

Vale S.A.  
Form 6-K  
March 24, 2016  
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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**

**March 2016**

**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.)

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

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

(Check One) Yes  No

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

(Check One) Yes  No

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

(Check One) Yes  No

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

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PUBLICLY LISTED COMPANY

CNPJ 33.592.510/0001-54

**ORDINARY AND EXTRAORDINARY**

**SHAREHOLDERS MEETINGS**

**CALL NOTICE**

Shareholders of Vale S.A. ( Vale ) are hereby invited to convene for the Ordinary and Extraordinary General Shareholders Meetings to be cumulatively held on April 25, 2016, at 11am at Avenida das Américas, 700, 2nd floor, room 218 (auditorium), Città America, Barra da Tijuca, in the city of Rio de Janeiro/RJ, Brazil, for the purpose of discussing and deciding upon the matters set forth in the Agenda below:

**1. Ordinary Shareholders Meeting**

1.1. Appreciation of management report and analysis, discussion and vote of the financial statements for the fiscal year ending on December 31, 2015;

1.2. Proposal for the destination of profits of the fiscal year of 2015, if any;

1.3. Ratification of the appointment of an effective and an alternate members of the Board of Directors, on the meetings of the Board of Directors held on 06/25/2015 and 07/29/2015, respectively, in accordance with the Article 11, §5 of Vale s By-Laws;

1.4 Appointment of the members of the Fiscal Council; and

1.5 Establishment of the remuneration of the Management and members of the Fiscal Council for 2016.

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**2. Extraordinary Shareholders Meeting**

2.1 Proposal for amendment of the Shareholders Remuneration Policy.

According to CVM Rule No. 165/91, as amended by CVM Rule No. 282/98, a shareholder must hold at least 5% (five percent) of the Vale's voting capital in order to request the cumulative voting system.

All documentation pertaining to the matters to be discussed in the Ordinary and Extraordinary Shareholders Meetings is available to shareholders at Vale's headquarters, on its website (<http://www.vale.com>) and on the websites of the Brazilian Securities and Exchange Commission (<http://www.cvm.gov.br>), of BM&FBovespa S.A. - Bolsa de Valores, Mercadorias e Futuros, the São Paulo Stock Exchange ([www.bmfbovespa.com.br](http://www.bmfbovespa.com.br)), of the Securities and Exchange Commission of the United States ([www.sec.gov](http://www.sec.gov)) and of The Stock Exchange of Hong Kong Limited ([www.hkex.com.hk](http://www.hkex.com.hk)).

Shareholders who wish to attend the Meetings may do so in person or appoint a duly-registered proxy, pursuant to Paragraph 1 of Article 126 of the Brazilian Corporate Law (Law No. 6,404/76). The proxy shall have been granted less than 1 (one) year before the Meetings, and be duly qualified as a shareholder, manager, attorney registered with the Brazilian Bar Association or a financial institution.

Note that shareholders must attend the Shareholders Meetings with proof of ownership of shares issued by Vale, such proof issued no more than 4 (four) business days prior to the date of the Meetings by the financial institution who serves as the bookrunner or custodian, as well as the following:

(a) in case the shareholder is a physical person, they must carry a valid photo identification document, or, where applicable, the identification document of their proxy and the respective power-of-attorney;

(b) in case the shareholder is a legal person, they must carry a valid photo identification document of the legal representative and the documents which prove his or her representation powers, including the power-of-attorney, and a

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copy of the articles of incorporation and of the minutes in which the management was appointed; and

(c) in case the shareholder is an investment fund, they must carry a valid photo identification document of the legal representative and the documents which prove his or her representation powers, including the power-of-attorney, and a copy of the valid regulation of the investment fund, the bylaws or articles of incorporation of its administrator, and the minutes in which the management was appointed. If any such documents are in a foreign language, they must be translated to Portuguese by a sworn translator, notarized, and legalized by consular officials.

The regularity of representation documents will be verified prior to the Meetings.

In order to expedite the process of holding the Meetings, we ask that the shareholders who will be represented by proxy kindly deposit the aforementioned documents proving representation at least 72 (seventy-two) hours prior to the Meetings.

Rio de Janeiro, March 23rd, 2016.

**Gueitiro Matsuo Genso**

**Chairman of the Board of Directors**

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**MANUAL FOR PARTICIPATION**

**IN THE VALE S.A.**

**SHAREHOLDERS ANNUAL AND SPECIAL GENERAL  
MEETINGS**



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**Annex I** – Managers' comments on Vale's financial situation, as per item 10 of Vale's Reference Form, pursuant to the provisions set forth in Article 9, III, of CVM Instruction # 481/2009 as amended.

**Annex II** – Information related to item 13 of Vale's Reference Form, pursuant to the provisions set forth in Article 12, II of CVM Instruction # 481/2009 as amended.

**Annex III** – Proposal to amend Vale's Compensation Policy.

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**I. Notice of Meeting**

The Shareholders of Vale S.A. ( Vale ) are hereby called to the Shareholders Annual and Special Meetings which will be held, cumulatively, on April 25, 2016, at 11:00 AM, at Avenida das Américas # 700, 2º andar, Sala 218 (auditorium), Città America, Barra da Tijuca, in this City, Rio de Janeiro, in order to deliberate on the following Agenda:

**1. Shareholders Annual Meeting**

- 1.1 Evaluation of management s annual report and, analysis, discussion, and vote on the financial statements for the fiscal year ending on December 31, 2015;
- 1.2 Proposal for the destination of profits for the 2014 fiscal year, if any;
- 1.3 Ratify the appointment of effective and alternate members of the Board of Directors occurred on the Meetings held on June 25, 2015 and on July 29, 2015, pursuant to Article 11, §10 of Vale s By-Laws;
- 1.4 Election of the members of the Fiscal Council; and
- 1.5 Establishment of the remuneration of the senior management and members of the Fiscal Council for the year 2016.

**2. Shareholders Special Meeting**

- 2.1 Proposal to amend Vale s Compensation Policy.

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**II. Procedures for participation in the Meetings**

**2.1. Shareholder participation in general meetings**

Vale shareholders may attend General Meetings **personally** or **be represented by a duly constituted attorney**.

The following documents will be required for shareholders to participate in General Meetings:

**Individual person**

- valid identity document with photo (original or certified copy) of the shareholder or, if applicable, of their attorney and respective proxy document. The following documents may be submitted: (i) General Record ID (RG); (ii) Foreigner s identity card (RNE); (iii) passport; (iv) Class Association card used as civil identity for legal purposes (ex. OAB, CRM, CRC, CREA); or (v) National Professional Card (CNH).
- proof of ownership of shares issued by Vale issued by the depositary financial institution or custodial agent up to 4 (four) working days before the date of the Meetings.

**Corporate entity**

- valid identity document with photo of the legal representative (original or certified copy). The following documents may be submitted: (i) General Record ID (RG); (ii) Foreigner s identity card (RNE); (iii) passport; (iv) Class Association card used as civil identity for legal purposes (ex. OAB, CRM, CRC, CREA); or (v) National Professional Card (CNH).
- evidentiary documents of representation, including power of Attorney and copy of the constitutive acts and of the minutes of the

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election of Directors, and, in the case of investment fund, copy of fund rules in force, of the bylaws or social contract of its director, and of the election of Directors. If such documents are in a foreign language they must be translated to Portuguese by a sworn translator, notarized and consularized.

- proof of ownership of shares issued by Vale issued by depositary financial institution or custodial agent up to 4 (four) working days before the date of the Meetings.

We remind you that the regularity of the representation documents will be checked before the beginning of Meetings. For this reason, Shareholders are requested to kindly arrive in advance of Meetings so that the documents necessary for their participation can be duly checked in timely manner for its participation.

**2.2. Proxy Representation**

Shareholder participation in Meetings can be in person or through a duly constituted Attorney, observing the terms of §1 of Art. 126 of law # 6,404/76. It is also necessary that the attorney should have been nominated less than 1 (one) year previously, and qualify as a shareholder, a Vale executive, a lawyer registered with the Brazilian Bar Association, or be a financial institution, and the partnerships of investment funds must be represented by its fund management company.

Pursuant to the provisions set forth in the Circular-Letter/CVM/SEP/# 02/2016, legal corporate entities may be represented in Meetings by their legal representatives or by a duly constituted attorney in accordance with the provisions of their respective constitutive acts and the Brazilian Civil Code. In this case, it is not required that the attorney of the corporate entity shareholder be qualified as a shareholder, a Vale executive or a lawyer.

In the case of proxy in a foreign language, it should be accompanied by the corporate documents, in the case of a corporate entity, and the proxy instrument adequately prepared in Portuguese, notarized and consularized.

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In item V of this manual there is a proxy template for reference purposes for shareholders. Shareholders will also be able to use proxies other than that suggested in this guide, as long as they are in accordance with the provisions of law # 6,404/76 and the Brazilian Civil Code.

For the purpose of expediting the process of conducting the Meetings, those shareholders represented through a power of attorney (proxy) may, at their sole and exclusive discretion, send the representative documents at least seventy-two hours (72) prior to the Meetings, to the following address:

**Attn.: Investor Relations Officer**

Avenida das Américas 700, 2º andar, sala 218

Barra Rio de Janeiro RJ

Regarding the above-mentioned deadline, we point out that the shareholder who appears by the start of the Meetings with the required documents will be entitled to participate and vote, even if he or she have not submitted them in advance.

We remind you that the regularity of the representation documents will be checked before the beginning of Meetings. For this reason, Shareholders are requested to kindly arrive in advance of Meetings so that the documents necessary for their participation can be duly checked in timely manner for its participation.

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**III. The Vote**

**3.1. Voting Rights**

Pursuant to Article 5 of Vale's By-Laws, each common share, each class A preferred share, and each special class preferred share allows for one vote in the deliberations of the General Meeting, and it is certain that class A and special preferred shares have the same political rights as the common shares, except for voting to elect members of the Board of Directors, excluding the provisions of §2° and §3° of Article 11 of the By-Laws, as well as the right to elect and dismiss a member of the Fiscal Council and his respective substitute.

We emphasize that under the terms of CVM Instruction # 165/91, as amended by the CVM Instruction # 282/98, the minimum percentage of participation in the Vale's voting capital required to request multiple voting is 5% (five percent).

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**IV. Agenda Items of the Shareholders General and Special Meetings**

All documents regarding the agenda of Vale Shareholders General and Special Meetings are available to the shareholders at the main offices of Vale, on the Company's web site ([www.vale.com](http://www.vale.com)) and on the web sites of the Brazilian Securities and Exchange Commission ([www.cvm.gov.br](http://www.cvm.gov.br)), the BM&FBovespa S.A. São Paulo Stock Exchange ([www.bmfbovespa.com.br](http://www.bmfbovespa.com.br)), the Securities and Exchange Commission ([www.sec.gov](http://www.sec.gov)), and The Stock Exchange of Hong Kong Limited ([www.hkex.com.hk](http://www.hkex.com.hk)).

**4.1 Annual General Meeting**

**4.1.1 Evaluation of the management's annual report and analysis, discussion, and vote on the financial statements for the fiscal year ending on December 31, 2015.**

In order to deliberate on this issue, the following documents will be available to the shareholders:

- (a) the Annual Management Report, the Financial Statements, the Financial Statements for the fiscal year ending on December 31, 2015 and the Opinion of the Independent Auditors (KPMG Auditores Independentes), which will be published as required by current legislation;
- (b) the Opinions of the Board of Directors and the Fiscal Council, dated 02/24/2016;
- (c) DFP Form 2015 (Standard Financial Statements);
- (d) Managers' comments on Vale's financial situation, as per item 10 of Vale's Reference Form, pursuant to the provisions set forth in Article 9, III, of CVM Instruction # 481/2009 as amended, attached hereto as Annex I.

**4.1.2 Proposal for the destination of profits for the 2015 fiscal year, if any.**

Vale ascertained a net loss in the amount of R\$44,212,186,731.00 related to the fiscal year ended on December 31, 2015, being the aforesaid net loss absorbed pursuant to





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Article 189, sole paragraph, of Law # 6.404/1976. Therefore, Vale will not distribute dividends related to the fiscal year ended on December 31, 2015.

In view of the resolutions above, Vale is exempt from presenting the Annex 9-1-II in accordance with Article 9, paragraph 1, II, of CVM Instruction # 481/2009, due to the instruction set out in Circular Letter/CVM/SEP/# 02/2016.

It should be emphasized that, based on the retained earnings reserves approved on the balance sheet related to the fiscal year of 2014, the Board of Directors has approved on the meeting held on (a) April 14, 2015, the payment, as of April 30, 2015, of the first installment of the minimum dividend for 2015, in the total gross amount of R\$3,101,100,000.00, in the form of interest on capital, corresponding to the total gross amount of R\$0.601760991 per outstanding common or preferred share issued by Vale, being such amount subject to Withholding Income Tax at rate in force; (b) October 15, 2015, the payment, as of October 30, 2015, of the second installment of dividend for 2015, in the total gross amount of R\$1,925,350,000.00, corresponding to R\$0.373609533 per outstanding common or preferred share issued by Vale.

**4.1.3 Ratify the appointment of the effective and alternate members of the Board of Directors.**

Pursuant to Article 11 of Vale's By-Laws, the Board of Directors is composed of eleven members and their respective substitutes, who are shareholders of the company. The mandate term for members of the Board of Directors is two years, and re-election is allowed. The election of the members of the Board of Directors shall comply with the provisions established under current legislation and those under Vale's By-Laws.

In view of the vacancy of the Board of Directors positions, and pursuant to Article 11, §10 of Vale's By-Laws, Mr. Alberto Ribeiro Guth (as effective) and Mr. Arthur Prado Silva (as alternate for Mr. Dan Conrado) were elected as members of the Board of Directors on the Meetings held on June 25 and on July 29, 2015, respectively, who will remain in the position until the first Annual Shareholders Meeting after their election.

Therefore, Valepar S.A. proposes to ratify on the Shareholders Meeting, which will be held on April 14, 2016, the appointment of such members to remain in their positions until the 2017 Annual Shareholders Meeting.

Pursuant to the provisions set forth in Article 10 of CVM Instruction N. 481/2009 and, as set forth in Annex A of CVM Instruction # 552/2014, below please find information

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with respect to Mr. Alberto Ribeiro Guth and Mr. Arthur Prado Silva pursuant to items 12.5 through 12.10 of the Reference Form.

Name	Alberto Ribeiro Guth	Arthur Prado Silva
Birth Date	08/01/1959	04/29/1972
Occupation	Engineer	Bank Clerk
CPF/MF	759.014.807-59	991.897.047-20
Position to be placed	Effective member of Board of Directors	Alternate Member of Board of Directors
Election date	04/14/2016	04/14/2016
Date of investiture	05/13/2016	05/13/2016
Term of office	Until 2017 Annual Shareholders Meeting	Until 2017 Annual Shareholders Meeting
Other positions held or duties exercised at Vale	Not applicable	Member of the Governance and Sustainability Committee (since April 2015)
Indicated/Elected by controlling shareholder	Yes	Yes
Independent member? (1)	Yes	No
Number of consecutive terms of office	N/A	N/A

(1) The determination of independence came from the fact that he (i) has no relationship with Vale, except for possible significant stake; (ii) is not the controlling shareholder, spouse or relative up to the second degree; (iii) is not bound by a shareholders agreement; (iv) was not an employee or Officer of Vale or its subsidiaries or affiliates for at least 3 (three) years; (v) is and was not, over the past 3 (three) years, member of the board of any subsidiary; (vi) does not provide, purchase, offers or trade, directly or indirectly, services and/or products to Vale in significant volume; (vii) is not a spouse or relative up to the second degree of any officer or manager of Vale; (viii) does not receive any other compensation from Vale, in addition to management fees; (ix) neither is nor was a shareholder, over the past 3 (three) years, of an audit firm that audits or has audited Vale in the same period; (x) is not a member of a nonprofit entity that receives significant financial resources of Vale or its related parties; and (xi) does not financially depends on the compensation paid by Vale.

*Main professional experience:***Alberto Ribeiro Guth**

Alberto Ribeiro Guth is an Effective Member of the Board of Directors of Vale (since June 2015). His main professional experiences in the past 5 years include: (i) Member of the Board of Directors of Via Varejo S.A. (since 2012), a publicly-held company engaged in retail; (ii) Member of the Board of Directors of Centrais Elétricas de Santa

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Catarina S/A CELESC (since 2015), a publicly-held company engaged in energy distribution; (iii) Managing partner of Angra Partners Gestão de Recursos Ltda. (since 2003), a closely-held company engaged in asset management and financial advisory; (iv) Member of the Board of Directors of TG Participações S.A. (since 2008), a closely-held company engaged in the production of ethanol; (v) Member of the Board of Directors of Angra Infraestrutura Gestão de Informações Ltda. (since 2006), a closely-held company engaged in resource management; (vi) Member of the Board of Directors of Estre Ambiental S.A. (since 2014), a closely-held company engaged in waste treatment; (vii) Member of the Board of Directors of A Geradora Aluguel de Máquinas S.A. (since 2013), a closely-held company engaged in equipment leasing; (viii) Officer of Aconçágua Investimentos e Participações Ltda. (since 2013), a closely-held company of Angra Partners Group; (ix) Managing partner of Angra Partners Participações Ltda. (from 2010 to 2014), a closely-held company engaged in resource management; (x) Partner and manager of Angra Partners Assessoria Financeira Ltda. (from 2010 to 2015), a closely-held company engaged in resource management; (xi) Officer of Futuretel S.A. (since 2012), a publicly-held holding investment company; (xii) Officer of Zain Participações S.A. (since 2012), a publicly-held company of investments; (xiii) Director of Neustift Participações Ltda. (since 2014), a closely-held company of Angra Partners Grup; (xiv) Member of the Board of Directors of Ediouro Participações S.A. (from 2013 to 2014), closely-held company engaged in publishing; (xv) Officer of Sul 116 Participações S.A. (since 2012), a publicly-held company of investments; (xvi) Officer of Newtel Participações S.A. (since 2012), a publicly-held investment company; (xvii) Member of the Board of Director of Companhia Providência Indústria e Comércio S.A. (from 2013 to 2014), a publicly-held company engaged in manufacture and sale of nonwovens; (xviii) Officer of Daleth Participações S.A., a publicly-held investment company (from 2012 to 2015); (xix) Officer of Capinauá Empreendimentos e Participações S.A. (since 2007), a publicly-held investment company; (xx) Officer of Invitel Legacy S.A. (since 2012), a publicly-held investment company; and (xxi) Member of the Board of Directors of Rio Barigui S.A. (since 2012), a closely-held investment company. Mr. Guth holds an a bachelor's degree in Engineering from IME (Military Institute of Engineering), concluded on December 1981, and an MBA in finance specialization from Wharton Business School, University of Pennsylvania concluded on May 1992.

**Arthur Prado Silva**

Arthur Prado Silva is an Alternate Member of the Board of Directors (since July 2015) and a member of the Governance and Sustainability Committee of Vale (since April

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2015). His main professional experiences in the past 5 years include: (i) Member of the Board of Directors of Valepar S.A. (since July 2015), controlling shareholder of Vale, a closely-held holding company; (ii) Effective Member of the Board of Directors of Litel Participações S.A. (since July 2015), indirect controlling shareholder of Vale, a holding company, where also held the position of Managing Director (from 2013 to 2015); (iii) Effective Member of the Board of Directors of Litela Participações S.A. and Litel B Participações S.A. (since July 2015), publicly-held holding companies controlled by Litel Participações S.A., where also held the position of Managing Director at both companies (from 2013 to 2015); (iv) Member of the Audit Committee of Tupy S.A. (from 2011 to 2015), a publicly-held company engaged in metallurgy industry; (v) Effective Member of the Board of Directors of Sul 116 Participações S.A. (from 2011 to 2015), a publicly-held holding company; (vi) Effective Member of the Board of Directors of 521 Participações S.A. (since 2006), a publicly-held holding company; (vii) Effective Member of the Board of Directors of GTD Participações S.A. (from 2008 to 2013), a publicly-held holding company; (viii) Alternate Member of the Board of the Directors of Companhia de Energia Elétrica da Bahia Coelba (since 2003), a publicly-held company engaged in distribution and sale of electricity; and (ix) Member of the Financial Committee of Rio Grande Energia S.A. (since 2003), a publicly-held company engaged in electric power generation. Mr. Silva holds a law degree concluded on December 1999, a post-graduate degrees in controlling and finance, concluded on May 2001, and in tax law, concluded on March 2009, all from Universidade Cândido Mendes, and an MBA in Corporate Finance from Fundação Getúlio Vargas, concluded on December 2004.

**Statements**

*Judicial and administrative convictions (including criminal).*

All candidates declare, individually and for all legal purposes, that, over the past 5 (five) years, they were not subject to (i) any criminal conviction, (ii) any conviction in an administrative proceeding from the Brazilian Securities and Exchange Commission, or also (iii) any conviction due to a final and unappealable decision, at judicial or administrative level, that have suspended or disqualified them in connection with the performance of any professional or commercial activity.

*Marital relationship, stable relationship or family relationship up to second degree.*

All candidates declare, individually and for all legal purposes, that there is no marital relationship, stable relationship or family relationship up to second degree among them

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and (i) the administrators of Vale; (ii) the managers of direct or indirect subsidiaries of Vale; (iii) direct or indirect parent companies of Vale; e (iv) the managers of the direct and indirect parent companies of Vale.

*Relations of subordination, Provision of Service or Control.*

Mr. Alberto Ribeiro Guth declares for all legal purposes, that there are no relations of subordination, provision of service or control, in the past 3 (three) fiscal years, between him and (i) subsidiary, directly or indirectly, by Vale, except for those where Vale holds, directly or indirectly, total capital stock; (ii) direct or indirect parent companies of Vale; or (iii) significant suppliers, customers, debtors or creditors of Vale, its subsidiaries or its parent companies.

Mr. Arthur Prado Silva declares for all legal purposes, that (a) there are no relations of subordination, provision of service or control, in the past 3 (three) fiscal years, between him and (i) subsidiary, directly or indirectly, by Vale, except for those where Vale holds, directly or indirectly, total capital stock; (ii) significant suppliers, customers, debtors or creditors of Vale, its subsidiaries or its parent companies; and (b) there are relations of subordination, provision of service or control, in the past 3 (three) fiscal years, between him and direct or indirect parent companies of Vale, due to his current position as Executive manager of Caixa de Previdência dos Funcionários do Banco do Brasil ( PREVI ).

*Percentage of attendance at meetings during the fiscal year ended on December 31, 2015*

<b>Board of Directors</b>	<b>Total Meetings held by the Board during the last fiscal year since the investiture of the manager</b>	<b>% of attendance of the manager at meetings after his investiture</b>
Alberto Ribeiro Guth	8	100%
Arthur Prado Silva	7	0%

**Committees**

As set forth in Article 10 of CVM Instruction # 481/2009 as amended, and in accordance with items 12.7 and 12.8 of the Reference Form, the Company explains that this Manual does not

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contain the information related to the candidates to the Company's committees, as long as they are elected by the Board of Directors of Vale.

