the Southeast System of Vale.

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Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Concessions	Concession for the Center-East network belonging to the Federal Railroad Network S.A., granted to FCA	7,220 km in Sergipe, Bahia, Minas Gerais, São Paulo, Rio de Janeiro, Goiás, and Federal District	2026 (extendible for 30 years)	The concession will be terminated if one of the following takes place: the end of the contractual period, nationalization, forfeiture, rescission, cancellation, or bankruptcy or dissolution of the concessionaire.	Interruption and/or cancellation of the railroad operations.
Concessions	Sub concession contract with lease of North-South Railroad network	720 km, between Açailândia (MA) and Palmas (TO)	2038 (extendible for 30 years)	The concession will be terminated if one of the following takes place: the end of the contractual period, nationalization, forfeiture, rescission, cancellation, or bankruptcy or dissolution of the subconcessionaire.	Interruption and/or cancellation of the railroad operations.

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Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Concessions	Concession for use of public property for electric energy generation Igarapava Dam	Igarapava (SP), Conquista (MG), Rifaina (SP)	2028	(i) by reversion of the asset at the end of the contractual period; (ii) by nationalization.	Interruption and/or cancellation of the supply of energy from the hydroelectric plant.
Concessions	Concession for use of public property for electric energy generation Porto Estrela Dam	Joanésia (MG), Braúnas (MG), and Açucena (MG)	2032	(i) the termination of the contractual period; (ii) by nationalization of the services; (iii) by forfeiture; (iv) by rescission; (v) by cancellation as a result of defect or irregularity verified in the procedure or act of making the grant; (vi) in the case of bankruptcy or dissolution of the concessionaire.	Interruption and/or cancellation of the supply of energy from the hydroelectric plant.
Concessions	Concession for use of public property for electric energy generation Capim Branco I and II Dam	Araguari (MG), Uberlândia (MG), and Indianópolis (MG)	2036	(i) the termination of the contractual period; (ii) by nationalization of the services; (iii) by forfeiture; (iv) by rescission; (v) by cancellation as a result of defect or irregularity verified in the procedure or act of making the grant; (vi) in the case of bankruptcy or dissolution of the concessionaire.	Interruption and/or cancellation of the supply of energy from the hydroelectric plant.

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Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Concessions	Concession for use of public property for electric energy generation Funil Dam	Cities in the State of Minas Gerais	2035	(i) the termination of the contractual period; (ii) by nationalization of the services; (iii) by forfeiture; (iv) by rescission; (v) by cancellation as a result of defect or irregularity verified in the procedure or act of making the grant; (vi) in the case of bankruptcy or dissolution of the concessionaire.	Interruption and/or cancellation of the supply of energy from the hydroelectric plant. Note: Lavras (MG), Perdões (MG), Ijaci (MG), Itumirim (MG), Ibituruna (MG), and Bom Sucesso (MG).

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Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Concessions	Concession for use of public property for electric energy generation Aimorés Dam	Cities in the State of Minas Gerais	2035	(i) the termination of the contractual period; (ii) by nationalization of the services; (iii) by forfeiture; (iv) by rescission; (v) by cancellation as a result of defect or irregularity verified in the procedure or act of making the grant; (vi) in the case of bankruptcy or dissolution of the concessionaire.	Interruption and/or cancellation of the supply of energy from the hydroelectric plant. Note: Aimorés (MG), Baixo Guandu (ES), Resplendor (MG), and Itueta (MG) .
Concessions	Concession for use of public property for electric energy generation Candonga Dam	Rio Doce (MG) and Santa Cruz do Escalvado (MG)	2035	(i) the termination of the contractual period; (ii) by nationalization of the services; (iii) by forfeiture; (iv) by rescission; (v) by cancellation as a result of defect or irregularity verified in the procedure or act of making the grant; (vi) in the case of bankruptcy or dissolution of the concessionaire.	Interruption and/or cancellation of the supply of energy from the hydroelectric plant.

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Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Concessions	Concession for use of public property for electric energy generation Estreito Dam	Cities in Maranhão and Tocantins	2037	(i) termination of the contractual period; (ii) nationalization; (iii) forfeiture; (iv) rescission; (v) cancellation as a result of defect or irregularity verified in the procedure or act of making the grant; (vi) bankruptcy or dissolution of the concessionaire.	Interruption and/or cancellation of the supply of energy from the hydroelectric plant.

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Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Concessions	Concession in a shared arrangement for electric energy generation Machadinho Dam	Cities in Rio Grande do Sul and Santa Catarina	2032	(i) by reversion of the asset at the end of the contractual period; (ii) by nationalization: (iii) by forfeiture.	Interruption and/or cancellation of the supply of energy from the hydroelectric plant.
Concessions	Concession for the utilization of hydraulic energy Nova Maurício Dam	Leopoldina (MG)	2021	(i) termination of the contractual period.	Interruption and/or cancellation of the supply of energy from the small hydroelectric plant.
Concessions	Concession for the utilization of hydraulic energy Glória Dam	Muriaé (MG)	2021	(i) termination of the contractual period.	Interruption and/or cancellation of the supply of energy from the small hydroelectric plant.