**4.1.4 Election of members of the Fiscal Council**

Under Article 36 of the Bylaws of Vale, the Fiscal Council is a permanent body, comprised of three to five effective members and respective alternates, who remain in the position until the first Annual Shareholders Meeting after their election. The election of the members of the Fiscal Council shall comply with the prevailing law and the Bylaws of Vale.

As set forth in Article 10 of CVM Instruction # 481/2009, below is the information about the candidates appointed for election/re-election by shareholder Valepar S.A. to hold the positions of effective members and alternate members of the Fiscal Council (pursuant to items 12.5 to 12.10 of the Reference Form, as set forth in Annex A of CVM Instruction # 552/2014, due to the instruction set out in Circular Letter/CVM/SEP/# 02/2016).

Name	Effective		
	Sandro Kohler Marcondes	Marcelo Amaral Moraes	Aníbal Moreira dos Santos
Birth Date	04.16.1964	07.10.1967	08.26.1938
Occupation	Bank Clerk	Bachelor in Economy	Accounting Technician
CPF/MF or Passport	485.322.749-00	929.390.077-72	011.504.567-87
Position to be placed	Effective	Effective	Effective
Election date	04/14/2016	04/14/2016	04/14/2016
Date of investiture	05/13/2016	05/13/2016	05/13/2016
Term of office	Until 2017 Annual Shareholders Meeting	Until 2017 Annual Shareholders Meeting	Until 2017 Annual Shareholders Meeting
Other positions held or duties exercised at Vale	Not Applicable	Not Applicable	Not Applicable
Indicated/Elected by controlling shareholder	Yes	Yes	Yes
Independent member (1)	Yes	Yes	Yes
Number of consecutive terms of office	Not Applicable	12	11

(1) The criterion for determination of the independence of the officers above was set forth in section 3.13 of the *Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited* (Hong Kong Listing Rules).

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Name	Alternate members		
	Sergio Mamede Rosa do Nascimento	Vacant (2)	Oswaldo Mario Pêgo de Amorim Azevedo
Birth Date	04.29.1954		06.23.1941
Occupation	Business Administrator		Industrial and Production Engineer
CPF/MF or Passport	650.042.058-68		005.065.327-04
Position to be placed	Alternate		Alternate
Election date	04/14/2016		04/14/2016
Date of investiture	05/13/2016		05/13/2016
Term of office	Until 2017 Annual Shareholders Meeting		Until 2017 Annual Shareholders Meeting
Other positions held or duties exercised at Vale	Not Applicable		Member of the Accounting Committee
Indicated/Elected by controlling shareholder	Yes		Yes
Independent member (1)	Yes		Yes
Number of consecutive terms of office	Not Applicable		12

(1) The criterion for determination of the independence of the officers above was set forth in section 3.13 of the *Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited* (Hong Kong Listing Rules).

(2) (2) No alternate member was appointed to Mr. Marcelo Amaral Moraes.

*Main professional experiences:*

*Effective members*

**Sandro Kohler Marcondes**

Sandro Kohler Marcondes was Alternate Member of the Board of Directors of Vale (from April 2011 to April 2015), where also held the position of Effective Member of the Board of Directors (from April 2007 to March 2011). His main professional experiences in the past 5 years include: (i) Alternate Member of the Board of Directors of Valepar S.A. (from 2009 to April 2015), Vale controlling shareholder, a closely-held holding company; (ii) Officer of Banco do Brasil S.A. (since 2005), financial institution, where held, among other positions, the



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position of Capital Markets and Infrastructure Director (since 2013), Accounting Director (from 2012 to 2013) and Commercial Director (from 2009 to 2012); (iii) Officer of BB Leasing S.A. Arrendamento Mercantil (from 2005 to 2008), closely-held company that develops leasing activity; (iv) Chairman of the Board of Directors of Banco do Brasil A.G., Viena (from 2008 to 2009), a subsidiary of Banco do Brasil S.A. in Austria; (v) Alternate Member of the Board of Directors of Banco Patagônia S.A. (from 2011 to 2012), a publicly-held financial institution; (vii) Effective Member of the Fiscal Council of Caixa de Previdência dos Funcionários do Banco do Brasil - PREVI (from 2012 to 2014), a complementary welfare entity; (viii) Member of Fiscal Council of Embraer (from 2014 to 2015) and (ix) Effective Member of the Advisory Board of CASSI - Caixa de Assistência de Funcionários do Banco do Brasil (from 2012 to 2013), a health plan operator. Mr. Marcondes has a Business Administration degree from Universidade Estadual Centro Oeste PR, concluded on December 1986, and a master's degree in Business Administration from Fundação Getúlio Vargas (FGV) São Paulo, concluded on April 1994.

**Marcelo Amaral Moraes**

Mr. Moraes is an Effective Member of the Fiscal Council of the Vale (since 2004), where he also held the position of Alternate Member of the Board of Directors (2003). His main professional experiences over the last 5 years include: (i) Executive Officer of Stratus Investimentos Ltda. (from 2006 to 2010), private equity manager; (ii) Executive Officer of Capital Dynamics Investimentos Ltda. (from 2012 to 2015), private equity manager; and (iii) observing member of the Board of Directors of Infinity Bio-Energy S.A. (from 2011 to 2012). Mr. Moraes holds a bachelor's degree Economy from Federal University of Rio de Janeiro, concluded on January 1991, an MBA from COPPEAD of UFRJ, concluded on November 1993, and a post-graduate degree in Corporate Law and Arbitration from Fundação Getúlio Vargas, concluded on November 2003.

**Aníbal Moreira dos Santos**

Mr. dos Santos is an Effective Member of the Fiscal Council of the Vale (since 2005), where he held the position of Alternate Member (April to July 2005). His main professional experiences over the last 5 years include: (i) Effective Member of the Fiscal Council of the Log-In Logística Intermodal S.A. (2009 to 2014), a publicly-held company engaged in intermodal transportation; and (ii) Effective Member of the Fiscal Council of the Associação dos Participantes Ativos, Assistidos e Beneficiários da Fundação CAEMI (since 2013). Mr. dos

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Santos attended a Technical Accounting course at Escola Técnica de Comércio da Fundação Getúlio Vargas, concluded on April 1962.

*Alternate members*

**Sergio Mamede Rosa do Nascimento**

Mr. Nascimento's main professional experiences in the past 5 years include: (i) Member of the Fiscal Council of Fibria Celulose S.A. (from 2013 to 2015), a publicly-held company of cellulose industry; (ii) Effective Member of the Fiscal Council of Contax Participações S.A. (from 2009 to 2011), a publicly-held company engaged in telecommunications; (iii) Member of the Fiscal Council of Marisol S.A. (from 2011 to 2012), a publicly-held company engaged in apparel industry; and (iv) Managing Partner of Barra Livros e Cursos Editora Ltda. (since 2011). Mr. Nascimento holds a bachelor's degree in physics from Universidade de Franca, concluded on 1976, a post-graduate degree in economic engineering from AEUDF - Associação de Ensino Unificado do Distrito Federal, concluded on 1983, and an MBA in finance from IBMEC - Instituto Brasileiro de Mercado de Capitais, concluded on 1991.

**Oswaldo Mario Pêgo de Amorim Azevedo**

Mr. Azevedo is an Alternate Member of the Fiscal Council of Vale (since 2005), where he also held the positions of Effective Member of the Fiscal Council (2004 to 2005). His main professional experiences over the last 5 years include: (i) Member of the Accounting Committee of Vale (since April 2015); (ii) Member of the Special Advisory Board of the Sindicato das Empresas de Seguros Privados, de Capitalização e de Resseguros do Rio de Janeiro e Espírito Santo (since 2005); (iii) Alternate Member of the Audit Committee of Prudential do Brasil Seguros de Vida S.A. and of the Kyoei do Brasil Vale de Seguros (both since 2014), insurance companies, (iv) Officer of Sul América Cia de Seguros Gerais (from 2008 to 2012), insurance company; (v) Ombudsman of Conglomerado Sul América Seguros, an insurance company (from 2005 to 2012), where he also held the position of (vi) Vice-President of Institutional Relations and Foreign Branches (from 1990 to 2010); (vii) Vice-President of the Sindicato das Empresas de Seguros Privados, de Capitalização e de Resseguros do Rio de Janeiro (from 2007 to 2012); (viii) Alternate Member of the Board of Directors of Brasil Veículos Cia de Seguros (from 2006 to 2010) and (ix) Brasil Saúde Cia de Seguros (from 2006 to 2010), both insurance companies; (x) Officer and (xi) Vice-President of Sul América Cia. Nacional de Seguros, insurance company (from 1980 to 2010); (xii) Officer and Vice-President of Nova Ação Participações S.A., a publicly-held company that manages

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own assets and interests in commercial or civil companies (from 2006 to 2010); (xiii) Officer of Sul América Cia. de Seguros S.A., insurance company (from 2006 to 2010). Mr. Azevedo holds a bachelor's degree in Industrial and Production Engineering from Escola Politécnica da Pontifícia Universidade Católica of Rio de Janeiro - PUC-RJ, concluded on January 1964..

**Statements**

*Judicial and administrative convictions (including criminal).*

All candidates declare, individually and for all legal purposes, that over the past 5 (five) years, they were not subject to (i) any criminal conviction, (ii) any conviction in an administrative proceeding from the Brazilian Securities and Exchange Commission, or also (iii) any conviction due to a final and unappealable decision, at judicial or administrative level, that have suspended or disqualified them in connection with the performance of any professional or commercial activity.

*Marital relationship, stable relationship or family relationship up to second degree.*

All candidates declare, individually and for all legal purposes, that there is marital relationship, stable relationship or family relationship up to second degree among them and (i) the administrators of Vale; (ii) the managers of direct or indirect subsidiaries of Vale; (iii) direct or indirect parent companies of Vale; and (iv) the managers of the direct and indirect parent companies of Vale.

*Relations of subordination, Provision of Service or Control.*

All candidates declare, individually and for all legal purposes, that there are no relations of subordination, provision of service or control, kept in the past 3 (three) fiscal years, among them and (i) subsidiary, directly or indirectly, by Vale, except for those where Vale holds, directly or indirectly, the total capital stock; (ii) direct or indirect parent companies of Vale; or (iii) significant suppliers, customers, debtors or creditors of Vale, its subsidiaries or its parent companies.

**Independence Confirmation**

The candidates to be elected-re-elected to hold the positions of effective/alternate members of Fiscal Council, individually confirmed their status of independent members, for the purposes



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of section 3.13 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (Hong Kong Listing Rules), being qualified to be elected/re-elected as independent members of the Fiscal Council.

*Percentage of attendance at meetings during the fiscal year ended on December 31, 2015*

<b>Fiscal Council</b>	<b>Total Meetings held by the Board during the last fiscal year since the investiture of the manager</b>	<b>% of attendance of the manager at meetings after his investiture</b>
Sandro Kohler Marcondes	Not Applicable	Not Applicable
Marcelo Amaral Moraes	10	100%
Aníbal Moreira dos Santos	10	100%
Sergio Mamede Rosa do Nascimento	Not Applicable	Not Applicable
Oswaldo Mario Pêgo de Amorim Azevedo	10	0%

**4.1.5 Establishment of the remuneration of the Senior Management and Fiscal Council members for the fiscal year 2016.**

The proposal for the remuneration of Senior Management is made available pursuant to Item 13 (specially item 13.16) of CVM Instruction # 480/09 as amended, which is attached hereto as Annex II.

**4.2 Shareholders Special Meeting**

**4.2.1 Proposal to amend Vale's Compensation Policy**

To deliberate on the matter, are provided the proposal to amend Vale's Compensation Policy together with a table, containing the implemented changes, the rationale for each proposed change and its possible effects, all in accordance with Annex III attached hereto. It should be clarified that the current policy was approved on the Shareholders' Annual and Special Meetings held on 04/27/2005.

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**v. ADDITIONAL INFORMATION**

Any questions or clarifications on the issues listed in the Agenda of the Meetings can be resolved or obtained, as the case may be, through contact with the Investor Relations Office, including the option of using a hotline at [rio@vale.com](mailto:rio@vale.com).

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**PROXY VOTE TEMPLATE**

[**ACIONISTA**], [Qualificação] ( Outorgante ), neste ato nomeia e constitui como seu procurador o(a) Sr(a) [**NOME**], [NACIONALIDADE], [ESTADO CIVIL], [PROFISSÃO], com carteira de identidade nº [ ] e inscrito no CPF/MF sob o nº [ ], residente e domiciliado [ENDEREÇO], na Cidade [ ], Estado [ ] ( Outorgado ), ao qual confere poderes para representar o(a) Outorgante nas Assembleias Gerais Ordinária e Extraordinária da Vale S.A., a serem realizadas, cumulativamente, em primeira convocação no dia 14 de abril de 2016, às 11h, e, se necessário, em segunda convocação em data a ser informada oportunamente, assinar o Livro de Registro de Presença de Acionistas da Vale S.A. e a(s) ata(s) dessas Assembleias Gerais, e apreciar, discutir e votar os assuntos constantes da respectiva ordem do dia, em conformidade com as orientações estabelecidas abaixo:

Ordem do dia:

Assembleia Geral Ordinária

1) Apreciação do relatório da administração e exame, discussão e votação das demonstrações financeiras, referentes ao exercício social encerrado em 31 de dezembro de 2015.

( ) a favor ( ) contra ( ) abstenção

[**SHAREHOLDER**], [Identification] (the Grantor ), hereby makes, constitutes, appoints and designates [**NAME**], [CITIZENSHIP], [MARITAL STATUS], [PROFESSION], with ID # [ ] and holder of CPF/MF # [ ], resident in [CITY], and with commercial address at [ADDRESS], in the City of [ ], State of [ ] (the Grantee ), as true and lawful attorneys-in-fact to represent the Grantor at Ordinary and Extraordinary Shareholders Meetings to be held on first call on April 14, 2016, at 11 a.m., and, if necessary, on second call on a date to be duly informed, with powers to sign the Attendance Book of Shareholders of Vale S.A. and the corresponding minutes of such General Meetings, and assess, discuss and vote on matters included in the agenda, in accordance with the voting instructions below:

Agenda:

Ordinary Shareholders Meeting

1) Appreciation of the managements report and analysis, discussion and vote on the financial statements for the fiscal year ending December 31, 2015.

( ) Pro ( ) Against ( ) Abstain

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2) Proposta para a destinação do resultado do exercício de 2015, caso houver.

a favor  contra  abstenção

3) Ratificação da nomeação de membro efetivo e de membro suplente do Conselho de Administração nas reuniões de 25/06/2015 e 29/07/2015, respectivamente.

a favor  contra  abstenção

4) Eleição dos membros do Conselho Fiscal.

a favor  contra  abstenção

5) Fixação da remuneração dos administradores e dos membros do Conselho Fiscal para o ano de 2016.

a favor  contra  abstenção

2) Proposal for the destination of profits of the said fiscal year, if applicable.

Pro  Against  Abstain

3) Ratification of the nomination of effective and alternate members of the Board of Directors according to the Board of Directors meetings held on 06/25/2015 and 07/29/2015, respectively.

Pro  Against  Abstain

4) Appointment of the members of the Fiscal Council.

Pro  Against  Abstain

5) Establishment of the remuneration of the Senior Management and Fiscal Council members for 2016.

Pro  Against  Abstain



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Assembleia Geral Extraordinária

Extraordinary Shareholders Meeting

6) Proposta de alteração da Política de Remuneração dos Acionistas.

6) Proposal to amend the Shareholders' Remuneration Policy

a favor  contra  abstenção

Pro  Against  Abstain

Este instrumento é válido por [ ], a partir da data de sua assinatura.

This power of attorney shall remain in effect from [ ] until [ ].

[Local], [Data].

[Place], [Date].

[Acionista]

[Shareholder]

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LISTED COMPANY

CORPORATE TAX CODE (CNPJ) # 33,592,510/0001-54

BOARD OF TRADE REGISTRATION (NIRE) # 33,300,019,766

**EXCERPT OF THE MINUTES OF THE  
ORDINARY BOARD OF DIRECTORS MEETING OF VALE S.A.**

On February 24, 2016, at 9:30 am, met, ordinarily, at Rua Almirante Guilhem, 378, 7º floor, Rio de Janeiro, RJ, Messrs. Dan Conrado Chairman, Sérgio Alexandre Figueiredo Clemente Vice Chairman, Marcel Juviniانو Barros, Gueitiro Matsuo Genso, Tarcísio José Massote de Godoy, Oscar Augusto de Camargo Filho, Alberto Ribeiro Guth, Lucio Azevedo, and the alternates Messrs. Yoshitomo Nishimitsu and Luiz Maurício Leuzinger, and also Mr. Clovis Torres as secretary, having unanimously resolved upon the following: **FINANCIAL STATEMENTS FOR THE FINANCIAL YEAR 2015 AND RELATED ACTS** Messrs. Luciano Siani, Executive Officer of Finance and Investor Relations, Marcelo Botelho, Controller Officer, and Murilo Muller, Executive Manager of Controller and Accounting, performed presentation on the subject. With a favorable report of the Financial Committee and of the Fiscal Council, as reported by Marcelo Amaral Moraes and Aníbal Moreira dos Santos present at the meeting under the provisions of Article 163, §3, of Law No. 6404/76, and in the presence of Messrs. Bernardo Moreira and Daniel Ricica, representatives of KPMG Auditores Independentes, external auditor according to Brazilian and North American accounting standards, which issued a favorable opinion the Company's Financial Statements for the financial year 2015, the Board of Directors approved the Annual Report, the balance sheet and further financial statements of Vale for the year ended 12/31/2015. **BOARD OF DIRECTORS** The members of the Board were informed by Mr. Dan Conrado that, after a natural transition, he decided to leave the functions of Chairman of the Board of Directors as of this date, remaining as member of the Board of Directors. Therefore, they approved the designation of Mr. Gueitiro Matsuo Genso, as Chairman of the Board of Directors of Vale. I hereby attest that the deliberations above were excerpted from the Minutes taken from the Registry of the Minutes of the Board of Directors Meetings of the Company.

Rio de Janeiro, February 24, 2016.

Clovis Torres

Secretary

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**BOARD OF DIRECTOR'S REPORT ON MANAGEMENT REPORT AND ON THE FINANCIAL  
STATEMENTS FOR THE FISCAL YEAR ENDED DECEMBER 31, 2015**

The Board of Directors of Vale S.A. ( Vale ), after conducting the analysis of the managements report as well as of the financial statements for the fiscal year ended December 31, 2015, unanimously resolved to approve such proposal.

Due to the resolution above, the Board of Directors is favorable to the submission of such documents to the shareholders resolution at the Ordinary General Shareholder Meeting to be held in April, 2016.

Rio de Janeiro, February 24, 2016.

Dan Conrado  
Chairman

Sérgio Alexandre Figueiredo Clemente  
Vice-Chairman

Gueitiro Matsuo Genso  
Director

Marcel Juviniانو Barros  
Director

Yoshitomo Nishimtsu  
Director

Oscar Augusto de Camargo Filho  
Director

Luiz Maurício Leuzinger  
Director

Tarcísio José Massote de Godoy  
Director

Alberto Guth  
Director

Lucio Azevedo  
Director

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**OPINION OF FISCAL COUNCIL ON RECOGNITION OF VALE S.A. S FISCAL ASSET AS  
OF DECEMBER 31, 2015**

The Fiscal Council of Vale S.A. ( Vale ), in performing its legal and statutory duties, and under the terms of article 4 of CVM Instruction 371 of June 27, 2002, has examined the proposal to recognize the accounting entry for Vale s deferred fiscal asset as of December 31, 2015.

Based on the study produced by Vale, containing the company s record of profitability and expected future profitability, it is our opinion that this fiscal asset has the prospect of being realized in the short to medium term, and consequently it may be recognized in the financial statements of December 31, 2015.

Rio de Janeiro, February 24th, 2016.

Marcelo Amaral Moraes  
*Chairman*

Aníbal Moreira dos Santos  
*Member*

Cláudio José Zucco  
*Member*

Marcelo Barbosa Saintive  
*Member*

Raphael Manhães Martins  
*Member*

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**OPINION OF THE FISCAL COUNCIL ON THE ANNUAL REPORT AND FINANCIAL  
STATEMENTS OF VALE S.A. FOR THE FISCAL YEAR ENDED DECEMBER 31, 2015**

The Fiscal Council of Vale S.A. ( Vale ), in carrying out its legal and statutory duties, after examining the Company's Annual Report, Balance Sheet, Statement of Income, Statement of Comprehensive Income, Statement of Cash Flows, Statement of Changes in Stockholders' Equity, Statement of Added Value and the respective Notes of the Financial Statements relative to the fiscal year ended December 31, 2015 and based on the opinion of the independent auditors, is of the opinion that the mentioned information, examined in accordance with applicable corporate legislation should be approved by the Annual Stockholders' General Meeting of the Company.

Rio de Janeiro, February 24th, 2016.

Marcelo Amaral Moraes  
*Chairman*

Aníbal Moreira dos Santos  
*Member*

Cláudio José Zucco  
*Member*

Marcelo Barbosa Saintive  
*Member*

Raphael Manhães Martins  
*Member*

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**10. Director Comments**

**10.1. General Financial and Equity Conditions**

Financial information included in this Reference Form, except expressly otherwise noted, refers to consolidated financial statements of years ending on December 31, 2013, 2014, and 2015.

Information in this item 10 in the Reference Form should be read and analyzed jointly with our consolidated financial statements, available at our website ([www.vale.com.br](http://www.vale.com.br)) and the website of Comissão de Valores Mobiliários ([www.cvm.gov.br](http://www.cvm.gov.br)).

**a. General Financial and Equity Conditions**

On December 31, 2015, Vale net operational revenue was R\$ 85.5 billion and the operational margin (prior to the recoverable values of noncurrent assets and loss in the measuring of the sale of noncurrent assets) was 10.6%. The operational loss was R\$ 25.4 billion, mainly due to a drop in the prices of its products. This year, that Company has sought after several opportunities to reduce costs. Vale has presented an 18.2% reduction in net operational revenues (including SG&A, research and development, pre-operational and stoppage, and other expenses), corresponding to R\$ 1,724 billion, compared to the same period in 2014, especially marked by the revenue arising out of the *gold stream* operation in the amount of R\$ 722 million and provision reversion to fixed assets retirement, in the amount of R\$ 1,281 billion, due to rate change due to risk change. Additionally, Vale has had an increase in impairment of assets, to R\$ 34,553 billion compared to R\$ 2,713 billion in 2014. Cash generation, measured by Adjusted EBITDA(1), was R\$ 23.7 billion in 2015.

On December 31, 2014, Vale net operational revenue was R\$ 88.3 billion, and the operational margin (prior to the recoverable values of noncurrent assets and loss in the measuring of the sale of noncurrent assets) was 22.3%. The operational profit was R\$ 16.6 billion in 2014, an approximate 50% reduction compared to the operational profit in 2013, mainly due to a drop in ore prices. Continuous Company efforts to cut costs, investment discipline and focus on core business were seen this year. Vale had a 11.9% reduction in net operational costs (including SG&A, research and development, pre-operational and stoppage, as well as other costs), corresponding to R\$ 1,277 billion, relative to 2013. This drop was due mainly to the reduction of costs related to operation stoppage and optimization in the Company's cost structure, after adjustments made in 2013. Additionally, in 2014, Vale had a reduction of 49.7% in the impairment of assets, R\$ 5,390 billion in 2013 to R\$ 2,713 billion in 2014, due to return on the Onça Puma operation. Cash generation, measured in Adjusted EBITDA(1), was R\$ 31.1 billion in 2014.

In 2013, Vale net operational revenue was R\$ 101,490 billion and the operational margin (prior to the recoverable values of noncurrent assets and loss in the measuring of the sale of noncurrent assets) was 37.7%. The operational profit was R\$ 32,340 billion in 2013. In 2013, as a result of the Company's focus on investments in world-class assets, several adjustments were made, among the non-realization of the potash project (PRC) in Argentina, and the sale of the company Tres Valles, as described in Explanatory Note no. 7 of the Company's 2013 consolidated accounting statements. Besides, Vale also reported an operation in the Tax Recovery Program REFIS, which substantially involved all of the claims related to income tax collection and social contributions on capital gains of subsidiary and associated companies abroad, whose loss expectations were classified as possible. Such factors negatively affected the Company financial performance in 2013, resulting in financial indicators reduction relative to what was obtained in 2012. In this scenario, the Company had a net loss of R\$ 258 million in 2013; relative to

2012 s net profit of R\$ 9.4 billion.

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(1) Adjusted EBITDA is the operational profit or loss added with dividends received from affiliates and *joint ventures* and excluding depreciation, depletion, and amortization, impairment, contracts and resulting in the measurement or sale of noncurrent assets.

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The sale of ferrous minerals - iron ore, pellets, manganese ore and ferroalloy represented 64.8% of total net operating revenues in the year ended on December 31, 2015, relative to 68.4% in the year ended on December 31, 2014. In 2013, the total net operational revenue of ferrous minerals was 74.6%.

Base metals participation in the total net revenue was 24.0% in 2015 compared to 20.6% in 2014. In 2013, the base metals participation in net revenue was 15.5%.

Fertilizer revenue was 8.7% in 2015, compared to 5.9% in the same period in 2014. In 2014 and 2013, the fertilizer revenue in total net revenue was 6.4% and 6.0%, respectively.

Other products represented 2.5% of the 2014 total operating net revenue in 2015, relative to 4.6% in 2014. In 2013, the contribution of other products to the total net operational revenue was 3.9%.

**Fiscal year ending on December 31,**

<b>Business segments</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Ferrous minerals	74.6%	68.4%	64.8%
Base metals	15.5%	20.6%	24.0%
Fertilizers	6.0%	6.4%	8.7%
Others	3.9%	4.6%	2.5%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

On December 31, 2015, the gross debt of the Company (understood as the sum of loans and financing of our current liabilities and non-current liabilities) summed R\$ 112,666 billion, compared to R\$ 76,517 billion, on December 31, 2014, representing a 47.2% increase, mainly due to depreciation of real compared to the US dollar. Despite the increase in gross debt in reais for that period, the gross debt in US dollars had an increase lower than the increase of the gross debt in Reais, namely, 0.2%, from US\$ 28,807 billion on December 31, 2014 to US\$ 28,853 billion on December 31, 2015. On December 31, 2014 and 2013, the gross debt summed R\$ 76,517 billion and R\$ 68,977 billion, respectively, and the 10.9% increase perceived between those fiscal years was due to depreciation of real compared to the US dollar. Despite the increase in gross debt in the period between December 31, 2013 and December 31, 2014, the absolute debt in dollars decreased a little, from US\$ 29.655 billion on December 31, 2013 to US\$ 28.807 billion on December 31, 2014.

On December 31, 2015, the current liquidity index of the Company (which is the index found by dividing the current asset by the current liability) was 1.09, compared to 1.56 on December 31, 2014 and 2.25 on December 31, 2013. The decrease in the liquidity index in 2015 compared to the previous fiscal year was mainly due to increase in Company debt due to depreciation of real compared to the US dollar, with impact on the debt expressed in dollars. In turn, the drop in liquidity on December 31, 2014, compared to December 31, 2013 resulted mainly from lower cash generation from operational activities due to the lower price of most *commodities* sold by the Company.



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On December 31, 2015 the Company had controlling shareholders' equity of R\$ 131,160 billion, compared to 146,414 billion on December 31, 2014. Shareholders' equity suffered 10.4% reduction, mainly due to absorption of loss in 2015 with reserves. On December 31, 2013, the controlling shareholders' equity was R\$ 148,346 billion, that is, 1.3% lower than the net equity on December 31, 2014, , mainly justified by the use of the net profit of the year to pay the shareholders' compensation and set forth provisions.

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In 2015, 2014, and 2013, Vale delivered to its shareholders dividends in the amount of US\$ 1.5 billion (R\$ 5.0 billion), US\$ 4.2 billion (R\$ 9.7 billion), and US\$ 4.5 billion (R\$ 9.3 billion), respectively.

**b. Capital Structure**

The table below presents the funding standard adopted for Company activities, considering equity and third party capital:

R\$ billion	Fiscal year ended on December 31,		
	2015	2014	2013
Third party capital (liabilities + noncurrent liabilities)	206,128	159,814	139,760
Equity (shareholders' equity)	139,419	149,601	152,121
<b>Total Capital (third party + equity)</b>	<b>345,547</b>	<b>309,415</b>	<b>291,881</b>

**c. Payment Capacity in Relation to the Financial Commitments Assumed**

The leverage, measured by the gross debt/adjusted(2) EBITDA, showed decrease in the fiscal year ending on December 31, 2015 compared to the fiscal year ended on December 31, 2014, especially due to drop in the price of *commodities*, as the following table illustrates:

(in R\$ million, except %)	Fiscal year ended on December 31		
	2015	2014	2013
<b>Net profit (loss) for the year</b>	(45,997)	219	(258)
(+) Income tax and social contribution	(18,879)	2,600	15,249
(+) finance results	36,538	14,753	18,442
EBIT	(28,338)	17,572	33,433
(+) Depreciation, amortization and depletion	13,489	10,108	8,953
EBITDA	(14,849)	27,680	42,386
Equity held on <i>joint ventures</i> and affiliates	1,507	(1,141)	999
Impairment of noncurrent assets and investments	34,553	2,713	5,390
Impairment of equity on joint ventures and affiliates	1,727	71	0
Gains from the sale of equity on joint ventures and affiliates	(296)	68	(98)
(Gain) loss in the realization of noncurrent assets held for sale	(52)	441	508
Dividends received	1,064	1,302	1,836
Discontinued operations			4
Adjusted EBITDA	23,654	31,134	49,027
Dividends received	(1,064)	(1,302)	(932)
Depreciation, amortization and depletion	(13,489)	(10,108)	(8,953)
Adjusted EBIT	9,101	19,724	38,238
<b>in R\$ billion</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>
Gross debt	112,666	76,517	68,977

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Leverage, measured by gross debt/Adjusted EBITDA ratio	4.8	2.5	1.4
--------------------------------------------------------	-----	-----	-----

The gross debt/ Adjusted EBITDA (4.8 on December 31, 2015 compared to 2.5 on December 31, 2014 and 1.4 on December 31, 2013). The increase of this index in the period between December 31, 2013 and 2015, is due to decrease on the price of commodities and depreciation of real compared to the US dollar.

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(2) Adjusted EBITDA is used by the Company management to help in the decision-making process of segments. The definition of Adjusted EBITDA is operational loss or profit added with dividends received from affiliates or joint ventures, excluding depreciation, depletion, and amortization, impairment, agreements, and result of measurement or sale of noncurrent assets

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The index of interest coverage, measured by the indicator EBITDA adjusted/payment of interest, was 4.3x on December 31, 2015, 7.6x on December 31, 2014, 14.4x on December 31, 2013. The decrease of this index in the period between December 31, 2013 and 2015, is due to decrease in EBITDA, with impact from the drop on the price of commodities in the international market and the impact of foreign exchange depreciation of real compared to the US dollar, with negative impact on the portion of costs and expenses expressed in other currencies (mainly US dollar and Canadian dollar).

in R\$ billion	On December 31,		
	2013	2014	2015
Gross debt	68,977	76,517	112,666
Cash position*	12,465	10,555	14,022
Financial investments	0,008	0,392	0,109
Net debt	56,504	65,570	98,535

**d. Source of financing for working capital and investments in non-current assets**

The sources of funds utilized by Vale in the last three years were generation of operating cash, loans and financing, and issue of bonds and securities, convertible or not, launched in the capitals market and sale of investments.

Operating activities from continuing operations generated cash flows of R\$ 15,719 billion in 2015, compared to R\$ 27.792 billion in 2014 and R\$ 31.876 billion in 2013. Comparing 2013 and 2014, the operating cash flow suffered a reduction in 2012 determined mainly by price drops in our products. In 2013, operating cash flow suffered variation mainly due to the gold stream operation outsourced in February 2013 with Silver Wheaton Corp. ( SLW ) to sell 70% of the payable gold flows produced as a byproduct in the nickel mines in Sudbury Coleman, Cooper Cliff, Creighton, Garson, Stobie, Totten and Victor for a 20 year term, and with Silver Wheaton (Caymans) Ltd. to sell 25% of the payable gold flows produced as a by-product in the copper mine in Salobo for the longevity of the mine. In 2015, the operating cash flow suffered variation compared to the previous fiscal year mainly due to the drop of the price of ore and pellets

Among other more relevant operations in the three-year period, the following are highlighted:

- In November 2015, Vale issued R\$ 1.5 billion in credit notes to export with due date in 2022 before Banco do Brasil.
- In August 2015, Vale issued infrastructure debentures to be placed by means of a public offer, in the total amount of R\$ 1,350 billion. Infrastructure debentures are to be monetarily adjusted and will pay annual interest, priced at IPCA + 6.6232% a year and IPCA + 6.6252% a year, depending on the series.
- In May 2015, Vale acquired a new revolving credit facility in the amount of US\$ 3.0 billion (equivalent to R\$ 9.5 billion), for five years. This revolving credit facility replaces the revolving credit facility of the

same amount acquired in 2011, being acquired from a syndicate comprised by 24 global banks.

- In March 2015, Vale signed a bank credit note with Bradesco for R\$ 700 million. This agreement has been used as grounds for the CRI, to fund projects under the S11D Logística, in Complexo Portuário de Ponta Madeira. The agreement term is for seven years, and funds have been fully disbursed by June 30, 2015.
- From March to July 2015, Vale has acquired and disbursed exporting pre-payments with due dates in five or six years, linked to future sales, summing US\$ 1.20 billion (equivalent to R\$ 54.7 billion).

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- In December 2014, Vale acquired exporting prepayment with the Bank of China, due in six years, in the amount of US\$ 300 million (equivalent to R\$ 797 million), which has been fully disbursed. The total term of this operation is 6 years and by December 31, 2014 there was no disbursement related to this operation.
- In May 2014, Vale signed two new funding agreements with the BNDES in the total amount of R\$ 6.2 billion. These agreements refer to the deployment of S11D and CLN S11D projects. The financing shall be in effect for ten years and funds will be disbursed in up to three years, according to the projects schedule. By December 31, 2015, R\$ 3.3 billion were disbursed under these agreements.
- In January 2014, Vale issued infrastructure debentures in the amount of US\$ 376.5 million (equivalent to R\$ 913.5 million). Infrastructure debentures are to be adjusted and will pay annual interest, according to IPCA + 6.46% per year (equivalent to NTN-B 2020 0.15%), IPCA + 6.57% per year (equivalent to NTN-B 2022 0.10%), IPCA + 6.71% per year (equivalent to NTN-B 2024 + 0%) and IPCA + 6.78% per year (equivalent to NTN-B 2030 + 0%), and mature in 2021, 2024, 2026, and 2029, depending on the series.
- In January 2014, Vale acquired a financing in the amount of US\$ 775 million with the Canadian agency EDC. The financing was divided into two tranches that are in effect for 5 and 7 years. The amount was fully disbursed by December 31, 2014.
- In December 2013, Vale issued R\$ 650 million in export credit notes from Brazilian commercial banks with maturity in 2023.
- In October, November and December 2013, Vale acquired export pre-payments with maturity in five and seven years, linked to future sales, totaling US\$ 1.4 billion (equivalent to R\$ 3.2 billion), which have been fully disbursed at the time.
- In July 2013, Vale signed a financing contract with Banco Safra, a BNDES financing agent, in the amount of R\$ 109.3 million. This contract is for the purchase of domestic equipment and was fully disbursed by December 31, 2014.
- In July 2013, Vale acquired a new revolving credit facility in the amount of US\$ 2.0 billion (equivalent to R\$ 4.7 billion), with a five-year maturity in a best effort transaction.

**e. Potential sources of financing used for working capital and for investments in non-current assets for coverage of liquidity deficiency**

In the regular course of business, the principal need for funds of Vale refers to capital investments, payments of dividends and debt service. The sources of funds frequently used are operating cash flow and financing.

The main sources of financing to cover liquidity deficiency are the facilities related to the export transactions offered by local banks (Advance on Foreign Exchange Contract - ACCs, and Advance on Delivered Exchange Instruments - ACEs).

Vale has, moreover, revolving lines of credit available that may be used at the option of the debtor. In 2013, Vale obtained a revolving credit facility in the amount of US\$ 2.0 billion (equivalent to R\$ 4.7 billion), for five years, while in fiscal year ending on December 31, 2014, Vale has not acquired revolving credit facilities.

In May 2015, the Company acquired another revolving line of credit in the amount of US\$ 3.0 billion (equivalent to R\$ 9.5 billion), with maturity period of 5 years, totaling, in lines of this

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type, available on December 31, 2015, \$US\$ 5 billion, that may be used by Vale, Vale Canada Ltd. (Vale Canada), and Vale International S.A. (Vale International).

IN January 2016, Vale has disbursed US\$ 3 billion in revolving credit facilities, for purposes of increasing liquidity and covering potential cash flow needs until conclusion of the divestment program.

**f. Indebtedness levels and composition of such debts**

On December 31, 2015, the total debt was R\$ 112.666 billion, with a tranche of R\$ 1.937 billion guaranteed by Vale's assets, with an average maturity period amortization of 8.13 years and an average cost of 4.47% per year in US dollars.

DEBT STRUCTURE In R\$ billion	ON DECEMBER 31,		
	2013	2014	2015
Gross debt	68,977	76,517	112,667
Tranche guaranteed by assets of Vale	5%	5%	1.7%
Average term of amortization (in years)	9.89	9.10	8.13
Average cost (in US dollars)	4.6%	4.6%	4.5%

Since July 2005, Vale has been considered investment grade by some of the main rating agencies. On the date of this Reference Form, Vale currently has the following credit risk ratings: BBB- (Standard & Poor's), Ba3 (Moody's), BBB (Dominion Bond Ratings) and BBB (Fitch).

**i. Relevant loan and financing contracts**

The most important categories of the total debt of the Company are presented below. The values presented exclude the accumulated costs.

- *Loans and financing contracted in US dollars (R\$ 27.5 billion, R\$ 18.7 billion, and R\$ 15.5 billion on December 31, 2015, 2014, and 2013, respectively).* These loans include credit facilities for exports, financing imports from the export credit agencies and loans from commercial banks and multilateral organizations.
- *Fixed income instruments issued in US dollars (R\$ 55.1 billion, R\$ 35.3 billion, and R\$ 32.4 billion on December 31, 2015, 2014, and 2013, respectively).* Vale issued several debt securities in the capital market, inclusive through its wholly owned subsidiary Vale Overseas in the total amount of US\$ 13 billion (equivalent to R\$ 50.8 billion). The subsidiary Vale Canada issued debt securities in the amount of US\$ 400 million (equivalent to R\$ 1.6 billion).



- *Fixed income instruments issued in euros (R\$ 4.8 billion, R\$ 4.8 billion and R\$ 4.0 billion on December 31, 2014, 2013, and 2012, respectively).* Vale issued debt securities in the capital market in the total amount of 1.5 Billion (equivalent to R\$ 4.8 billion).
  
- *Other debts (R\$ 21.2 billion, R\$ 16.5 billion, and R\$ 15.2 billion on December 31, 2015, 2014, and 2013, respectively).* The Company has several loans acquired in Brazil, mainly with the BNDES and some private Brazilian banks, as well as loans and financing in other currencies.

For information on most relevant financing operations in last three fiscal years, see item 10.1(d) above.

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ii. **Other long-term relationships with financial institutions**

Vale and its associated and subsidiary companies have a commercial relationship in the normal course of their business with some of the main financial institutions in the country, according to regular financial market practices.

iii. **Degree of subordination among debts**

There is no degree of contractual subordination among the Company's unsecured financial debts. Financial debts that are secured through collateral have the privileges and prerogatives granted by the law.

Additionally, considering the total of current and non-current liabilities of the Company, the R\$ 206,128 billion or 99.1%, corresponded to unsecured debts on December 31, 2015 (compared to R\$ 156,329 million or 97.8% on December 31, 2014; and R\$ 136.350 billion or 97.6% on December 31, 2013). Such amounts are subject to the preference of Company obligations that appear as collateral, including mortgage of assets totaling, on December 31, 2015, R\$ 1,937 billion or 1.7% of the total current and non-current liabilities of the Company, compared to R\$ 3.485 or 2.2 % on December 31, 2014; and R\$ 3.410 billion or 2.4% on December 31, 2013.

iv. **Any restrictions that might be imposed on the issuer in particular, in relation to limits of indebtedness and contracting the company's debts, the distribution of dividends, the disposal of assets, the issue of new securities and the transfer of corporate control, and if the issuer has been compliant with these restrictions**

Some long-term financial instruments contain obligations related compliance with financial indicators. The main indicators are: (i) leveraging (which is the index found with the division of debt by Earnings Before Interest Tax, Depreciation and Amortization (EBITDA), and (ii) interest coverage (which is the index found by dividing EBITDA with interest expenses). Vale is in conformity with the levels required for the indicators.

Preventively, Vale has executed agreements in the last quarter to increase the upper limit of the financial covenant of the gross debt for adjusted EBITDA from 4.5x to 5.5x by the end of 2016. This type of measure ensures greater flexibility during the period when Vale closes its investment cycle. In addition, no clause is directly limiting the ability to distribute dividends or interest on equity.

g. **Limits of financing contracted and percentage of use**

The following is a description of limits set forth by the relevant infrastructure debentures and financing contracts in the last three fiscal years:

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Date	Counterparty	Allocation	Value	Percentage Used	Disbursement of funds
8/15/2015	N/A	Use or reimbursement with expenses and/or debts related to the project for Expansion of Carajás Railway	R\$ 1.35 billion	100%	All infrastructure debentures issued by the Company have been fully subscribed and paid up.
3/24/2015	Banco Bradesco S.A.	Funding of CLN S11D project	R\$ 700 million	100%	Funds were disbursed entirely.
5/19/2014	BNDES	Funding of S11D and CLN S11D projects	R\$ 6.2 billion	54%	The credit is available in tranches, according to the projects

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					schedule
01/15/2014	N/A	Used in the reimbursement of spending, expenses and/or debt related to the Southeastern Railroad Branch of the Pará Project (RFSP)	R\$ 1.0 billion	100%	The entire infrastructure debentures issued by the Company have already been subscribed and paid
12/27/2013	BNDES	Financing for the Tecored Investment Plan	R\$ 136.7 million	100%	Credit is provided in tranches according to the project schedule
06/15/2013	Banco J. Safra	Financing for equipment	R\$ 109.31 million	100%	Credit is provided in tranches according to the project schedule
10/19/2012	BNDES	Financing for Vale Fertilizantes Project	R\$ 88.63 million	100%	Credit is provided in tranches according to the project schedule
09/24/2012	BNDES	Financing for CLN150 Project	R\$ 3.88 million	94%	Credit is provided in tranches according to the project schedule
8/04/2011	Banco Bilbao Viscaya, Banco Santander, BNP Paribas, Citibank Europe, Credit Agricole, HSBC, Natixis, and Societé Generale	Financing for the acquisition of ships with the Korean shipbuilders Daewoo and Sungdong	R\$ 2,062 billion	82%	The credit was provided in tranches according to the ship delivery schedule, and the remaining unused balanced was cancelled
4/01/2008	BNDES	investments made in Brazil	R\$ 7.3 billion	76%	The credit is provided in tranches according to the project schedule

**h. Significant alterations in each item of the financial statements**

Fiscal year ending on December 31, 2014 compared to fiscal year ending on December 31, 2015

**Analysis of Operating Results 2014 x 2015**

The table below presents the values for the consolidated income statements for the fiscal years ended December 31, 2015 and 2014:

<b>(in R\$ billion)</b> <b>Income statement</b>	<b>Fiscal Year ending on December 31,</b>				<b>Variation (%) (2014 x 2015)</b>
	<b>2014</b>	<b>AV (%)</b>	<b>2015</b>	<b>AV (%)</b>	
Net Operating Revenues	88,275	100.0	85,499	100.0	(3.1)
Cost of products and services	(59,087)	(66.9)	(68,658)	(80.3)	16.2
Administrative and sales expenses	(2,603)	(2.9)	(2,143)	(2.5)	(17.7)
Research and development	(1,738)	(2.0)	(1,603)	(1.9)	(7.8)
Pre-operational and shutdown operation	(2,563)	(2.9)	(3,408)	(4.0)	33.0

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## Fiscal Year ending on December 31,

(in R\$ billion)	Fiscal Year ending on December 31,				Variation (%) (2014 x 2015)
Income statement	2014	AV (%)	2015	AV (%)	
Other net operating expenses	(2,560)	(2.9)	(0,586)	(0.7)	(77.1)
Impairment of noncurrent assets	(2,713)	(3.1)	(34,553)	(40.4)	1,173.6
Gain (loss) in the measurement or noncurrent assets sale	(0,441)	(0.5)	0,052	0.1	NA
<b>Operating Revenues</b>	16,570	18.8	(25,400)	(29.7)	NA
Equity results	1,141	1.3	(1,507)	(1.8)	NA
Result of disposal of shares in joint ventures and associated companies	(0,068)	(0.1)	0,296	0.3	NA
Net financial result	(14,753)	(16.7)	(36,538)	(42.7)	147.7
Impairment of investments	(0,071)	n/a	(1,727)	(2.0)	2,332.4
Income before income tax and social contribution	2,819	3.2	(64,876)	(75.9)	NA
Taxation on profits	(2,600)	(2.9)	18,879	22.1	NA
<b>Net income (loss) in the year</b>	0,219	0.2	(45,997)	(53.8)	NA

**Revenues**

The net operating revenue reached R\$ 85,499 billion in 2015, compared to R\$ 88,275 billion in 2014, corresponding to a 3.1% decrease. The revenue decrease was mainly due to the drop in commodities prices, partially offset by the depreciation of real, because company income is mainly expressed in dollars.