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Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Concessions	Concession for the utilization of hydraulic energy Ituerê Dam	Rio Pomba (MG)	2021	(i) termination of the contractual period.	Interruption and/or cancellation of the supply of energy from the small hydroelectric plant.
Concessions	Concession for the utilization of hydraulic energy Mello Dam	Rio Preto (MG)	2025	(i) termination of the contractual period.	Interruption and/or cancellation of the supply of energy from the small hydroelectric plant.
Trademarks	Registration of Mixed Trademark Vale	172 countries	2017 (extendible every 10 years)	Within the administrative sphere (the Brazilian National Institute for Industrial Property INPI), the registration of trademarks already granted may be contested through nullification procedures or be subject to petitions for partial or total cancellation under the allegation that the trademark is not being used in the way that the registration was granted. In the judicial sphere, third parties may sue for the nullification of trademark registrations alleging violation of their rights to industrial property. Trademark registrations are maintained by periodic payments to INPI. The payment of the fees due and the continual use of the trademarks are indispensable to avoid the termination of their registration and the consequent cessation of the rights of the holder.	The loss of rights to trademarks results in the impossibility of stopping third parties from using identical or similar trademarks to brand even competing products and services, since the holder loses the right to the exclusive use of them. There also exists the possibility that the holder be subject to criminal and civil lawsuits for improper use, in the case of the violation of the rights of third parties, resulting in the impossibility of using the trademarks when carrying out its activities. It is not possible to quantify the impact of these events.

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Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Licenses	Domain name: Vale.com.br	Brazil	9/16/2018	The loss of rights related to such assets relates to: (i) lack of payment to maintain the domain; (ii) finding that at registration or later, there was use of false CNPJ, CPF, corporate name, or invalid, incorrect, or outdated; (iii) failure to timely comply with the provision of documents; (iv) by court order; and (v) by express request of the applicant of the domain registration.	It is not possible to quantify the impact; however, it is certain that with the loss of the domain name, this could be registered by third parties.

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Type of asset	Description of asset	Territory affected	Duration	Events which might cause a loss of rights	Consequences of loss of rights
Licenses	Domain name: Vale.com.br	Brazil	10/7/2020	The loss of rights related to such assets relates to: (i) lack of payment to maintain the domain; (ii) finding that at registration or later, there was use of false CNPJ, CPF, corporate name, or invalid, incorrect, or outdated; (iii) failure to timely comply with the provision of documents; (iv) by court order; and (v) by express request of the applicant of the domain registration.	It is not possible to quantify the impact; however, it is certain that with the loss of the domain name, this could be registered by third parties.

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9.1 - Relevant non-current assets / 9.1.c Participation in Corporations

Corporate Name	CNPJ (Corporate Tax ID)	CVM Code	Type of Corporation	HQ - Country	HQ - State	HQ - Municipality	Issuer participation (%)
Aços Laminados do Pará S.A.	10.335.963/0001-08		Controlled company	Brazil	RJ	Rio de Janeiro	100.000000

Description of activities Develop studies for technical-economic viability, as well as market studies, business plans, and other related studies to build an integrated steel plant in Marabá (Project), in the State of Pará, dedicated to the production of steel, including one or more plants for sintering, coking, high furnace, steel mill, and machines for ingot casting/finishing for the Project. The studies will also include market, engineering, and environmental assessments, budgets, and fiscal and economic analysis (the Project Study). Acquire the premises where the Project will be installed and sign the necessary agreements for said acquisition. Obtain the required licenses for the implementation of the Project, including, but not limited to the environmental licenses. Negotiate all commercial agreements that are necessary for the implementation of the Project, including the supply of iron ore/pellets, contracts for the supply of coal, of ferroalloys, and contracts for the supply of logistic services, among others.

		Market value	Amount of dividends	Market Value		Book Value
12/31/2014	3.000000	0.000000	0.00			
12/31/2013	0.600000	0.000000	0.00	12/31/2014	12/31/2014	332,000,000.00
12/31/2012	20.000000	0.000000	0.00			

Reasons for buying and holding that participation Encourage the consumption of iron ore in Brazil through investment in the iron and steel company.

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Corporate Name	CNPJ (Corporate Tax ID)	CVM Code	Type of Corporation	HQ - Country	HQ - State	HQ - Municipality	Issuer participation (%)
Biopalma da Amazônia S.A., Reflorestamento, Indústria e Comércio.	08.581.205/0001-10		Controlled company	Brazil	PA	Belém	87.700000

Description of activities Biopalma is a privately-owned corporation which main activities relate to growing palm and other vegetables and extraction, processing, and sale of their oils

	Book value variation	Market value	Amount of dividends	Market Value		Book Value	
[redacted]							
12/31/2014	16.000000	0.000000	0.00				
12/31/2013	60.000000	0.000000	0.00	12/31/2014		12/31/2014	646,000,000.00
12/31/2012	-21.000000	0.000000	0.00				

Reasons for buying and holding that participation Exploration of the palm oil production complex located in the State of Pará

Corporate Name	CNPJ (Corporate Tax ID)	CVM Code	Type of Corporation	HQ - Country	HQ - State	HQ - Municipality	Issuer participation (%)
VBG Vale BSGR BVI Limited	00.000.000/0000-00		Controlled	Virgin Islands (England)			0

Description of activities All and any activity not prohibited by law.

Year	Book value variation (%)	Market value variation (%)	Amount of dividends received (Reais)	Market Value Date	Market Value Value (R$)	Book Value Date	Book Value Value (R$)
12/31/2014	100	0	0				
12/31/2013	0.800000	0.000000	0.00	12/31/2014		12/31/2014	0
12/31/2012	15.000000	0.000000	0.00				

Reasons for buying and holding that participation Iron ore investment in Guinea

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	CNPJ			**HQ -**	**Issuer participation**
[redacted]					
California Steel Industries, Inc.	00.000.000/0000-00	Affiliate	United States		