**Iron ore**

The revenue from the sales of ore decreased by 8.6%, from R\$ 45,341 billion in 2014 to R\$ 41,427 billion in 2015, especially due to the drop in ore price in the international market, led by drop in consumption in China, partially offset by the increase in the volume of sales of iron ore, due to improvement in distribution channel.

**Pellets**

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The revenue from the sale of pellets decreased by 4.0%, from R\$ 12,397 billion in 2014 to R\$ 11,916 billion in 2015, due to the drop in pellets price in the international market, partially offset by the depreciation of real, as company revenue is mainly expressed in dollars.

### *Manganese ore and ferroalloys*

The revenue from the sale of manganese and ferroalloys decreased by 44.5%, from R\$ 0,933 billion in 2014 to R\$ 0,518 billion in 2015, due to the drop in prices.

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***Coal***

The revenue from the sale of coal was maintained in line, from R\$ 1,740 billion in 2014 to R\$ 1,739 billion in 2015, despite the drop of prices in the international market, considering the depreciation of real.

***Base Metals***

***Nickel and other products***

There was a 5.7% increase in the revenue from these products, from R\$ 14,703 billion in 2014 to R\$ 15,534 billion in 2015, especially due to the increase in the volume of sales of nickel, resulting from annual production records, in the operations of New Caledonia, Indonesia and Onça Puma.

***Copper***

The revenue from the sale of copper increased by 44.4%, from R\$ 3,434 billion in 2014 to R\$ 4,957 billion in 2015, due to the ramp-up in Salobo.

***Fertilizers***

***Potash***

The revenue from the sale of potash increased by 22.0%, from R\$ 363 million in 2014 to R\$ 443 million in 2015, due to variation in the US dollar.

***Phosphate***

The revenue from the sale of phosphate increased by 36.3%, from R\$ 4,259 billion in 2014 to R\$ 5,806 billion in 2015, due to variation in the US dollar.



*Nitrogen*

The revenue from the sale of nitrogen increased by 21.8%, from R\$ 820 million in 2014 to R\$ 999 million in 2015, due to variation in the US dollar.

*Other products and services*

The revenue from other products and services decreased by 82.3%, from R\$ 2,347 billion in 2014 to R\$ 414 million in 2015, due to the drop in the sale of power to third parties.

**Costs of Business Areas**

*Comments on the Cost of Business Areas*

The cost of product sold (excluding depreciation) was R\$ 56,855 billion in 2015, a R\$ 6,852 billion increase (13.7%) compared to R\$ 50,003 billion in 2014, especially due to the impact of exchange variation (R\$ 8,372 billion) on costs expressed in dollars, for instance, costs with maritime freight of iron ore and costs of base metals outside Brazil.

Costs related to each business area are detailed below:

Table of Contents**CPV BY BUSINESS AREA**

<b>In R\$ million</b>	<b>2014</b>	<b>2015</b>
Ferrous Minerals	30,840	34,211
Base metals	10,835	14,427
Coal	2,514	2,857
Fertilizers	4,406	4,896
Others	1,408	464
Cost with no depreciation	50,003	56,855

It is important to note that all amounts mentioned were considered after discounting depreciation.

***Sales and administrative expenses***

Sales and administrative expenses decreased by 17.7%, from R\$ 2,603 billion in 2014 to R\$ 2,143 billion in 2015, especially due to the continuous streamlining of our corporate structure.

***Research and development expenses***

Research and development expenses remained stable, from R\$ 1,738 billion in 2014 to R\$ 1,603 billion in 2015.

***Pre-operational and operation stoppage expenses***

In 2015, pre-operational and operation stoppage expenses were R\$ 3,408 billion, representing a R\$ 845 million increase compared to 2014, especially due to higher expenses with Long Harbour and Nacala projects.

***Other operational expense/income, net***

Other operational expenses decreased by 77.1%, from R\$ 2,560 billion in 2014 to R\$ 0,586 billion in 2015, especially due to nonrecurring positive effect from the R\$ 722 million transaction of gold stream registered in the first quarter in 2015 and R\$ 1,281 billion, registered in the fourth quarter of 2015, related to the annual revision of mine closure provisions and other assets, generating a positive impact, resulting from the increase in the use life of some mines and revision of the work scope required for closure of the assets.

*Noncurrent asset impairment*

In 2015, asset impairment totaled R\$ 34,553 billion mainly due to the significant reduction in price assumptions used in impairment tests (see table below). The reduction registered in 2014, in the amount of R\$ 2.713 billion refers mainly to Vale Fertilizantes and Vale BSGR Limited, in the amount of R\$ 5,593 billion, and reversion of part of the impairment of Onça Puma in the amount of R\$ 4,295 billion, which initial value was recorded in 2012.

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<b>Impairment R\$ million</b>	<b>Total impairment of assets in 2015</b>	<b>Impairment in agreements 2015</b>	<b>Recoverable value Dec 31, 2015</b>
<b>Ferrous minerals</b>			
Iron ore Central-Western System (1)	2,023	1,382	
Pelleting plants	213		
Others	225		
<b>Coal</b>			
Assets in Mozambique	9,302		6,751
Assets in Australia(1)	2,460		286
<b>Base metals</b>			
Vale New Caledonia (VNC)	5,660		14,545
Vale New Foundland and Labrador (VNL)	13,394		9,188
Onça Puma	(976)		9,102
Others	240		
<b>Fertilizers</b>			
Phosphate assets	(1,515)		15,002
Rio Colorado Project (PRC)	2,123		78
<b>Others</b>	22		
<b>Total</b>	<b>33,171</b>	<b>1,382</b>	

**Impairment in investments on affiliates and joint ventures**

<b>R\$ million</b>	<b>Total impairment in 2015</b>
<b>Iron ore</b>	
Samarco	510
<b>Base metals</b>	
Teal Minerals	1,217
<b>Total</b>	<b>1,727</b>

On November 5, 2015, Samarco Mineração S.A. ( Samarco ) experienced the failure of iron ore tailings dam (Fundão) in state of Minas Gerais - Brazil. Following the dam failure, the competent authorities ordered the suspension of Samarco's operations.

## a) Accounting impacts on the investment resulting from the dam failure

Samarco is a closed capital company, in which each shareholder, Vale and BHP Billiton Brasil Ltda. ( BHP ), has a 50% ownership interest.

As a consequence of the dam failure, Samarco has incurred in expenses, wrote off assets, and recognized provisions for remediation, which affected its balance sheet and income statement. Because Samarco is a *joint venture*, the effects of the dam failure are accounted for under equity method by Vale, in which the balance sheet and income statement impact is limited to the Vale's interest in Samarco's capital as per the Brazilian Corporate Law. The dam failure had no effects on Vale's cash flow for the year ended on December 31, 2015.

The accounting impact of the investment in Samarco in Vale's financial statements, including effects of the dam failure, are as follows:

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In Million	Consolidated			
	Investments in associated and joint ventures	Accounts receivable	Related parties	Total
<b>Balance on December 31, 2014</b>	<b>533</b>	<b>63</b>	<b>822</b>	<b>1,418</b>
Equity results on income statement				(533)
Dividends received			(459)	(459)
Royalties declared		-120		120
Royalties received		(36)		(36)
Transfers	510	(147)	(363)	
Impairment of assets	(510)			(510)
<b>Balance on December 31, 2015</b>				

Due to the preliminary stage of the legal proceedings related to the dam failure involving Samarco and its shareholders, it is not possible to provide a range of possible outcomes or a reliable estimate of the potential future exposure for Vale related to the lawsuits. Therefore, no provision was recognized in the financial statements of Vale and no contingent liability was quantified.

On March 2, 2016, Samarco and its shareholders, Vale and BHP have entered into an agreement with the States of Espírito Santo and Minas Gerais and certain other public authorities for the restoration of the environment and communities affected by the Samarco's dam failure. The agreement provides a long-term remedial and compensation framework for responding to the impact of the event ( Agreement ).

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Under the terms in the Agreement, Samarco, Vale and BHP will establish a Foundation that will develop and execute environmental and social-economic programs to remediate and provide compensation for damages caused by the Samarco's dam failure.

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

Samarco will fund the Foundation with contributions as follows (calendar year):

- R\$ 2 billion in 2016, less the amount of funds already spent on or allocated to, remediation and compensation activities;
- R\$ 1.2 billion in 2017; and
- R\$ 1.2 billion in 2018.

From 2019 to 2021, annual contributions to the Foundation will be set based on an amount sufficient to undertake remaining remediation and compensation projects. Annual reference amounts for these contributions will range from R\$ 800 million to R\$ 1,600 billion.

From signature of the agreement, the Foundation will allocate an annual amount of R\$ 240 million, for a period of 15 years, to the execution of compensation projects. These annual amounts are already included in the first six years contributions. There is also a one time contribution of R\$ 500 million for basic sanitation in the affected areas.

Samarco management is working on a plan that would permit it to resume operations, but the feasibility, timing and scope of restarting remain uncertain. Samarco and its shareholders are hopeful that Samarco will be able to resume operations and to generate all or a substantial part of the funding required under the agreement.

Samarco will continue to conduct and fund the humanitarian and environmental recovery and remediation work until the Foundation is operational, which is likely to be in the next few months.

To the extent Samarco does not meet its funding obligations in the Foundation, each of Vale and BHP is liable, under the terms of the Agreement, for providing funds to the Foundation in proportion to its 50 per cent shareholding in Samarco. The Samarco's cash flow projections included in its business plan, which considers the resumption of its operations, predict that Samarco will be able to satisfy its obligations without the capital contributions or cash disbursements by its shareholders. Therefore, Vale does not expect, at this time, any material impact on its financial statements arising from the Agreement. However, this position will be constantly reevaluated by Vale, in order to reassess any changes in the key assumptions used in Samarco cash flow projections. Any evidence on the need of future cash disbursement by shareholders under the Agreement will be immediately reflected in Vale's financial statements, in proportion to its percentage of interest, as a provision of remediation

and compensation related to the of the dam failure.

***Result in the measurement or sale of noncurrent assets***

The result of the sale of assets increased from an expense of R\$ 441 million in 2014 to income of R\$ 52 million in 2015. In 2015, the result of the measurement or sale of noncurrent assets referred to the navigation and power assets, in 2014 the result referred to the assignment of the area of Vale Canada Limited under the CoW agreement of Vale Canada Limited.

**Result from equity**

The result from equity decreased R\$ 2,648 billion, from income of R\$ 1,141 billion in 2014 to expense of R\$ 1,507 billion in 2015, especially due to Teal Minerals (copper operation in

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Lubambe, Africa), which had the negative impact of the impairment of assets and Samarco results.

**Net Financial Results**

Net income decreased by 147.7%, from R\$ 14,753 billion expense in 2014 to R\$ 36,538 billion expense in 2015, basically due to exchange variation.

**Taxation on profits**

In 2015, the net income tax income was R\$ 18,879 billion, compared to R\$ 2,600 billion expense in 2014, basically due to fiscal losses calculated in companies abroad and foreign exchange results.

**Net gains/loss in the fiscal year**

Net profit from R\$ 219 million in 2014 to net loss of R\$ 45,997 billion in 2015, mainly due to factors explained above.

**Analysis of equity variation on December 31, 2015 compared to December 31, 2014**

	12.31.2014	AV (%) (3)	12.31.2015	AV (%) (47)	Variation (%) (2014 x 2015)
<b>Current Assets</b>					
Cash and cash equivalents	10,555	3.4	14,022	4.0	32.8
Short-term investments	0,392		0,109		(72.2)
Derivatives financial instruments	0,441	0.1	0,474	0.1	7.5
Accounts Receivable	8,700	2.8	5,763	1.7	(33.8)
Inventory	11,956	3.9	13,775	4.0	15.2
Taxes on estimated profit	4,200	1.4	3,513	1.0	(16.4)
Taxes to be refunded	4,515	1.5	5,482	1.6	21.4
Related parties	1,537	0.5	0,273	0.1	(82.2)
Others	1,780	0.6	1,215	0.3	(31.7)
Non-current assets held for sale	9,669	3.1	15,792	4.6	63.3
	53,745	17.4	60,418	17.5	12.4
<b>Noncurrent</b>					
Derivative financial instruments	0,231	0.1	0,363	0.1	57.1
Loans	0,609	0.2	0,732	0.2	20.2



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Taxes on profits	1,271	0.4	1,840	0.5	44.8
Taxes to be refunded	1,064	0.3	1,956	0.6	83.8
Taxes on profit deferred	10,560	3.4	30,867	8.9	192.3
Judicial deposits	3,370	1.1	3,445	1.0	2.2
Related parties	0,093		0,005		(94.6)
Others	1,873	0.6	2,392	0.7	27.7

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(3) Relative to asset total.

(4) Relative to asset total.

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	12.31.2014	AV (%) <sup>(3)</sup>	12.31.2015	AV (%) <sup>(47)</sup>	Variation (%) (2014 x 2015)
	19,071	6.1	41,600	12.0	118.1
<b>Investments</b>	10,978	3.6	11,481	3.3	4.6
<b>Intangible Assets</b>	18,114	5.9	20,789	6.0	14.8
<b>Fixed Assets</b>	207,507	67.0	211,259	61.2	1.8
	255,670	82.6	285,129	82.5	11.5
Total assets	309,415	100.0	345,547	100.0	11.7
<b>Liabilities and shareholders equity</b>					
<b>Current</b>					
Accounts Payable to suppliers and contractors	11,566	3.8	13,140	3.8	13.6
Salaries and employment taxes	3,089	1.0	1,464	0.4	(52.6)
Derivatives financial instruments	3,760	1.2	8,107	2.3	115.6
Loans and financing	3,768	1.2	9,788	2.8	159.8
Related Parties	0,813	0.3	1,856	0.5	128.3
Taxes on profit Refinancing Program	1,213	0.4	1,348	0.4	11.1
Taxes on royalties payable	1,461	0.5	0,977	0.3	(33.1)
Taxes on profit payable	0,937	0.3	0,943	0.3	0.6
Pension and retirement benefits	0,177		0,266	0.1	50.3
Asset retirement obligation	0,361	0.1	0,346	0.1	(4.2)
Others	1,074	0.3	2,531	0.8	135.7
	28,219	9.1	40,766	11.8	44.5
Liabilities related to non-current assets held for sale	0,294	0.1	0,416	0.1	41.5
	28,513	9.2	41,182	11.9	44.4
<b>Non-current</b>					
Derivatives financial instruments	4,276	1.4	5,581	1.6	30.5
Loans and financing	72,749	23.5	102,878	29.8	41.4
Related Parties	0,288	0.1	0,830	0.2	188.2
Pension and retirement benefits	5,941	1.9	6,831	2.0	15.0
Legal provisions	3,405	1.1	3,210	0.9	(5.7)
Taxes on profit Refinancing Program	15,572	5.0	15,953	4.6	2.4
Taxes on profits deferred	8,874	2.9	6,520	1.9	(26.5)
Asset retirement obligation	8,588	2.8	9,313	2.7	8.4
Participation Debentures	4,584	1.5	1,336	0.4	(70.9)
Non-controlling shareholders redeemable share	0,645	0.2			(100.0)
Others	6,379	2.1	12,494	3.6	106.7
	131,301	42.4	164,946	47.7	25.6
<b>Shareholders Equity</b>					
Shareholders equity of Vale shareholders	146,414	47.3	131,160	38.0	(10.4)

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	12.31.2014	AV (%) <sup>(3)</sup>	12.31.2015	AV (%) <sup>(47)</sup>	Variation (%) (2014 x 2015)
Shareholders equity of non-controlling shareholders	3,187	1.0	8,259	2.4	159.1
Total shareholders equity	149,601	48.3	139,419	40.4	(6.8)
Total liabilities and shareholders equity	309,415	100.0	345,547	100.0	11.7

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(1) Relative to total liabilities

**Position on December 31, 2013 compared to the position on December 31, 2014**

Vale has assets and debts referenced to different currencies, the main ones being the *real*, the US dollar and the Canadian dollar. On December 31, 2015, the Company had 54% of assets related to Brazilian *reais*, 11% to US dollars, 17% to Canadian dollars and 8% to other currencies, while the majority of our debt was expressed in US dollars. Consequently, the effects of changes in exchange rates had an impact on the financial statements, especially the depreciation of the *real* by 47% against the US dollar between December 31, 2014 and 2015.

***Current Assets******Cash and cash equivalents***

The 32.8% increase, from R\$ 10,555 billion on December 31, 2014 to R\$ 14,022 billion on December 31, 2015, occurred as a function of divestment transactions: (i) R\$ 4.8 billion from the sale of twelve VLOCs (*very large ore carriers*) for Chinese shipyards; (ii) R\$ 4 billion from the sale of 36.4% of preferred shares of MBR; (iii) R\$ 2.8 billion from the *gold stream* transaction as byproduct of the Salobo copper mine; and (iv) R\$ 306 million, from the sale of power assets. Part of the amounts above were used for Company general purposes.

***Inventories***

The 15.2% increase, from R\$ 11,956 billion on December 31, 2014 to R\$ 13,775 billion on December 31, 2015, was mainly due to exchange variation, considering that some inventory is evaluated in US dollars.

***Taxes on estimated profit***

Taxes on estimated profit decreased by 16.4%, from R\$ 4,200 billion on December 31, 2014 to R\$ 3,513 billion on December 31, 2015, due to offset values in the period.

*Non-current assets held for sale and discontinued operations*

The sale of assets totaled R\$ 15,792 billion on December 31, 2015, related to Nacala, comparing to R\$ 9,669 billion on December 31, 2014 related to the sale of power generation assets and general load.

**Noncurrent assets**

*Deferred taxes on profit*

The amount of deferred taxes on profits increased by 192.3%, from R\$ 10,560 billion on December 31, 2014 to R\$ 30,867 billion on December 31, 2015, basically due to fiscal loss of the controller and its affiliate abroad and previous years related to the inventory in losses due to Law 12,973.

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***Investments***

Investments increased by 4.6%, from R\$ 10.978 billion on December 31, 2014 to R\$ 11.481 billion on December 31, 2015, reflecting the investment made on Aliança Geração de Energia S.A.

***Fixed Assets***

Fixed assets increased by 1.8%, from R\$ 207,507 billion on December 31, 2014 to R\$ 211,259 billion on December 31, 2015, due to exchange variation of some assets abroad, partially offset by depreciation expenses and asset offsetting, mainly Nacala.

***Current Liabilities***

***Derivatives***

Derivatives increased by 115.6%, from R\$ 3,760 billion on December 31, 2014 to R\$ 8,107 billion on December 31, 2015, basically due to (i) maturity of fuel operations, with the effect of the drop of price in the fuel market and appreciation of US dollar compared to real, affecting fuel operations and exchange swaps.

***Loans and financing***

The increase in long-term loans by 159.8%, from R\$ 3,768 billion on December 31, 2014 to R\$ 9,788 billion on December 31, 2015, was basically due to exchange variation and especially reclassification of part of the long-term debt to mature in 2016.

***Liabilities related to non-current assets held for sale and discontinued operations***

Liabilities related to non-current assets held for sale increased by 41.5%, from R\$ 0,294 billion on December 31, 2014 to R\$ 0,416 billion on December 31, 2015, due to the availability of Nacala for sale.

***Noncurrent liabilities***

*Derivatives*

Derivatives increased by 30.5%, from R\$ 4,276 billion on December 31, 2014 to R\$ 5,581 billion on December 31,2015, basically due to appreciation of US dollar against real, with a loss in swap mark-to-market, which goal is to reduce the volatility of cash flow, net of transfer of fuel positions to current liabilities.

*Loans and financing*

Loans and financing increased by 41.4%, from R\$ 72,749 billion on December 31, 2014 to R\$ 102,878 billion on December 31,2015, reflecting exchange variation, as considerable portion of loans were acquired in foreign currency.

*Provisions for contingencies*

Provisions for contingencies decreased by 5.7%, from R\$ 3,405 billion on December 31, 2014 to R\$ 3,210 billion on December 31,2015, reflecting the changes to the prognosis of part of the lawsuits where Vale appears as party.

*Obligations for asset retirement*

Obligations for asset retirement increased by 8.4%, from R\$ 8,588 billion on December 31, 2014 to R\$ 9,313 billion on December 31,2015, mainly due to exchange reduction applicable to

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part of the balance of companies abroad, partially offset by the adjustment of the present value of the obligation due to reduction in the discount rate.

**Debentures**

Debentures decreased by 70.9%, from R\$ 4,584 billion on December 31, 2014 to R\$ 1,336 billion on December 31, 2015, due to decrease in the mark-to-market due to commodities prices.

**Shareholders Equity held by Controlling Shareholders**

Shareholders equity held by controlling shareholders decreased by 11.2%, from R\$ 146,414 billion on December 31, 2014 to R\$ 129,958 billion on December 31, 2015, due to losses in the period.

**Fiscal year ended on December 31, 2013 compared to fiscal year ended on December 31, 2014****Analysis of Operating Results, 2014 vs. 2013**

The table below presents the values for the consolidated income statements for the fiscal years ended December 31, 2013 and December 31, 2014:

(in R\$ billion)	Fiscal year ended on December 31,				Variation (%) (2013 x 2014)
	2013	AV (%) <sup>(1)</sup>	2014	AV (%) <sup>(1)</sup>	
<b>Income statement</b>					
<b>Net Operating Revenues</b>	101,490	100.0	88,275	100.0	(13.0)
Cost of products and services	(52,511)	(51.7)	(59,087)	(66.9)	12.5
Administrative and sales expenses	(2,804)	(2.8)	(2,603)	(3.0)	(7.2)
Research and development	(1,745)	(1.7)	(1,738)	(2.0)	(0.4)
Pre-operational and shutdown operation	(4,035)	(4.0)	(2,563)	(2.9)	(36.5)
Other net operating expenses	(2,157)	(2.1)	(2,560)	(2.9)	18.7
Reduction of noncurrent assets recoverable value	(5,390)	(5.3)	(2,713)	(3.1)	(49.7)
Gain (loss) in the measurement or noncurrent assets sale	(0,508)	(0.5)	(0,441)	(0.5)	(13.2)
<b>Operating Revenues</b>	32,340	31.9	16,570	18.7	(48.8)
Result of corporate participations	0,999	1.0	1,141	1.3	14.2
Result of disposal of shares in joint ventures and associated companies	0,098	0.1	(0,068)	(0.1)	(169.4)
Net financial result	(18,442)	(18.2)	(14,753)	(16.7)	(20.0)

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Reduction of investments recoverable value		n/a	(0,071)	(0.1)	n/a
<b>Income before income tax and social contribution</b>	14,995	14.8	2,819	3.2	(81.2)
Taxation on profits	(15,249)	(15.0)	(2,600)	(2.9)	(82.9)
Losses from discontinued	(0.004)			n/a	n/a



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(in R\$ billion)	Fiscal year ended on December 31,				Variation
	2013	AV (%) <sup>(1)</sup>	2014	AV (%) <sup>(1)</sup>	(%) (2013 x 2014)
Income statement operations					
<b>Net income (loss) in the year</b>	(0.258)	(0.2)	0.219	0.2	(184.9)

*(1) Relative to the net operating revenue.*

**Revenues**

The net operating revenue reached R\$ 88.275 billion in 2014, compared to R\$ 101.490 billion in 2013, corresponding to a 13% decrease. The revenue decrease was mainly due to the drop in commodities prices, partially offset by the increase in the volume of iron ore sales resulting from the *ramp-up* of ore projects.

**Iron Ore**

The revenue from the sales of ore decreased by 26.0%, from R\$ 61.271 billion in 2013 to R\$ 45.341 billion in 2014, especially due to the drop in ore price. This drop was mainly offset by the increase in sales volume, with the ramp up of some ore projects.

**Pellets**

The revenue from the sale of pellets decreased by 4.4%, from R\$ 12.972 billion in 2013 to R\$ 12.397 billion in 2014, due to the drop in the price reference index of ore IODEX partially offset by the increase in the quality premium attributed to pellets.

**Manganese ore and ferroalloys**

The revenue from the sale of manganese and ferroalloys decreased by 18.2%, from R\$ 1.140 billion in 2013 to R\$ 0.933 billion in 2014, due to the drop in volume and prices.

**Coal**

The revenue from the sale of coal decreased by 20.5%, from R\$ 2.188 billion in 2013 to R\$ 1.740 billion in 2014, due to the drop in prices and suspension of operations of Integra and Isaac Plains, partially offset by the increased volume in Moatize. Suspension of operations of Integra and Isaac Plains was due to the economic unviability of the current market conditions.

*Base Metals*

*Nickel and other products*

There was a 17.0% increase in the revenue from these products, from R\$ 12.566 billion in 2013 to R\$ 14.703 billion in 2014, especially due to the increase in nickel price, responding to the demand cycle, and the increase volume of sales of nickel, due to the return of production at Onça Puma, after recovery of the furnace.

*Copper*

The revenue from the sale of copper increased by 8.0%, from R\$ 3.180 billion in 2013 to R\$ 3.434 billion in 2014, due to the increased sales volume driven by the *ramp-up* of Salobo II, copper operation in Brazil.

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***Fertilizers***

*Potash*

The revenue from the sale of potash decreased by 16.4%, from R\$ 434 million in 2013 to R\$ 363 million in 2014, due to the decrease in sales volume and prices due to the lower demand resulting from weak conditions in the global market of fertilizers.

*Phosphate*

The revenue from the sale of phosphate decreased by 4.1%, from R\$ 4.443 billion in 2013 to R\$ 4.259 billion in 2014, due to the decrease prices due to the lower demand resulting from weak conditions in the global market of fertilizers.

*Nitrogen*

The revenue from the sale of nitrogen decreased by 17.2%, from R\$ 990 million in 2013 to R\$ 820 million in 2014, partially due to the sale of the company Araucária in 2013.

***Other products and services***

The revenue from other products and services increased by 26.9%, from R\$ 1.850 billion in 2013 to R\$ 2.347 billion in 2014, due to the drop in the sale of steel.

**Costs of Business Areas**

***Comments on the Cost of Business Areas***

The cost of products and services sold (excluding depreciation) was R\$ 50.003 billion in 2014, a R\$ 5.523 billion increase compared to R\$ 44.480 billion in 2013, especially due to exchange variation and greater volume sold. The cost of ferrous minerals increased by R\$ 5.082 billion (19.7%) and the cost of base metals increased by R\$ 747 million (7.4%), both increases especially due to the greater volume sold. Moreover, costs with coal and fertilizers increased by R\$ 29 million and reduced by R\$ 293 million, respectively.

Costs related to each business area are detailed below:

<b>CPV BY BUSINESS AREA</b> <b>in R\$ million</b>	<b>2013</b>	<b>2014</b>
Ferrous	25,758	30,840
Base metals	10,088	10,835
Coal	2,485	2,514
Fertilizers	4,699	4,406
Others	1,450	1,408
Cost with no depreciation	44,480	50,003

It is important to note that all amounts mentioned were considered after discounting depreciation.

***Sales and administrative expenses***

Sales and administrative expenses decreased by 7.2%, from R\$ 2.804 billion in 2013 to R\$ 2.603 billion in 2014, especially due to the continuous simplification of our corporate structure.

***Research and development expenses***

Research and development expenses remained stable, from R\$ 1.745 billion in 2013 to R\$ 1.738 billion in 2014.

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***Noncurrent asset impairment***

In 2014, asset impairment totaled R\$ 2.713 billion mainly due to Vale Fertilizantes and Vale BSGR Limited, in the amount of R\$ 5.593 billion, and the review of part of the impairment of Onça Puma, in the amount of R\$ 4,295 billion, which initial value was registered in 2012. Impairment in 2013 registered in the amount of R\$ 5.390 billion refers mainly to the suspension of the Rio Colorado Project ( PRC ) in the amount of R\$ 4.963 billion and pelleting plants in the amount of R\$ 427 million.

***Pre-operational and operation stoppage expenses***

In 2014, pre-operational and operation stoppage expenses were R\$ 2.563 billion, representing a R\$ 1.472 billion decrease compared to 2013, especially due to lower expenses with the Rio Colorado and Long Harbor Projects.

***Other net operational expense/income***

Other operational expenses increased by 18.7%, from R\$ 2.157 billion in 2013 to R\$ 2.560 billion in 2014. If excluding the transaction nonrecurring positive effect of the sale of 25% of payable gold flow produced as byproduct of the copper mine of Salobo during the mine life, and 70% of payable gold flow produced as byproduct of the nickel mines in Sudbury Coleman, Copper Cliff, Creighton, Garson, Stobie, Totten, and Victor paid in the first quarter in 2013, net operational expenses would decrease by 3.4% from 2013 to 2014.

***Loss in the measurement or sale of noncurrent assets***

The result of the sale of assets decreased by 13.2%, from R\$ 508 million in 2013 to R\$ 441 million in 2014. In 2013, the result referred to the loss in the sale of Tres Valles, while in 2014 the loss referred to the termination of the area of Vale Canada Limited. For more information, see explanatory note 30 in the Company financial statement.

***Result from shareholding***

The result from shareholding increased by 14.2%, from R\$ 999 million in 2013 to R\$ 1.141 billion in 2014, especially due to discontinued consolidation of VLI into Vale results.

***Net Financial Results***

Net income decreased by 20.0%, from R\$ 18.442 billion expense in 2013 to R\$ 14.753 billion expense in 2014, due to the impact of the Fiscal Recovery Program REFIS ( REFIS ), registered in 2013.

***Taxation on profits***

In 2014, the net income tax expense was R\$ 2.600 billion, compared to R\$ 15.249 billion in 2013, basically due to company results abroad taxed at rates other than the ones applicable to the controlling company and the inability to reduce the impairment of certain assets.

***Net profit/loss of the fiscal year***

Net loss in the amount of R\$ 258 million in 2013 turned into net profit of R\$ 219 million in 2014, especially due to factors mentioned above.

Table of Contents**Analysis of equity changes on December 31, 2014 compared to December 31, 2013**

<b>in R\$ billion</b>	<b>12.31.2013</b>	<b>AV (%) (1)</b>	<b>12.31.2014</b>	<b>AV (%) (1)</b>	<b>Variation (%) (2014 x 2013)</b>
<b>Current Assets</b>					
Cash and cash equivalents	12,465	4.3	10,555	3.4	-15.3
Short-term investments	0,008	0.0	0,392	0.0	n/a
Derivatives financial instruments	0,471	0.2	0,441	0.1	-6.4
Accounts Receivable	13,360	4.6	8,7	2.8	-34.9
Related parties	0,611	0.2	1,537	0.5	151.6
Inventory	9,622	3.3	11,956	3.9	23.7
Taxes on estimated profit	5,563	1.9	4,2	1.4	-24.5
Taxes to be refunded	3,698	1.3	4,515	1.5	22.1
Advances to suppliers	0,292	0.1	0,256	0.1	-12.3
Others	2,151	0.7	1,524	0.6	-29.1
<b>Non-current assets held for sale</b>	<b>8,822</b>	<b>3.0</b>	<b>9,669</b>	<b>3.1</b>	<b>9.6</b>
	<b>57,103</b>	<b>19.6</b>	<b>53,745</b>	<b>17.4</b>	<b>-5.9</b>
<b>Non-current</b>					
Related Parties	0,235	0.1	0,093	0.0	-63.2
Loans and financing	0,564	0.2	0,609	0.2	8.0
Legal deposits	3,491	1.2	3,37	1.1	-3.5
Taxes on profits to be refunded	0,899	0.3	1,271	0.4	41.4
Taxes on profits deferred	10,596	3.6	10,56	3.4	-0.3
Taxes to be refunded	0,668	0.2	1,064	0.3	59.3
Derivatives financial instruments	0,329	0.1	0,231	0.1	-29.8
Others	1,730	0.6	1,693	0.6	-2.1
	<b>18,977</b>	<b>6.5</b>	<b>19,071</b>	<b>6.1</b>	<b>0.5</b>
<b>Investments</b>	<b>8,397</b>	<b>2.9</b>	<b>10,978</b>	<b>3.6</b>	<b>30.7</b>
<b>Intangibles</b>	<b>16,096</b>	<b>5.5</b>	<b>18,114</b>	<b>5.9</b>	<b>12.5</b>
<b>Fixed Assets</b>	<b>191,308</b>	<b>65.5</b>	<b>207,507</b>	<b>67</b>	<b>8.5</b>
	<b>234,778</b>	<b>80.4</b>	<b>255,67</b>	<b>82.6</b>	<b>8</b>
<b>Total Assets</b>	<b>291,881</b>	<b>100.0</b>	<b>309,415</b>	<b>100</b>	<b>6.0</b>
<b>Liabilities and shareholders equity</b>					
	<b>12.31.2013</b>	<b>AV (%) (1)</b>	<b>12.31.2014</b>	<b>AV (%) (1)</b>	<b>Variation (%) (2014 x 2013)</b>
<b>Current</b>					
Accounts Payable to suppliers and contractors	8,837	3.0	11,566	3.8	30.9
Salaries and employment taxes	3,247	1.1	3,089	1.0	-4.9
Derivatives financial instruments	0,556	0.2	3,76	1.2	576.3
Loans and financing	4,158	1.4	3,768	1.2	-9.4
Related Parties	0,479	0.2	0,813	0.3	69.7
Taxes on profit Refinancing Program	1,102	0.4	1,213	0.4	10.1
Taxes to be refunded	0,766	0.3	1,461	0.5	90.7
Taxes on estimated profit	0,886	0.3	0,937	0.3	5.8
Pension and retirement benefits	0,227	0.1	0,177	0.0	-22.0
<b>Asset retirement obligation</b>	<b>0,225</b>	<b>0.1</b>	<b>0,361</b>	<b>0.1</b>	<b>60.4</b>
<b>Other</b>	<b>0,985</b>	<b>0.3</b>	<b>1,074</b>	<b>0.3</b>	<b>9.0</b>
	<b>21,468</b>	<b>7.4</b>	<b>28,219</b>	<b>9.1</b>	<b>31.4</b>
<b>Liabilities related to non-current assets held for sale</b>	<b>1,050</b>	<b>0.4</b>	<b>0,294</b>	<b>0.0</b>	<b>(72.0)</b>

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	<b>22,518</b>	<b>7.8</b>	<b>28,513</b>	<b>9.2</b>	<b>26.6</b>
<b>Non-current</b>					
Derivatives financial instruments	3,496	22.2	4,276	1.4	22.3
Loans and financing	64,819	0.0	72,749	23.5	12.2
Related Parties	0,011	0.0	0,288	0.1	n/a
Pension and retirement benefits	5,148	1.8	5,941	1.9	15.4
Legal provisions	2,989	1.0	3,405	1.1	13.9
Taxes on profit Refinancing Program	15,243	5.2	15,572	5.0	2.2
Taxes on profits deferred	7,562	2.6	8,874	2.9	17.3
Asset retirement obligation	5,969	2.0	8,588	2.8	43.9
Participation Debentures	4,159	1.4	4,584	1.5	10.2
Non-controlling shareholders redeemable share	0,646	0.2	0,645	0.2	-0.2
Others	7,200	2.5	6,379	2.1	-11.4
	<b>117,242</b>	<b>40.1</b>	<b>131,301</b>	<b>42.4</b>	<b>12.0</b>
<b>Shareholders Equity</b>					
Vale s controlling shareholders equity	148,346	50.8	146,414	47.3	(1.3)
Non-controlling shareholders interest	3,775	1.3	3,187	1.0	(15.6)
<b>Total equity</b>	<b>152,121</b>	<b>52.117</b>	<b>149,601</b>	<b>48.3</b>	<b>(1.7)</b>
<b>Total liabilities and equity</b>	<b>291,881</b>	<b>100.000</b>	<b>309,415</b>	<b>100</b>	<b>6.0</b>



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(1) *Relative to total liabilities and shareholders' equity.*

**Position on December 31, 2013 compared to the position on December 31, 2014**

Vale has assets and debts referenced to different currencies, the main ones being the *real*, the US dollar and the Canadian dollar. On December 31, 2014, the Company had 55% of assets related to Brazilian *reais*, 12% to US dollars, 19% to Canadian dollars and 14% to other currencies, while the majority of our debt was expressed in US dollars. Consequently, the effects of changes in exchange rates had an impact on the financial statements, especially the depreciation of the *real* by 13 % against the US dollar between December 31, 2013 and 2014.

***Current Assets***

***Cash and cash equivalents***

The 15.3% decrease, from R\$ 12.465 billion on December 31, 2013 to R\$ 10.555 billion on December 31, 2014, occurred as a function of the non-recurring transaction related to the sale of 25% of payable gold flow in 2013 and the negative impact from the drop of commodities prices in the generation of operational cash flow in 2014, partially offset by the increase of volume and reduction of expenses.

***Inventories***

The 23.7% increase, from R\$ 9.662 billion on December 31, 2013 to R\$ 11.956 billion on December 31, 2014, was mainly due to the ramp up of the distribution center in Malaysia, as well as exchange variation.

***Taxes on estimated profit***

Taxes on estimated profit decreased by 24.5%, from R\$ 5.563 billion on December 31, 2013 to R\$ 4.200 billion on December 31, 2014, due to offset values of income tax and social contribution.

***Non-current assets held for sale***

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The sale of assets totaled R\$ 9.669 billion on December 31, 2014, refers mainly to the divestment in power generation assets and share held in the assets in Nacala, comparing to R\$ 8.822 billion on December 31, 2013 refers to the sale of power generation assets and general load.

### *Noncurrent Assets*

### *Deferred taxes on profit*

The amount of deferred taxes on profits decreased by 0.3%, from R\$ 10.596 billion on December 31, 2013 to R\$ 10.560 billion on December 31, 2014, due to fiscal loss.

### *Investments*

Investments increased by 30.7%, from R\$ 8.397 billion on December 31, 2013 to R\$ 10.978 billion on December 31, 2014, reflecting the investment increase on affiliates due to the

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consolidation of Vale Logística da Argentina S.A. which investment was partially sold and the remaining portion is no longer consolidated.

***Fixed Assets***

Fixed assets increased by 8.5%, from R\$ 191.308 billion on December 31, 2013 to R\$ 207.507 billion on December 31, 2014, due to Capex execution, mainly the S11D project, including the Integrated Logistic Corridor of Nacala - CLN and partial impairment of assets related to Onça Puma in 2012.

***Current liabilities***

***Accounts payable to suppliers and contractors***

Accounts payable to suppliers and contractors increased by 30.9%, from R\$ 8.837 billion on December 31, 2013 to R\$ 11.566 billion on December 31, 2014, was basically due to the extension on the average due date of payments.

***Derivatives***

Derivatives increased by 576.3%, from R\$ 0.556 billion on December 31, 2013 to R\$ 3.760 billion on December 31, 2014, basically due to appreciation of US dollar against real, with a loss in swap mark-to-market, which goal is to reduce the volatility of cash flow.

***Loans and financing***

The 9.4% reduction in the long-term loan current debt, from R\$ 4.158 billion on December 31, 2013 to R\$ 3.768 billion on December 31, 2014, was due to the due date of long term debts, acquired in reais.

***Liabilities related to non-current assets held for sale and discontinued operations***

Liabilities related to non-current assets held for sale decreased by 72.0%, from R\$ 1.050 billion on December 31, 2013 to R\$ 0.294 billion on December 31, 2014, due to the conclusion of the general load sale and negotiation at the Nacala corridor with Mitsui.

***Noncurrent Liabilities***

*in R\$ billion*

Derivatives increased by 22.3%, from R\$ 3.496 billion on December 31, 2013 to R\$ 4.276 billion on December 31, 2014, basically due to appreciation of US dollar against real, with a loss in swap mark-to-market, which goal is to reduce the volatility of cash flow.

***Loans and financing***

Loans and financing increased by 12.2%, from R\$ 64.819 billion on December 31, 2013 to R\$ 72.749 billion on December 31, 2014, reflecting exchange variation, as considerable portion of loans were acquired in foreign currency.

***Provisions for contingencies***

Provisions for contingencies increased by 13.9%, from R\$ 2.989 billion on December 31, 2013 to R\$ 3.405 billion on December 31, 2014, reflecting the changes to the prognosis of part of the lawsuits where Vale appears as party.

Table of Contents***Obligations for asset retirement***

Obligations for asset retirement increased by 43.9%, from R\$ 5.969 billion on December 31, 2013 to R\$ 8.588 billion on December 31, 2014, was due to the reduction in the discount rate and annual revision of realized estimates.

***Debentures***

Debentures increased by 10.2%, from R\$ 4.159 billion on December 31, 2013 to R\$ 4.584 billion on December 31, 2014, due to mark-to-market.

***Shareholders' Equity held by Controlling Shareholders***

Shareholders' equity held by controlling shareholders decreased by 1.3%, from R\$ 148.346 billion on December 31, 2013 to R\$ 146.414 billion on December 31, 2014, due to realization of provisions for shareholders' compensation.

**Analysis of Cash Flows 2015 vs. 2014**

The table below presents the values for the cash flow statements for the fiscal years ended December 31, 2015 and December 31, 2014:

(in R\$ million)	2015	%	2014
<b>Cash flow from operational activities:</b>			
Net gain (loss) in the period	(45,997)	n/a	219
Adjustments to consolidate net profit with revenues from operational activities	61,716	173.4	22,573
Net revenue from operational activities	15,719	(31.0)	22,792
Net revenue used in investment	(20,116)	(10.0)	(22,360)
Net revenue from (used in) financing	5,250	n/a	(8,634)
Increase (reduction) in cash and cash equivalents	853	n/a	(3,202)
Beginning of the year cash and cash equivalents	10,555	(15.3)	12,465

Effect of exchange variations in cash and cash equivalents	2,614	102.3	1,292
End of the year cash and cash equivalents	14,022	32.8	10,555

**Year ending on December 31, 2014 compared to the year ended on December 21, 2015**

*Net operating revenues*

Net operating revenues totaled R\$ 15,719 billion in 2015, compared to R\$ 27,792 billion in 2014, representing a 31.0% decrease, basically due to the drop in the iron ore price.

*Net Operating revenues from (used in) investments*

Net revenues used in investments totaled R\$ 20,116 billion in 2015, compared to R\$ 22,360 billion in 2014, representing a 10.0% decrease, due to Company adjustment to projects, as some of them are entering the deployment phase, as is the case of S11D project, one of the largest of the Company, expected to end in the second half in 2016.

Table of Contents*Net revenue from (used in) financing*

Net revenue from (used in) financing totaled R\$ 5,250 billion in 2015, compared to R\$ 8,634 billion in 2014, due to decrease in the payment of dividends to shareholders and the MBR transaction, comprised by the sale of class-A preferred shares of MBR, representing 36.4% of its capital.

**Analysis of Cash Flow 2014 vs. 2013**

The following table shows the values related to the consolidated cash flow statements for the years ended December 31, 2013 and December 31, 2014:

<b>(in R\$ million)</b>	<b>2014</b>	<b>%</b>	<b>2013</b>
Operating cash flow:			
Net gains (loss)	219	n/a	(258)
Adjustments to consolidate net profit with revenues from operational activities	27,573	(15.1)	32,491
Net revenue from operational activities	27,792	(13.8)	32,233
Net revenue used in investment	(22,360)	(3.4)	(23,150)
Net revenue from (used in) financing	(8,634)	(8.1)	(9,396)
Increase (reduction) in cash and cash equivalents	(3,202)	n/a	(313)
Beginning of the year cash and cash equivalents	12,465	4.6	11,918
Effect of exchange variations in cash and cash equivalents	1,292	50.2	860
End of the year cash and cash equivalents	10,555	(15.3)	12,465

**Year ended on December 31, 2013 compared to year ended on December 31, 2014***Net operating revenues*

Net operating revenues totaled R\$ 27.792 billion in 2014, compared to R\$ 32.233 billion in 2013, representing a 13.8% decrease, basically due to the drop in the iron ore price.

*Net Operating revenues from (used in) investments*

Net revenues used in investments totaled R\$ 22.360 billion in 2014, compared to R\$ 23.150 billion in 2013, representing a 3.4% decrease, due to the reduction in investment sale.

*Net revenue from (used in) financing*

Net revenue from (used in) financing totaled R\$ 8.634 billion in 2014, compared to R\$ 9.396 billion in 2013, representing an 8.1% decrease, due to the funding levels in 2014.



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**10.2 Operating and Financial Results**

**a. Results of Vale Operations, in particular:**

*i. Description of key components of revenue*

In 2015, net operating revenues totaled R\$ 85.5 billion with operational margin (prior to gains from the measurement of the sale of noncurrent assets) of 10.6%. Operating loss was R\$ 25.4 billion, a R\$ 42.0 billion variation compared to the operating profit in 2014, mainly due to reduction in the prices of its products.

This year, that Company has sought after several opportunities to improve its margin. Vale has presented an 18.2% reduction in net operational revenues (including SG&A, research and development, pre-operational and stoppage, and other expenses), corresponding to R\$ 1.7 billion, compared to the same period in 2014, especially marked by the revenue arising out of the *gold stream* operation and reduction in the provision for fixed asset retirement, due to risk change.

In addition, Vale had a R\$ 31.8 billion variation in impairment of assets, from R\$ 2.7 billion in 2014 to R\$ 34.5 billion in 2015, due to drop in the price of our commodities, with impact in the adjustment of the performance assumption and return of our activities. Cash generation measured by Adjusted EBITDA, was R\$ 23.7 billion in the fiscal year ending on December 31, 2015.

On December 31, 2014, Vale net operational revenue was R\$ 88.3 billion, and the operational margin (prior to the recoverable values of noncurrent assets and loss in the measuring of the sale of noncurrent assets) was 22.3%. The operational profit was R\$ 16.6 billion in 2014, an approximate 50% reduction compared to the operational profit in 2013, mainly due to a drop in ore prices. Continuous Company efforts to cut costs, investment discipline and focus on core business were seen this year. Vale had a 11.9% reduction in net operational costs (including SG&A, research and development, pre-operational and stoppage, as well as other costs), corresponding to R\$ 1,277 billion, relative to 2013. This drop was due mainly to the reduction of costs related to operation stoppage and optimization in the Company's cost structure, after adjustments made in 2013. Additionally, in 2014, Vale had a reduction of 49.7% in the impairment of assets, R\$ 5,390 billion in 2013 to R\$ 2,713 billion in 2014, due to return on the Onça Puma operation. Cash generation, measured in Adjusted EBITDA(1), was R\$ 31.1 billion in 2014.

In addition, in 2014, Vale had a 49.7% reduction in impairment of assets from R\$ 5,390 billion in 2013 to R\$ 2,713 billion in 2014, due to resuming operations at Onça Puma. Cash generation, measured by Adjusted EBITDA, was R\$ 31.1 billion in 2014.

In 2013, Vale net operational revenue was R\$ 101,490 billion and the operational margin (prior to the recoverable values of noncurrent assets and loss in the measuring of the sale of noncurrent assets) was 37.7%. The operational profit was R\$ 32,340 billion in 2013.

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In the fiscal year ending on December 31, 2015, operating loss measured by EBIT was R\$ 28.3 billion, compared to the EBIT operating profit of R\$ 17.6 billion in the same period in 2014. In 2015 operating loss was R\$ 25,4 billion while in 2014 and 2013, operating profit was R\$ 16.6 billion and R\$ 32.3 billion, respectively.

Table of Contents**Adjusted EBITDA**

in R\$ billion	Fiscal year ending on December 31		
	2013	2014	2015
Net operating revenue	101,490	88,275	85,499
Adjusted EBIT	38,238	19,724	9,101
Adjusted EBITDA	49,027	31,134	23,654
Net profit (loss) of the fiscal year	(0,258)	0,219	(45,997)
Shareholders' compensation (contoller)	9,319	9,739	5,026

**EBITDA**

in R\$ billion	Fiscal year ending on December 31		
	2013	2014	2015
Net profit (loss) of the period	(0,258)	0,219	(45,997)
Taxation on profit	15,249	2,600	(18,879)
Net financial income	18,442	14,753	36,538
EBIT (Earnings Before Income and Taxes)	33,433	17,572	(28,338)
Depreciation, amortization, and depletion	8,953	10,108	13,489
EBITDA (Earnings Before Income, Taxes, Depreciation, and Amortization)	42,386	27,680	(14,849)

Net operating revenue presented (i) a 3.1% decrease compared to fiscal years ending on December 31, 2015 and 2014 and (ii) a 13.0% decrease compared to fiscal years ending on December 31, 2014 and 2013, both due to the drop in the price of *commodities*.

Individually, the most important product in terms of revenue generation in fiscal years 2015, 2014, and 2013 was iron ore.

R\$ million	Fiscal year ending on December 31					
	2013	%	2014	%	2015	%
<b>Ferrous minerals</b>	75,668	74.6	60,395	68.4	55,413	64.8
Iron ore	60,653	59.8	45,341	51.4	41,427	48.5
Pellets	12,972	12.8	12,397	14.0	11,916	13.9
Manganese and ferroalloys	1,140	1.1	933	1.1	518	0.6
Others	903	0.9	1,724	2.0	1,552	1.8
<b>Coal</b>	2,188	2.1	1,740	2.0	1,739	2.0
<b>Base metals</b>	15,746	15.5	18,137	20.6	20,491	24.0
Nickel and others	12,566	12.4	14,703	16.7	15,534	18.2
Finished copper	3,180	3.1	3,434	3.9	4,957	5.8
<b>Fertilizers</b>	6,038	6.0	5,656	6.4	7,442	8.7
Potash	434	0.4	363	0.4	443	0.5
Phosphate	4,443	4.4	4,259	4.8	5,806	6.8
Nitrogen	990	1.0	820	0.9	999	1.2
Others	171	0.2	214	0.3	194	0.2
<b>Others</b>	1,850	1.8	2,347	2.6	414	0.5

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<b>Net Income</b>	101,490	100.0	88,275	100.00	85,499	100.0
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The sale of ferrous minerals - iron ore, pellets, manganese ore and ferroalloy represented 64.8% of total net operating revenues in the year ended on December 31, 2015, relative to 68.4% in the year ended on December 31, 2014. In 2013, the total net operational revenue of ferrous minerals was 74.6%.

In 2015, 2014, and 2013, the base metals participation in the total net revenue was 24.0%, 20.6%, and 15.5%, respectively.

In 2015, 2014, and 2013, fertilizer revenue was 8.7%, 6.4%, and 6.0%, respectively.

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In 2015, 2014, and 2013, the contribution by other products in net revenue represented 2.5%, 4.6%, and 3.9%, respectively.

In the fiscal year ending on December 31, 2015, sales to Asia represented 52.6% of total revenues, in line with 52.2% in 2014 and lower than 57.1% in 2013. Sales to the Americas amounted to 24.1%, lower than 25% in 2014 and higher than 19.7% in 2013. Revenues from Europe represented 18.2% in this period, 17.8% in 2014, and 18.6% in 2013, while the remainder contributed with 5.2% of the revenues for the fiscal year ending on December 31, 2015.

Considering sales per country, China was responsible for 36.0% of our revenue in the fiscal year ending on December 31, 2015, followed by Brazil with 15.3%, Japan with 7.6%, Germany with 5.6%, Canada with 4.3%, and the USA with 3.3%. In 2014, China was responsible for 33.7% of our revenues, followed by Brazil with 15.8%, Japan with 9.7%, Germany with 6.1%, South Korea with 4.1% and the United States and Canada with 3.7%. In 2013, China was responsible for 40.7% of our revenue, followed by Brazil with 13.1%, Japan with 8.7%, Germany with 7.0%, South Korea with 3.9%, and the United States with 2.8%.

R\$ million	Fiscal year ended on December 31					
	2013	%	2014	%	2015	%
<b>North America</b>	<b>5,065</b>	<b>5.0</b>	<b>6,486</b>	<b>7.4</b>	<b>6,500</b>	<b>7.6</b>
USA	2,823	2.8	3,210	3.7	2,803	3.3
Canada	2,242	2.2	3,276	3.7	3,697	4.3
<b>South America</b>	<b>14,960</b>	<b>14.7</b>	<b>15,561</b>	<b>17.6</b>	<b>14,073</b>	<b>16.5</b>
Brazil	13,295	13.1	13,946	15.8	13,081	15.3
Others	1,665	1.6	1,615	1.8	992	1.2
<b>Asia</b>	<b>57,929</b>	<b>57.1</b>	<b>46,076</b>	<b>52.2</b>	<b>44,976</b>	<b>52.6</b>
China	41,277	40.7	29,762	33.7	30,812	36.0
Japan	8,853	8.7	8,530	9.7	6,497	7.6
South Korea	3,897	3.9	3,639	4.1	2,633	3.1
Taiwan	2,103	2.1	1,697	1.9	2,064	2.4
Others	1,799	1.8	2,448	2.8	2,970	3.5
<b>Europe</b>	<b>18,816</b>	<b>18.6</b>	<b>15,732</b>	<b>17.8</b>	<b>15,535</b>	<b>18.2</b>
Germany	7,104	7.0	4,936	5.6	4,746	5.6
France	2,105	2.1	1,329	1.5	1,086	1.3
United Kingdom	2,156	2.1	1,665	1.9	1,285	1.5
Italy	2,263	2.2	345	0.4	1,531	1.8
Others	5,188	5.2	7,457	8.4	6,887	8.1
<b>Other countries</b>	<b>4,630</b>	<b>4.6</b>	<b>4,420</b>	<b>5.0</b>	<b>4,415</b>	<b>5.2</b>
<b>Net Revenues</b>	<b>101,490</b>	<b>100.0</b>	<b>88,275</b>	<b>100.0</b>	<b>85,499</b>	<b>100.0</b>

## ii. Factors that materially affected the operating results

### Demand and prices

The following table summarizes the average sale price of the main products for the periods indicated.

	Fiscal year ended on December 31,		
	2013	2014	2015
	\$/metric ton, unless otherwise indicated(5)		
Iron ore	231.30	178.89	148.94
Pellets	317.96	292.39	268.13
Manganese	340.74	283.23	191.54

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(5) Amounts converted using the average exchange rate in each period: R\$ 1.9546 in 2012, R\$ 2.1605 in 2013, and R\$ 2.354716 in 2014 and R\$ 3.3387 in 2015.

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	2013	Fiscal year ended on December 31,	
		2014	2015
	\$/metric ton, unless otherwise indicated(5)		
Ferroalloys	2,286.62	3,422.18	3,018.72
Coal			
Thermal coal	174.93	159.30	175.02
Metallurgical Coal	280.29	245.76	285.63
Nickel	32,038.31	38,679.67	39,012.71
Copper	14,847.03	14,164.84	14,566.75
Potash	1,864.07	837.78	1,061.87
Phosphates			
MAP	1,223.37	1,277.29	1,708.41
TSP	1,007.12	1,010.13	1,328.97
SSP	573.51	500.64	682.60
DCP	1,162.35	1,392.84	1,852.58
Nitrogen	1,113.87	1,423.21	1,850.00

The following table summarizes the average volume sold of main products for the periods indicated.

	2013	Fiscal year ended on December 31,	
		2014	2015
	(in thousand metric tons)		
Fine iron ore	251,029	255,877	276,393
Pellets	40,992	43,684	46,284
Manganese	2,116	1,879	1,764
Ferroalloys	183	151	69
Coal			
Thermal coal	726	1,152	892
Metallurgical Coal	7,353	6,330	5,614
Nickel	261	272	291
Copper	353	353	398
Potash	531	475	462
Phosphates			
MAP	1,133	1,040	1,081
TSP	681	749	744
SSP	1,969	2,091	1,847
DCP	461	493	459
Nitrogen	890	680	3,193

***Iron ore and pellets***

The demand for iron ore and pellets is a result of the global demand for carbon steel, which in turn is highly influenced by global industrial production. The pricing of iron ore and pellets is done according to several levels of quality and physical characteristics. Several factors affect the prices of different types of iron ore, such as the iron content in deposits, the size of particles, humidity and the type and concentration of contaminants (such as phosphorus, alumina and manganese) in the ore. Generally, the classification of ore into thin ore, lump ore and pellet feed determines price differences.





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Demand from China has been one of the main drivers of worldwide demand and prices.

Chinese imports of iron ore reached 953 million metric tons in 2015, 2% above the level of 933 million metric tons in 2014, which in turn was 15% above the level of 810 million metric tons in 2013. The higher ore import in 2015 was despite a 2.3% decrease in domestic steel production, reinforcing the hypothesis of mines closure in China.

Our iron ore prices are grounded in a variety of price option that are usually based on spot indices for the specification of prices charged to clients. Final prices may be based on spot rates for months prior to the shipping date or the shipping quarter, or according to the spot rate at delivery to customer.

Fine iron ore prices command premiums as a function of the content of iron. The lump ore and pellet prices contain premiums in relation to fine iron ore prices and are determined based on client negotiations. The average prices for iron ore in fiscal year ending on December 31, 2015 were 40.9% and 60.2% lower than the average prices in 2014 and 2013, respectively. The average price for pellets on December 31, 2015, was 35.3% and 46.5% lower compared to average prices in 2014 and 2013, respectively.

***Manganese and ferroalloys***

The prices of manganese ore and ferroalloys are mainly influenced by trends in the carbon steel market. The prices of ferroalloys are also influenced by the prices of its main inputs, such as manganese ore, energy and coke. Manganese ore sales are based on the spot market or calculated on a quarterly basis. Ferroalloys prices are determined on a quarterly basis.

***Coal***

The demand for metallurgical coal is driven by the demand for steel, especially in Asia. The demand for thermal coal is directly related to electricity consumption, which will continue to be driven by worldwide economic growth, especially in emerging economies. Since April 2010, the prices for metallurgical coal have been established on a quarterly basis for most volumes sold in the transoceanic market, while some players are selling it on a quarterly basis, and a minority continues to use annual pricing. The prices of thermal coal are set in spot negotiations and/or through annual contracts.

***Nickel***

Nickel is traded on the London Metal Exchange (LME), and it is mainly used to produce stainless steel. Most nickel products are priced using a discount or a premium to the LME price, depending on the technical and physical characteristics of the product. Nickel demand is heavily affected by production of stainless steel, which represented 66% of consumption in 2015 and 68% in 2014.

Vale has short-term fixed-volume contracts with customers for the majority of our expected annual nickel sales. These contracts, together with its sales of nickel products to be used for other purposes (high nickel alloys, steel alloys, forging, plating, batteries and special applications), provide stable demand for a significant portion of its annual production. In 2015, 52% of the refined nickel sales were destined to applications outside the stainless steel industry. This, when compared to the industry average of 34% among nickel producers, results in its sales volume being more stable. As a result of its focus on such higher-value segments, the average realized nickel prices have typically exceeded LME prices.

### *Copper*

Copper prices are determined on the basis of: (a) copper prices in final markets, such as the LME and the NYMEX; and (b) for intermediate products, such as copper concentrate (which represents the majority of the company's sales) and copper anode, treatment and refining rates

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are negotiated with each client. According to a pricing system known as MAMA (month after month of arrival), sale prices of copper concentrate and anode are provisionally set at the time of shipment, and the final prices are based on the LME at a future time, typically three months after shipment of product.

***Fertilizers***

The demand for fertilizers depends on the same market fundamentals as those for global demand for minerals, metals and energy. The rapid *per capita* growth of emerging economies causes changes in food, marked by an increase in the consumption of proteins, which contributes to higher demand for fertilizers. Demand is also driven by biofuels that are emerging as an alternative source of energy to reduce global dependency on greenhouse gases [sic], and essential raw materials for the production of biofuels – sugar cane, corn and palm – which are intensively used in fertilizers.

Fertilizers are sold in the market mainly on a cash basis using international reference prices, although certain large importers, such as China and India, often sign annual contracts. Seasonality is an important factor for determining price throughout the year, given that agricultural production in each region depends on the climactic conditions of the harvest.

***Exchange Rates***

The impact of exchange rate variations on Vale's operational results are described in item 10.2 (b) of this Reference Form.

**b. Variations in revenues attributable to changes in prices, exchange rates, inflation, changes in volumes and the introduction of new products and services**

***Exchange rate variations***

Most of the Company's revenues are expressed in US dollars, whereas most of our costs of goods sold are expressed in other currencies, mainly the Brazilian *real* (49% on December 31, 2015), the US dollar (34% on December 31, 2015), Canadian dollars (13% on December, 31, 2015), Indonesian rupees, Australian dollars, the euro, and others. As a result, changes in exchange rates affect the Company's operating margin.

Most of our long-term debt is expressed currencies other than the Brazilian real, mainly in American dollars (approximately 81% on December 31, 2015). Due to the fact that Vale's functional currency is the Brazilian *real*, changes in the value of the US dollar against the Brazilian *real* result in exchange gains or losses on our net liabilities, which, in turn, affect our financial results.

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On December 31, 2015 our debt expressed in *reais* was R\$ 20.508 billion. Since most of our revenue is in US dollars, Vale uses derivatives to convert our debt from Brazilian *reais* to US dollars. As a consequence of the depreciation of the Brazilian *real* against the US dollar in the fiscal year ending on December 31, 2015 and inflation, the net exchange rate and monetary variation caused a negative impact on net profits of R\$ 25.5 billion. The net result of the currency and interest rate swaps, structured mainly to convert the debt expressed in Brazilian *reais* into US dollars to protect our cash flow from currency price volatility, produced a negative accounting effect of R\$ 4.6 billion in the fiscal year ending on December 31, 2015, of which R\$ 1.0 billion generated a negative impact on the cash flow.

Regarding years 2013 and 2014, most part of the company revenue was in US dollars, while most part of the costs of assets sold was in other currencies, especially real (54% in 2013 and 54% in 2014, respectively), additional to US dollar (27% in 2013 and 30% in 2014, respectively), Canadian dollar (14% in 2013 and 13% in 2014 respectively), Indonesian Rupiah,

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Australian dollars, Euro, and others. Exchange rates, thus, affected the Company's operating margin.

Most of the long term debt in years 2013 and 2014 was in currencies other than real, especially US dollar (70% in 2013 and 70% in 2014). As Vale's functional currency is real, changes to the US dollar against the real, caused variations to net liabilities, resulting in exchange gains or losses in the financial income.

On December 31, 2013 and December 31, 2014, the debt in reais was R\$ 18,807 billion and R\$ 20.952, respectively. As most of the revenue was in US dollars, Vale used derivatives to translate the debt in real into US dollars. As consequence of real depreciation against the US dollar in 2013 and in 2014 (additional to inflation, this year), net exchange and monetary variation caused negative impact on net profit of R\$ 6,484 billion in 2013 and R\$ 5,445 billion in 2014.

The net result of the currency and interest rate swaps, structured mainly to convert the debt expressed in Brazilian *reais* into US dollars to protect our cash flow from currency price volatility, produced a negative accounting effect of R\$ 1,872 billion in 2013, where R\$ 362 million generated positive cash effect, and (ii) negative accounting effect of R\$ 1.8 billion in 2014, where R\$ 11 million generated negative cash effect.

***Variations in the inflation rates***

The company's revenues are not significantly affected by inflation rates, and main variations in operational income is attributable to price changes, volume changes and the introduction of new products and services

For more information on changes to its products' prices and services, as well as changes to the volumes sold, see item 10.2(a)(ii) of this Reference Form.

**c. Impact of inflation, price variations of main inputs and products, exchange rate and interest rates on operating results and the issuer's financial result, when relevant**

For comments on the inflationary impact, price variations in the main products and exchange rates, see item 10.2 (b) of this Reference Form.

**Interest Rate**

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Vale exposed to the risk of interest rates for loans and financings. Debt tied to interest rates in US\$ consists mainly of loans, including export prepayment operations, loans from commercial banks and multilateral organizations. In general, these debts are indexed to the LIBOR (London Interbank Offered Rate). The floating rate of its debt expressed in Brazilian *reais* includes debentures, loans obtained from the BNDES, fixed assets and financing for the purchase of services in the Brazilian market. The interest on these obligations is tied primarily to the CDI (Interbank Deposit Certificate), the reference interest rate on the Brazilian interbank market and the TJLP (long-term interest rate). We use swap operations to convert most part of this debt into fixed rates in US dollars. On December 31, 2015, before swap operations, 18% of the debt was in reais and the remaining 82% was in other currencies. On December 31, 2014, 22% of the debt was on reais and the remaining 78% was in other currencies. On December 31, 2013, 22% of the debt was in reais and the remaining 78% was in other currencies.

On December 31, 2015, around 42.4% of the debt was tied to the floating interest rate, compared to approximately 45.2% on December 31, 2014 and 45.3% on December 31, 2013.

Fuel and gas costs are an important component of our production cost and represented 6.3% of our total cost of products sold in the fiscal year ending on December 31, 2015; 7.33% in

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2014; and 7.4% in 2013. Decreases in the price of oil and gas impact positively all the Company businesses according to local prices used by each unit. Electricity costs were 2.8% the fiscal year ending on December 31, 2015; 2.4% in 2014, and 2.7% in 2013.

The non-current assets impairment registered in 2015 resulted in a loss of about R\$ 34,553 billion. This amount refers to the Company's assets recoverable value, based on the premise that includes the discounted cash flow and the commodities price.

Vale does not provide guidance regarding its future financial performance. Vale seeks to disclose as much information as possible about its views on the different markets where it operates, its strategic guidelines and implementation in order to give the capital markets a sound basis for their expectations regarding the Company's performance in the medium and long term.

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**10.3 Events with relevant effects, occurred and expected, in the financial statements**

**a. Introduction or disposal of operating segment**

In September 2013, the Company made public its intention to give away the control over its subsidiary VLI S.A. ( VLI ), responsible for operations in the General Load sector. Consequently, the General Load sector in 2013 was treated as under a phasing out process and assets and liabilities were reclassified as non-current assets/liabilities held for sale.

As part of the closure process, Vale signed share transfer agreements of (a) 20% of the VLI 's capital to Mitsui & Co. Ltd. ( Mitsui ) for the amount of R\$ 1.5 billion, (b) 15.9% to Accrued Severance Pay - FGTS (Portuguese acronym) ( FGTS ) in the amount of R\$ 1.2 billion, which equity is managed by Caixa Econômica Federal. This transaction was concluded on April 14, 2014. Revenue from the sale to FI-FGTS and R\$ 800 million of proceedings of the sale to Mitsui will be comprised by capital investment on VLI, who issued new shares to Mitsui and FI-FGTS. Amount invested in VLI will be used to fund part of the VLI 's investment plan. The remaining revenue of the 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 share in VLI, for R\$ 2 billion. This transaction was concluded on August 19, 2014, and now Vale holds 37.6% of the capital of VLI. Vale, Mitsui, FI-FGTS and Brookfield jointly control VLI, under a shareholders' agreement.

**b. Incorporation, acquisition or divestiture of stakeholder positions Main Acquisitions**

**2015**

There were no shareholding acquisitions in fiscal year 2015 that have caused or may cause relevant effects on the financial statements.

**2014**

There were no shareholding acquisitions in fiscal year 2014 that have caused or may cause relevant effects on the financial statements.

**2013**



*Share increase in the Belvedere coal project.*

On January 31, 2013, Vale Belvedere Pty Ltd. signed agreements to complete a purchase option exercised in June 2010 by means of which it purchased 24.5% additional share in the Belvedere da Aquila Resources Limited (Aquila) coal project. The purchase price of A\$ 150 million (equivalent to US\$ 156 million using the AUD/USD tax rate of 1.04) is equivalent to the market price, using as base date the date when the option is exercised (June 2010), as determined by an independent assessor hired by Vale and Aquila at the time. The outcome of this transaction is that Vale Belvedere Pty Ltd. increased its Belvedere share to 100%. Additionally, Vale Belvedere Pty Ltd. agrees to pay the amount of A\$ 20 million (equivalent to US\$ 21 million) to settle lawsuits and disputes associated with Belvedere and Aquila.

Overall, Vale paid US\$ 338 million for 100% of Belvedere. Belvedere is a future growth option.

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It is a project for an underground coal mine located in the southern Bowen Basin, near the city of Moura, in the state of Queensland, Australia. The project was approved by Vale's Administrative Council. According to preliminary estimates, Belvedere can potentially reach a production capacity of 7.0 million metric tons per year of mainly metallurgic coal.

*Increased share in the Capim Branco I and II hydroelectric power plants*

On March 12, 2013, Vale, together with Cemig Capim Branco Energia S.A., purchased for R\$ 223 million, exercising its preemptive right set forth in the consortium agreement of Consórcio Capim Branco, 12.47% interest held by Suzano Papel e Celulose S.A. and Suzano Holding S.A. in the Capim Branco I and II in Minas Gerais. Consequently, Vale now holds 60.89% interest in Capim Branco I and II, being able to generate 1,524 giga watts hour per year by the end of the concession in 2036. The purchase of the additional shares of Capim Branco I and II hydroelectric power plants adds value to the extent that there is immediate reduction in the cost of energy for our operations; and it is a low risk investment with a clearly higher return to Vale capital expenditure.

**Main investment disposals and asset sales**

In accordance with the strategy, the Company continues to reduce our stakes in non-core assets.

The following is a summary of the main disposals and sales of assets during the three-year period under discussion.

**2015**

**Sale of part of the gold stream produced as byproduct**

On March 2, 2015, Vale has entered into an agreement with Silver Wheaton for the sale of other 25% of the gold stream payable produced as byproduct in Salobo copper mine during the mine use life. In this transaction, Vale and Silver Wheaton have signed an amendment to the original agreement for gold purchase, dated February 2013, to include the purchase of this additional gold stream with 25% of payable gold.

Vale has received an initial payment in cash in the amount of US\$ 900 million and will receive future cash payments for each ounce (oz) of gold delivered to Silver Wheaton based on the smaller amount between US\$ 400 per ounce and market price. This amount will be updated annually at 1% starting in 2017.

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Vale may also receive an additional payment in cash, depending on its decision to expand the copper processing capacity at Salobo for additional 28 Mtpa before 2036. Salobo I and Salobo II, that are in ramp-up process, will have total processing capacity of 24 Mtpa run-of-mine (ROM). This additional amount may vary between US\$ 88 million and US\$ 720 million, depending on the time and size of the expansion.

### **Restructuring power generation assets**

On February 27, 2015, Vale has concluded the transaction that began in 2013 with Cemig GT to create the *joint venture* Aliança Geração de Energia S.A., and on March 31, 2015, Vale concluded the transaction with CEMIG GT for the sale of 49% of Vale's share in Norte Energia. As these transactions are related to the agreement with Cemig GT announced in December 2013, see item "Sale of power generation assets" below related to fiscal year 2013, for additional information.

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**Sale of Share at MBR**

On July 29, 2015, Vale has executed the Purchase and Sale Agreement of Shares and other issues, with the Fundo de Investimento em Participações Multisetorial Plus II ( FIP Plus II ), which shares are held on this date by Banco Bradesco BBI S.A. ( BBI ), under which it promised to sell the class A preferred shares representing 36.4% of the capital stock of Minerações Brasileiras Reunidas S.A. MBR ( MBR ), for R\$ 4 billion, subject to suspension conditions usually applicable, including prior approval of the operation by CADE. On September 1, 2015, the sale was concluded for the agreed price, which was transferred in one single payment on that date, and Vale now holds directly and indirectly 61.9% of the capital stock and 98.3% of the common capital of MBR. Vale also holds a purchase option of shares issued by MBR currently held by BBI, successor of FIP Plus II.

**Sale of maritime transportation assets and cooperation agreement**

On December 8, 2015, Vale and a consortium led by ICBC Financial Leasing, a wholly-owned subsidiary controlled by Industrial and Commercial Bank of China, concluded a purchase and sale transaction of four VLOCs with 400,000 tons. The transaction totaled US\$ 423 million.

**2014**

**Sale of share in Vale Moçambique and the Logistic Corridor of Nacala**

On December 9, 2014, Vale announced the execution of an investment agreement with Mitsui, under which Mitsui will hold 15% of Vale's 95% share in Vale Moçambique ( VM ) (concessionaire of the Moatize mine) and 50% of Vale's share in the Logistic Corridor of Nacala ( CLN ).

The transaction is comprised by the capital increase and partial assignment of the debt held by VM and CLN with Vale, and Vale now indirectly holds 81% of the Moatize mine and approximately 35% of the Nacala Logistics Corridor, under joint control with Mitsui.

The amount attributed to Mitsui's 15% share in VM is US\$ 450 million. Moreover, Mitsui may pay US\$ 30 million more related to an *earn out* clause. On the other hand, *claw-back* clause of up to US\$ 120 million is included in these US\$ 450 million. The earn outs amounts as well as the claw-back amounts are conditioned to mass recovery goals of the refining plant and production goals agreed upon between Vale and Matsui. As result of these clauses, the final amount attributed to the 15% share in VM may vary between US\$ 330 million and US\$ 480 million. Additionally, Mitsui will be responsible for funding, *pro-rata* to its 15% share, its portion in the investment needed to complete the expansion of the Moatize mine, which amount is estimated at US\$ 188 million.

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Upon concluding the transaction, Mitsui will contribute with US\$ 313 million to fund the CLN and, therefore, will hold 50% of some financial instruments, having joint control with Vale over the CLN. Until conclusion of this transaction and delivery by Mitsui, Vale will continue to fund the CLN with loans by Vale itself.

The conclusion of this transaction is subject to some precedent conditions and is expected to occur in 2016.

The transaction supports Vale's strategy to operate world-class assets, improves its balance sheet and reduces its need of future investment, while minimizing the exposure to project risk.

### **Sale of shares in Vale Florestar**

On June 4, 2014, Vale announced the execution with a subsidiary of Suzano Papel e Celulose S.A. ( Suzano Subsidiary ), company that produces eucalyptus cellulose, an agreement to sell its entire share in Vale Florestar Fundo de Investimento em Participações ( FIP Vale Florestar ),

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in the amount of R\$ 205 million. The usual precedent conditions and approvals, including by Conselho Administrativo de Defesa Econômica CADE were complied with and, thus, the transaction was effective 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 the FIP Florestar.

**Sale of maritime transport assets and cooperation agreement**

In September 2014, Vale Internacional and China Ocean Shipping Company ( Cosco ) entered into a strategic cooperation agreement for maritime iron ore transportation. Under this agreement, four 400 thousand tons VLOCs (Very Large Ore Carriers), currently owned and operated by Vale Internacional, would be sold to Cosco. The sale was concluded on May 19, 2015, and the transaction summed US\$ 445 million.

In September 2014, Vale Internacional and China Merchants Group entered into an agreement that covers a strategic cooperation between both maritime iron ore transportation companies. Under this agreement, the companies agreed upon a long term freight agreement to carry iron ore from Brazil to China, using VLOCs to be built and operated by China Merchants Group ( Cooperation Agreement ).

On May 19, 2015, Vale International and China Merchants Energy Shipping Co., Ltd. ( CMES ), subsidiary of China Merchants Group, entered into an amendment to the Cooperation Agreement, under which Vale would sell 4 VLOCs, with 400 thousand tons, to CMES, which are currently owned and operated by Vale for CMES. This sale was concluded on July 30, 2015, and the transaction totaled US\$ 448 million.

**2013**

**Sales of part of the gold flow produced as a by product**

On February 28, 2013, Vale Switzerland, after approval by the Administrative Council, finalized 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 2017 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's strategic plan reinforces the Company's confidence in the high potential of its world-class basic metals and the belief that they will generate significant value to shareholders across the cycles.

**Sale of shareholding position in VLI**

For information on this operation, see item 10.3 (a) above.

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**Norsk Hydro total share sale**

On November 14, 2013, Vale announced that it would sell all of its 22% Norsk Hydro ASA (Hydro) shares, held by its subsidiary Vale Austria Holding GmbH (currently named Vale International Holdings GmbH) (Vale Austria), for the price of NOK 25.00 per share, resulting in the amount of NOK 11.196 billion, equivalent to US\$ 1.822 billion (equivalent to R\$ 4.243 billion). Vale Austria held these shares since 2011, when it restructured its aluminum assets portfolio. After this transaction is concluded, Vale Austria will no longer hold Hydro shares.

Under the same operation, on November 9, 2014, Vale Áustria sold to Norsk Hydro ASA (Hydro) shares issued by Mineração Paragominas S.A. representing 20% of the total capital, resulting from the exercise of a *put option*. The remaining 20% of shares held by Vale Áustria in the capital stock of Mineração Paragominas S.A. is also subject to a *put option* of Vale, which may be exercised starting on February 28, 2016.

**Tres Valles share sales**

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

Tres Valles is a company that produces cathode copper in the Coquimbo region in Chile. The transaction included Vale total share of 90% in Tres Valles equity and also certain mining right held by Vale in the Coquimbo region. Tres Valles has underground and opencast mines and it has the production capacity of 18,500 metric tons of cathode copper.

**Energy production assets sale**

On December 19, 2013, Vale signed agreements with CEMIG Geração e Transmissão S.A. ( CEMIG GT ) for the sale of 49% of its shares of 9% of Norte Energia S.A. ( Norte Energia ) s equity, a company in charge of the construction, operation, and exploration of the Belo Monte hydroelectric power plant (Belo Monte), for R\$ 310 million, and for the creation of a joint venture of energy generation assets.

For this goal, two distinct vehicles were created to host energy generation projects and assets. In the first, Aliança Norte Energia Participações S.A., ( Aliança Norte ), comprised by Vale and CEMIG GT, respectively with 51% and 49% of the total capital. The incorporation of this company was done in two steps: initially, Vale transferred its 9% share in Norte Energia to its subsidiary Aliança Norte and, after that, CEMIG GT acquired 49% of the shares of this company for approximately R\$ 310 million. This transaction was concluded on March 31, 2015, and Vale reduced its share in Norte Energia to 4.59%, although remaining entitled to acquire 9% of the power produced by the plant, under the terms in the power purchase long-term agreement executed in 2012.



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The second vehicle, Aliança Geração de Energia S.A. ( Aliança Geração de Energia ), formed by Vale and CEMIG GT, respectively with 55% and 45% of the total equity, by means of contribution of its share in the following energy generation assets: Porto Estrela, Igarapava, Funil, Capim Branco I and II, Aimorés and Cadonga. These power plants hold 1.158 MW of attributed installed capacity and an average of 652 MW of secured energy. Electric energy supply to Vale operations will be secured by long-term contracts with Aliança Geração de Energia S.A., in order to maintain the same amount of energy currently supplied to our operations.

The transaction related to Aliança Geração de Energia was concluded on February 27, 2015, and such conclusion had no impact on financial disbursements or financial investment and was executed by delivering the above-mentioned assets.

Table of Contents**Purified phosphoric acid sales**

On December 20, 2013, Vale signed a contract with Israel Chemicals Ltd. (ICL) for the sale of all of its shares, corresponding to 44.25%, of Fosbrasil's equity, a company that produces purified phosphoric acid, located in Cajati, in the state of São Paulo, for US\$ 52 million. On December 18, 2014, upon compliance with preconditions, including approval by the Conselho Administrativo de Defesa Econômica (CADE), this transaction was concluded by Vale that no longer holds any shares in Fosbrasil.

**Log-in share sale**

On December 26, 2013, Vale, according to the rules in CVM's Instruction No. 168, from December 23, 1991, as edited, held an auction to dispose of 28,737,367 of common shares it owned from Log-in Logística Intermodal S.A. (Log-in), a company listed in the BM&FBOVESPA (ticker symbol: LOGN3), corresponding to all of the ordinary shares issued by Log-in and held by Vale, for the price of R\$ 8.11 per share, totaling R\$ 233 million. The completion of this transaction took place on January 2, 2014.

**c. Unusual events or operations**

2015

**Impairment of assets**

According to the accounting policy described in note 31(l) in the 2015 Financial Statement of the Company, the Company identified evidence of impairment in some intangible and fixed investments. *Impairment* adjustments and reversions are presented below:

Segments by asset class	Assets or cash generating units	Impairment	Impairment (reversion)		
			2015	2014	2013
<b>Fixed asset</b>					
Iron ore	Center-Western System		2,023		
Iron ore	Simandou Project			2,794	
Iron ore	Others		133		
Pellets	North System (stopped operations)		213		
Pellets	Pelleting assets				427
Pellets	Others		12		
Other products and ferrous services	Others		80		
Coal	Mozambique	6,751	9,302		
Coal	Australia	286	2,146	787	
Nickel	Newfoundland (VNL)	9,188	13,394		

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Nickel	New Caledonia (VNC)	14,545	5,660	628	
Nickel	Onça Puma	9,102	(976)	(4,295)	
Nickel	Others		102		
Copper	Others		138		
Potash	Potash Rio Colorado	78	2,123		4.963
Phosphate	Phosphate	15,002	(1,515)	1,576	
Other	Others		22		
			<b>32,857</b>	<b>1,490</b>	<b>5,390</b>
<b>Intangible asset</b>					
Coal	Australia		314		
Phosphate	Phosphate			1,223	
<b>Impairment of noncurrent assets</b>			<b>33,171</b>	<b>2,713</b>	<b>5,390</b>
<b>Agreements</b>					
Iron ore	Center-Western System		1,382		
<b>Impairment of noncurrent assets and agreements</b>			<b>34,553</b>	<b>2,713</b>	<b>5,390</b>
<b>Investments on affiliates and joint ventures</b>					
Pellets	Samarco Mineração S.A.		510		
Copper	Teal Minerals Inc.		1,217		
Others	Vale Soluções em Energia S.A.			71	
<b>Impairment of investments on affiliates and joint ventures</b>			<b>1,727</b>	<b>71</b>	

Table of Contents**2014****Impairment of assets**

The Company identified evidences of *impairment* in some investments, intangible and fixed assets. Main impairment adjustments are presented below:

Assets	Cash Generating Unit	Net Accounting Value	Recoverable Value	Impairment Adjustment
<b>Fixed Assets</b>				
Coal	Australia assets (i)	1,228	441	787
Fertilizers	Assets in Brazil	10,769	9,193	1,576
Nickel	Operations at			
Nickel	Onça Puma	2,245	6,540	(4,295)
	Operations in New Caledonia	15,071	14,443	628
Iron ore	VBG	2,794		2,794
		<b>32,107</b>	<b>30,617</b>	<b>1,490</b>
<b>Intangible</b>				
Fertilizers	Assets in Brazil	1,223		1,223
		<b>1,224</b>		<b>1,224</b>
		<b>33,330</b>	<b>30,617</b>	<b>2,713</b>
<b>Investment</b>				
Energy	Vale Soluções em Energia S.A.	71		71
		<b>71</b>		<b>71</b>

**2013****Impairment of assets**

The Company identified evidences of *impairment* in some investments, intangible and fixed assets. Main impairment adjustments are presented below:

Assets	Cash Generating Unit	Net Accounting Value	Recoverable Value	Impairment Adjustment
Fertilizantes	PRC	6,489	1,526	4,963
Pelotas	Pellets Assets	527	100	427

7,016

1,626

5,390

## REFIS

On November 2013, Vale decided to join the Tax Recovery Program – REFIS for the payment of amounts relative to taxation on the profit from its subsidiaries and affiliated companies abroad from 2003 to 2012. By joining the REFIS, Vale generated a substantial reduction in the amounts under dispute and is in consonance with the Company’s goals to eliminate uncertainties to focus on its business, in order to keep potential benefits from legal appeals under the tax regime for its foreign subsidiaries.

Among the options offered by REFIS legislation, Vale chose to make early payment of debts relative to 2003, 2004, and 2006, and to pay principal tranches, fines and interest for the remaining years of 2005, and 2007 through 2012.

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The payments' face value resulting from Vale's decision reached the amount of R\$ 22.2 billion. Considering early payments and payment of the first tranche, in 2013 R\$ 6.0 billion were paid; in 2014, R\$ 1.2 billion were paid; and in 2015, R\$ 1.3 billion were paid. The remaining amount in 2015, that is, R\$ 17.3 billion, will be paid in 154 monthly tranches. For further details, see Explanatory Note No. 19 of the accounting statements relative to the fiscal year ended on December 31, 2013.

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**10.4 Significant changes in Accounting Practices - Corrections and Remarks in auditor's opinion.**

**a. Significant changes in accounting practices**

**2015**

There were no significant changes in the accounting practices in the fiscal year that ended on December 31, 2015.

**2014**

In 2014 there was no significant change in any pronouncement. All pronouncements issued in 2014 aim adoption of new accounting guidelines starting in 2016, and among which IFRS 15 - *Revenue from Contracts with Customers* is the most significant one. IFRS 15 covers recognition of revenue from contracts with clients (except contracts within the scope of leasing agreements, insurance agreements, and financial instruments), and replaces the current pronouncements IAS 18 - *Revenue*, IAS 11 - *Construction contracts*, being adopted when effective, provided that there is deployment in Brazil CPC and approval by CVM and CFC.

**(I) Pronouncements, interpretations, or updates issued by the IASB to be adopted after December 31, 2014**

- *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*
- *Equity Method in Separate Financial Statements*
- *Accounting for Acquisitions of Interests in Joint Operations*
- *Clarification of Acceptable Methods of Depreciation and Amortization*
- *IFRS 15 Revenue from Contracts with Customers.*

**(II) Pronouncements, interpretation, guidelines and revision approved by the CVM to be adopted after December 31, 2014**

- CVM Deliberation 733, dated December 23, 2014 Approves the Technical Pronouncements Revision Document no. 07 related to Pronouncements CPC 18, CPC 35 and CPC 37 issued by the Accounting Pronouncements

Committee

**(III) Pronouncements, interpretations and guidelines issued and/or updated by CPC, adopted during year 2014**

- ICPC 09 (R2) Individual Financial Statements, Separate Statements, Consolidated Statements and Application of the Equity Method
- ICPC 19 - Taxes
- ICPC 20 Defined Limit of Benefit Asset, Minimum Funding Requirements and Interaction
- OCPC 07 Evidence in the Disclosure of Financial-Accounting Reports for General Purpose
- OCPC 8 - TECHNICAL GUIDELINES OCPC 08

**2013**

Starting on January 1st, 2013, Vale adopted the revised pronouncement IAS 19 - Benefits to employees. The Company applied the pronouncement retroactively according to the transition provided in the pronouncement, which (i) eliminated the "hallway" method, (ii) rationalized the changes between assets and liabilities in the plans, acknowledging in the results of the fiscal year the cost of services, interest rate expenses on obligations, interest rate of revenues on the plan's assets, and (iii) acknowledged in the comprehensive results new measurements of actuarial gains and losses, return of plan's assets (net revenue of interest rates on assets) and



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changes in the ceiling effect of onerous assets and liabilities.

For further details, see explanatory note no. 6 of the accounting statements relative to the fiscal year ended on December 31, 2013.

**(I) Pronouncements, interpretations issued by the IASB or updates to subsequently adopt the December 31, 2013**

- *Annual Improvements to IFRSs: 2010-2012 Cycle*
- *Defined Benefit Plans: Employee Contributions*
- *Hedge Accounting and amendments to IFRS 9, IFRS 7 and IAS 39*
- *Novation of Derivatives and Continuation of Hedge Accounting*
- *IFRIC 21 Levies*
- *Recoverable Amount Disclosures for Non-Financial Assets*

All of the above pronouncements, interpretations, and updates have correlated CPCs that were issued and approved, or that are in the process of being issued and approved by the CVM, with the same adoption dates.

**(II) Pronouncements, interpretation, guidelines and revision approved by the CVM to be adopted after December 31, 2012**

There are new pronouncements, interpretations and changes to the IFRS adopted in 2013, as follows. The retrospective impact of the new rules is limited to effects on the revision of CPC 33 (R1) Benefits to employees. For further details, see explanatory note no. 6 of the accounting statements relative to the fiscal year ended on December 31, 2013.

**b. Significant effects of changes in accounting practices**

There were no significant changes in the accounting practices adopted by the Company between fiscal years that ended on December 31, 2013, 2014, and 2015.

**c. Corrections and remarks in the auditor's opinion**

There were no corrections on the opinions drafted by our independent auditors relating to the financial statements for 2013, 2014, and 2015.

There are no paragraphs to emphasize in the financial statements for fiscal years ending on December 31, 2014 and 2015.

As result of a difference between practices adopted in Brazil and those defined through the International Financial Reporting Standards (IFRS), the opinion by independent auditors on the accounting statements ending on December 31, 2013 present the emphasis paragraph as follows:

As described in Note 2, individual financial statements were prepared in accordance with accounting practices adopted in Brazil. In the case of Vale S.A., these practices differ from IFRS, applicable to separate accounting statements, only related to the evaluation of investments in subsidiaries, affiliates, and joint ventures, by the equity method, as in accordance to IFRS, the fair value method should be adopted.

As discussed on Note 6 of the 2013 accounting statements, the Company changed how it pays employee benefits in 2013. Our opinion is not an exception in regards to this topic.

In 2014, KPMG Auditores Independentes assumed as responsible for the independent audit of Company Financial Statements, and issued the report of the financial statements for 2014. Amounts corresponding to the year ended on December 31, 2013, presented for purposes of

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comparison were previously audited by PricewaterhouseCoopers Auditores Independentes, who issued the report dated February 26, 2014, that present no changes.

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**10.5 Critical Accounting Policies**

Preparation of financial statements requires the use of certain critical accounting estimates and also the exercise of judgment by the Company's Management in the process of applying the Group's accounting policies.

These estimates are based on the best information available in each fiscal year. Changes in facts and circumstances may lead to revision of estimates, therefore the actual future results may differ from estimates.

Significant estimates and assumptions used by the Company's Management in preparing these financial statements are thus presented:

**a) Mineral reserves and useful life of the mines**

The estimates of proven and probable reserves are regularly evaluated and updated. These reserves are determined using generally accepted geological estimates. The calculation of reserves requires that the Company assume positions of future conditions that are uncertain, including future ore prices, exchange and inflation rates, mining technology, availability of permits and production costs. Changes in some of these assumptions could have a significant impact on proven reserves and probable reserves recorded.

The estimated volume of mineral reserves is based on calculation of the portion of the mines that is depleted, and the estimated useful life of the mine is a major factor in quantifying the provision of environmental rehabilitation of mines during the write-down of fixed assets. Any change in the estimates of the volume of mine reserves and the useful life of the assets linked to them may have a significant impact on charges for depreciation, depletion and amortization, which are recognized in the financial statements as cost of goods sold. Changes in the estimated useful life of the mines could cause a significant impact on estimates of the provision for environmental costs of recovery after write-down of fixed assets and impairment analysis.

**b) *Disposal of Assets***

The Company recognizes an obligation according to the fair value for disposal of assets during the period in which they occur, pursuant to the Accounting Statement's Explanatory Note 3(b). The Company believes the accounting estimates related to recovery of degraded areas and closure costs of a mine are a critical accounting policy because they involve significant values for the provision and it is expected to involve several assumptions, such as interest rates, inflation, the useful life of the asset considering the current stage of depletion and the projected dates of depletion of each mine. These estimates are reviewed each year.

**c) *Taxation on profit***

The Company recognizes the effect of the deferred tax from the tax loss and/or temporary differences in its consolidated financial statements and the financial statements of the controlling company.

Determination of the provision for income taxes or deferred income tax, assets and liabilities, and any provision for losses on tax credits requires estimates from Management. For each future tax credit, the Company assesses the likelihood of part or the entire asset not being recovered. The provision for devaluation depends on the assessment by the Company, the probability of generating taxable income in the future, on production and sales planning, commodity prices, operating costs, restructuring plans, the costs of recovering degraded areas, and planned capital costs.

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**d) Provision for legal suits**

Provisions for legal suits are only recorded when the possibility of loss is considered to be probable by the legal director and their legal advisers.

Legal suit provisions are recorded when the value of losses can be reasonably estimated. By their nature, legal suits will be resolved when one or more future events occur or fail to occur. The occurrence of such events does not typically depend on the Company's activities, which makes it difficult to give precise estimates about the date on which such events are recorded. Assessing such liabilities, particularly in the uncertain legal environment in Brazil, and well as in other jurisdictions, involves exercising significant estimates and judgments from management regarding the results of future events.

**e) Employee Retirement Benefits**

The amounts reported in this section depend on a number of factors that are determined based on actuarial calculations that use several assumptions to determine costs and liabilities, among other things. One of the assumptions used in determining the amounts to be recorded in the financial statements is the discount and corrective interest rate. Any changes in these assumptions will affect the accounting records.

At the end of each year, the Company, together with external actuaries, reviews which assumptions should be used for the following year. These assumptions are used to update and discount the fair value of assets and liabilities, costs and expenses, and to determine future values of estimated cash outflows that are necessary to pay pension plan obligations.

**f) Reduction in Recoverable Value of Assets**

Every year the Company tests the recoverability of its tangible and intangible assets separated by cash-generation unity, usually employing discounted cash flow criteria, which depends on several estimates that are influenced by market conditions prevailing at the time that such recoverability is tested.

**g) Fair Value of Derivatives and Other Financial Instruments**

The fair value of financial instruments not traded in an active market is determined by using valuation techniques. The Company uses its judgment to choose the various methods and to define assumptions, which are mainly based on market conditions existing at balance sheet date

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The analysis of the impact if actual results vary from Management's estimates is presented in 2015 accounting statement's explanatory note 24 on the topic of Sensitivity Analysis.

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**10.6 Significant items Not Included in the Financial Statements**

**a. Assets and liabilities held by the Company, directly or indirectly, that do not appear on its balance sheet (*off-balance sheet items*)**

**i. Operational leases, assets and liabilities**

**Pelleting operations**

Vale maintains an operational lease with its entities under common control, Companhia Coreano-Brasileira de Pelotização, Companhia Hispano-Brasileira de Pelotização, Companhia Ítalo-Brasileira de Pelotização, and Companhia Nipo-Brasileira de Pelotização, under which Vale leases its pelleting plants. These operational leases are in effect for 3 and 10 years, and are renewable.

Future minimum payment obligations for operational leases and procurement are as follows, on December 31, 2015:

<b>in R\$ million</b>	
2016	187
2017	196
2018	206
2019	177
2020 forward	186
All minimum payments required	952

**ii. offset portfolio of receivables where the entity maintains risks and responsibilities, including respective liabilities**

There is no offset portfolio of receivables where Vale maintains risks and responsibilities, that are not included in the Company balance sheet.

**iii. Agreement for future sale and purchase of products or services**

There are no agreements for future sale and purchase of products or services that are not included in the Company balance sheet.



**iv. Unfinished construction agreements**

There are no unfinished construction agreements that are not included in the Company balance sheet.

**v. agreements for futures from financing**

**(I) Base Metal**

*Nickel Operations Project New Caledonia*

Regarding the construction and installment of our nickel processing plant in New Caledonia, the subsidiary Vale Canada Limited ( Vale Canada ) offered guarantees for the financing agreements, structured under the terms of the French tax law to BNP Paribas (agent acting on behalf of the tax benefit of certain investors). The guarantees refer to payments related to financing due by the subsidiary Vale Nouvelle-Calédonie SAS ( VNC ) to an entity controlled by

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French investors on some assets of the operation. Consistent with the commitments assumed by VNC on the financing, the assets were substantially concluded on December 31, 2012. Vale Canada has also agreed that the assets will be operated for five years. Vale Canada believes that the probability of the guarantees being claimed is remote.

**(II) Participating Debentures**

Due to the 1997 privatization, the Company issued debentures for existing shareholder, including the Brazilian Government. The terms of the debentures were established to make sure that the pre-privatization shareholders had a share in potential future benefits, which were to be obtained by means of the exploration of certain mineral resources.

A total 388,559,056 debentures were issued in the nominal amount of R\$ 0.01 (one cent of a real), whose value will be adjusted based on the Market Price General Index ( IGP-M ), as defined in the Debenture Deed. On December 31, 2015, December 31, 2014, and December 31, 2013, the debentures fair value was R\$ 1,336 billion, R\$ 4,584 billion, and R\$ 4,159 billion, respectively

The owners of these debentures have the right to receive premiums payable every six months, equivalent to a percentage of the net revenues from certain mineral resources, as per the Debenture Deed. In 2015 and 2014, the Company paid to debenture holders compensation in the total amount of R\$ 207 million and R\$ 285 million, respectively.

**(III) Guarantee granted to affiliates**

On December 31, 2015, the total of guarantees granted by Vale (limited to its indirect or direct share) for Norte Energia S.A. and Companhia Siderúrgica do Pecém S.A. summed R\$ 1.1 billion and R\$ 4.6 billion, respectively. With the conclusion of the operation of power generation assets (explanation note 5 in the Financial Statement), the guarantee of Norte Energia S.A. was shared with Cemig GT.

**b. other items not evident in the financial statements**

**(II). Concessions and Sub-Concession Agreements**

*Railway transportation companies*

The Company entered into concession contracts with the Federal Government, through the Ministry of Transport, for exploration and development of public railway transport of cargo and passengers, under supervision of the National Agency of Ground Transportation (ANTT).

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The accounting records of concessions are classified as intangible assets.

Termination of the concession for the railways Vitória-Minas and Carajás are June 2027. The contractual bases and expiration dates of the railway transport did not change during the period.

The concession will be terminated in case of end of the contractual period, expropriation, forfeiture, termination of period, cancellation, bankruptcy or closure of the Concessionary.

### Port Terminals

Vale owns specialized port terminals, as follows:

Terminal de Tubarão	Vale S.A.	Vitória - ES	2039
Terminal de Praia Mole	Vale S.A.	Vitória - ES	2039
Terminal Marítimo de Ponta da	Vale S.A.	São Luis - MA	2039

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Madeira			
Terminal da Ilha Guaíba	Vale S.A.	Mangaratiba RJ	2039
Terminal de Exportação de Minério	CPBS - Companhia Portuária Baía de Sepetiba MCR - Mineração	Itaguaí/RJ	2021
Terminal de Gregório Curvo	Corumbaense Reunida S.A.	Corumbá/MS	2039

Except for Terminal de Exportação de Minério granted to CPBS - Companhia Portuária Baía de Sepetiba, the Adherence Agreements applicable to other port terminals were adapted to the new port law, Law 12.815/2013, and new Agreements were executed in September 2014, for 25 years, renewable for equal periods.

There are no other items not shown in Vale's financial statements other than those previously reported.

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**10.7 - Comments on items not shown in the Financial Statements**

**(a) how these items alter or may alter revenue, expenses, operating income, financial expenses or other items in the issuer financial statements**

Vale's Directors do not expect relevant effects on the operations described in item 10.8 of this Reference Form and not recorded in the financial statements that would change the revenues, expenses, operating result, financial expenses or other items in Vale's financial information.

**(b) nature and purpose of the operation**

For a description of the nature and purpose of each operation, see item 10.8 in this Reference Form.

**(c) nature and amount of obligations and rights in favor of the issuer arising out of the operation**

For a description of the amount of the obligations assumed and rights generated on behalf of Vale as a result of operations not shown in our financial statements, please refer to item 10.6 of this Reference Form.

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**10.10 Company Business Plan**

**a. Investments, including: (i) quantitative and qualitative description of ongoing and planned investments; (ii) sources of investment financing; and (iii) relevant ongoing and planned divestments.**

**b. Already-disclosed acquisition of plant, equipment, patents or other assets that should materially affect Vale's production capacity**

**c. New products and services, including: (i) description of ongoing research already published; (ii) the total amounts spent by the issuer on research to develop new products or services; (iii) ongoing projects already announced; and (iv) the total amounts spent by the issuer to develop new products or services**

*NOTE: To convert the amounts of investments made, the average exchange rates in the periods were used for conversion.*

In 2015, Vale investments (execution of projects and maintenance of operations) totaled R\$ 28,047 billion. The investment for project execution was R\$ 18,524 billion while for maintenance of existing operations was R\$ 9,524 billion. Investments on corporate social responsibility totaled R\$ 2,673 million, comprised by R\$ 1,764 million in environmental protection and R\$ 909 million in social projects.

In 2014, Vale investments (projects execution and operation maintenance) were R\$ 28.207 billion. A total of R\$ 18.649 billion were invested on project executions and R\$ 9.558 billion on the maintenance of existing operations. Investments on corporate social responsibility summed R\$ 2.693 billion, where R\$ 2.050 billion are destined to environmental protection, and R\$ 0.643 billion to social projects. Investments on acquisitions totaled R\$ 162 million in 2014.

Starting in 2013, expenses with Research and Development (R&D) were not included in the investments amount, which, in turn, include project execution and maintenance of existing operations, and are based in disbursements.

In 2013, Vale's investments (project execution and maintenance of existing operations) cost R\$ 30.750 billion. R\$ 20.845 billion were invested in project execution and R\$ 9.906 billion in the maintenance of existing operations. Investments in corporate social responsibility reached R\$ 2.776 billion, R\$ 2.194 billion of which were dedicated to environmental protection and R\$ 572 million to social projects.

Acquisition investments summed up to R\$ 579 million in 2013. The main acquisitions are discussed in item 10.3 of this Reference Form.

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In 2015, Vale started operation in three projects: Conceição Itabiritos II, Cauê Itabiritos and Nacala Port.

In 2014, Vale started operations in eight projects: the 5th line in Brucutu, Tubarão VIII, Teluk Rubiah, Salobo II, Serra Leste, Vargem Grande, Long Harbour, and Nacala.

In 2013, Vale started operations in five projects: (i) Conceição Itabiritos, an iron ore processing plant in Minas Gerais; (ii) Planta 2, a dry processing plant previously known as *Adicional* 40 Mtpa, in Pará; (iii) CLN 150, a logistic corridor in Brazil's Northern System (including Pier IV with its first cradle in Ponta Madeira), (iv) Long Harbour, a nickel and copper hydrometallurgical refinery in Canada, and (v) Totten, nickel and copper mine in Canada.

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In 2012, Vale started operations in two projects (a) Salobo I, a copper and gold operation in Pará, and (b) Lubambe, a copper operation located in Africa's copper belt, in Zambia.

**2016 Capital Budget**

In December 2015, the Board of Directors approved the budget for investments in 2016, totaling US\$ 6,167 billion (equivalent to R\$ 23,434 billion) including disbursements of US\$ 3,172 billion (equivalent to R\$ 12,053 billion) for projects and US\$ 2,995 billion (equivalent to R\$ 11,381 billion) dedicated to maintenance of existing operations and replacement projects.

In February 2016, the Board of Directors approved a contingency plan for 2016 in order to reduce, among others, investments to US\$ 5,561 billion (equivalent to R\$ 21,132 billion), comprised by US\$ 3,130 billion (equivalent to R\$ 11,894 billion) for project execution and US\$ 2,431 billion (equivalent to R\$ 9,238 billion) to support existing operations and replacement projects.

Our main iron ore growth initiatives respond for 72% of the US\$ 3,172 billion budget for project development in 2015. These programs include: (i) expansion of our integrated iron ore operations in Carajás (US\$ 2,293 billion) through S11D and CLN S11D projects.

The following table shows the estimated allocation of investments for the maintenance of existing operations:

**INVESTMENTS TO MAINTAIN OPERATIONS 2016 ALLOCATION BY BUSINESS AREA**

US\$ million	Operations	Piles and Rejection Barriers	Health and Safety	Corporate Social Responsibility	Administrative and Others	Total
<b>Ferrous materials</b>	677	137	179	41	75	1,110
<b>Base metals</b>	747	36	112	404	13	1,313
<b>Coal</b>	106	3	9	13	7	138
<b>Fertilizers</b>	154	18	16	38	15	241
<b>Others</b>	1			0	1	2
<b>Total</b>	1,685	194	317	496	112	2,803

(1) *Includes the Clean era project.*

The following table shows the main projects under development by Vale and/or by companies in the group:





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Project	Estimated Start-up Date	Investment Made		Expected Investment		Total	Status(1)
		2013	2014	R\$ millions 2015	2016		
<b>IRON ORE</b> <b>Project CLN S11D</b>	1S14 a 2S18	1,504	3,671	3,883	5,214	22,973	Civil works for the foundations to grow the port underway placement of beams on the North <i>off shore</i> area (99% concluded). Duplication of the railway achieved 41% physical advance. Railway branch achieved 81% of physical advance. 57% physical advance
Increase logistic capacity of Northern System to support mine S11D, including duplicating approximately 570 km of railroad, building 101 km of a new railroad branch, purchase of cars and locomotives and onshore and offshore expansion at the Ponta da Madeira Maritime terminal Increase nominal logistic capacity on the Carajás Railroad to approximately 230 Mtpa.							
<b>Carajás Serra Sul S11D</b>	2S16	1,767	291	6,056	3,498	17,810	Delivery of mine and plan electrical centers underway. Transmission line connecting Carajás to Canãa is powered. 80% physical advance.
Development of mine and processing plant. Location in the southern mountains of Carajás, Pará. Estimated nominal capacity of 90 Mtpa.							
<b>COAL MINING AND LOGISTICS</b>							
<b>Moatize II</b>	2S15	827	1,342	1,863	399	5,340	Electromechanic assembly achieved 99% physical advance. Commissioning of belts began. Tests in CHPP lines began 99% physical advance.
<b>CSP(2)</b>	2S15	816	428		714	3,101	Assembly of metallic structures achieved 97% physical advance. Civil works achieved 99% physical advance 97%
Development of a steel sheet plant in partnership with							

Dongkuk e Posco,  
located in Ceará.  
Vale holds 50% of  
the joint venture.  
Estimated nominal  
capacity of 3.0  
Mtpa

physical advance.

- 
- (1) Expected investment is related to Vale's stake in the project.
  - (2) Status on December 31, 2015

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**10.11 - Other factors with relevant influence on the operating performance that have not been identified or commented on other items in this section.**

There are no facts occurred in the last three fiscal years with relevant influence on the operational performance other than those identified and commented in other items in this section.

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**13.1 Description of the compensation policy, including Non-Statutory Boards**

**a. objectives of the compensation policy or practices**

According to the provisions of Article 10, Paragraph 4 of the Bylaws of the Company, the overall and annual compensation for Company Managers is set at the Annual General Meeting, and takes into account their responsibilities, the time they dedicate to their functions, competence and professional reputation, and the market value of their services.

Vale is one of the largest diversified mining companies in the world, and one of the largest private companies in Latin America. It has operations in over 25 countries having shareholders on every continent, and employing around 74,098 employees and 34,410 subcontracted workers active in its operations, as of December 31, 2015.

Clearly, Vale is a global company of great complexity and magnitude, whose administration requires an in-depth understanding of its area of business and market, combined with total commitment.

As global company, Vale is aware that retaining and engaging the right professionals in strategic roles, especially Executive Directors, is critical for its success today, in the mid and long terms. As such, the market is always the benchmark, from the perspective of global competition, thus Vale takes into consideration, to determine managers' compensation, compensation policies used by top mining companies, as well as from large global corporations from other industries.

Thus, the goal of Vale's compensation policy is to attract, motivate, and retain its talents, and considers market practices at locations where the company operates, its alignment with company strategy in the short and long terms, its shareholder value, and business sustainability.

**b. composition of compensation packages, indicating:**

**i. Description of the elements of the compensation packages and the objectives of each of them.**

**Board of Directors**

**Fixed Compensation**

*Pro-labore.* The compensation for the members of the Board of Directors is made up exclusively of the payment of a fixed monthly fee; this fixed compensation is designed to remunerate the services of each board member, within their scope of responsibility as members of Vale's Board of Directors. The overall annual compensation for the Managers, including the members of the Board of Directors, the Statutory Board, the Fiscal Council and the advisory committees is set at the Annual General Meeting and distributed by the Board of Directors.

*Direct and indirect benefits.* The members of the Board of Directors do not have the right to direct or indirect benefits.

*Participation on Committees.* The members of the Board of Directors do not have the right to remuneration for participation on committees.

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**Variable Remuneration**

The members of the Board of Directors do not have the right to variable remuneration, including bonuses, profit sharing, participation in meetings, and commissions.

**Post-employment Benefits**

The members of the Board of Directors do not have the right to post-employment benefits.

**Benefits Resulting from the Termination of Holding a Position**

The members of the Board of Directors do not have the right to benefits resulting from the termination of holding a position.

**Remuneration Based on Shares**

The members of the Board of Directors do not have the right to remuneration based on shares.

Fiscal Board

**Fixed Compensation**

*Pro-labore.* The compensation for the members of the Fiscal Board is made up of a fixed monthly fee (honorarium), excluding benefits, representation monies, and profit shares. Members of the Fiscal Board are also entitled to refund for their costs with travelling and accommodation expenses incurred while performing their duties. Deputies are compensated when they undertake the function when a seat is vacant, or when the member of the board in question is absent or unable to exercise the function. The aim of the fixed compensation is to remunerate the services of each board member, within their scope of responsibility as members of the Company's Fiscal Board. The fees for Fiscal Board members are determined as a percentage of the average compensation to the Executive Directors.

*Direct and Indirect Benefits.* Members of the Fiscal Board do not have the right to direct or indirect benefits.

*Participation on Committees.* The members of the Fiscal Board do not have the right to remuneration for participation on committees.

**Variable Remuneration**

The members of the Fiscal Board do not have the right to variable remuneration, including bonuses, profit sharing, participation in meetings, and commissions.

**Post-employment Benefits**

The members of the Fiscal Board do not have the right to post-employment benefits.

**Benefits Resulting from the Termination of Holding a Position**

The members of the Fiscal Board do not have the right to benefits resulting from the termination of holding a position.

**Remuneration Based on Shares**

The members of the Fiscal Board do not have the right to remuneration based on shares.



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Advisory Committees

**Fixed Compensation**

*Pro-labore.* The compensation for the members of the Board of Directors Advisory Committees (Strategy Committee, Finance Committee, Executive Development Committee, Financial Control Committee, and Governance and Sustainability Committee) considers exclusively the payment of a fixed monthly fee (fees), except for committee members who are Vale Managers, who will not be eligible for compensation for sitting on the committees, as set forth in Paragraph 2 of Article 15 of Vale's Bylaws. The aim of the compensation is to remunerate each member's services within the scope of their responsibility as members of the Company's respective Advisory Committees. The compensation for Advisory Committee members is defined by the Board of Directors.

*Direct and Indirect Benefits.* Advisory committee members are not entitled to direct or indirect benefits.

**Variable Remuneration**

The members of the Advisory Committees do not have the right to bonuses, profit sharing, or commissions.

**Post-employment Benefits**

The members of the Advisory Committees do not have the right to post-employment benefits.

**Benefits Resulting from the Termination of Holding a Position**

The members of the Advisory Committees do not have the right to benefits resulting from the termination of holding a position.

**Remuneration Based on Shares**

The members of the Advisory Committees do not have the right to remuneration based on shares.

Statutory Directors (Board of Directors)

**Fixed Compensation**

*Pro-labore.* Statutory Directors are entitled to receive a fixed monthly compensation aiming to remunerate the services rendered by them within the scope of the individual responsibility attributed to each one managing the Company.

*Direct and indirect benefits.* Statutory Directors are entitled to a package of benefits that is also compatible with market practices, including private healthcare, hospital and dental care, private pension scheme and life insurance. Not only are the benefits in line with market practices, but they are also aimed at assuring the executives and their dependents peace of mind when it comes to fundamental issues such as healthcare.

*Participation on Committees.* Statutory Directors do not have the right to remuneration for participation on committees.

**Variable compensation**

*Bonus.* Statutory Directors are entitled to variable annual payment (bonus) based on the Company's

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earnings and defined by indicators and objectives, targets derived from the strategic plan, and the annual budget approved by the Board of Directors. While assuring market competitiveness, the main aim of the bonus is to acknowledge an executive's contribution to the Company's performance and earnings.

*Others.* Statutory Directors do not have the right to variable compensation, profit sharing, participation in meetings, or commissions.

**Post-employment benefits**

Statutory Directors may have medical healthcare, hospital and dental care paid by the Company up to 24 months after their termination, in order to allow them to look for alternatives outside the corporative plan.

**Benefits Resulting from the Termination of Holding a Position**

The members of the Statutory Board do not have the right to benefits resulting from the termination of holding a position, except, however, as described in item 13.12 of this Reference Form, for eventual indemnity due to termination or no renewal of the employment agreement entered by and between these directors and the Company, provided that these events are a Company initiative. For more information, see item 13.12 in this Reference Form.

**Compensation based on shares**

*Long-term Incentives – ILP (Portuguese acronym) (by 2013, including) and Virtual Share Program – PAV (starting in 2014)*

The Long-term Incentives (ILP) represents a variable payment based on the Company's expected future performance aimed at retaining and engaging the Executives and aligning them with the future vision of the Company. The program was introduced in 2007 and the first payment was made in January 2010. Starting in 2014, the ILP was replaced by the Virtual Shares Program (PAV), whose basis of calculation is the basis of compensation received by Statutory Directors, and the parameters of this calculation will be pre-established for each hierarchical level in each of the countries where the Company operates. The program lasts for 4 years and not for 3 years, as described in the above paragraph. The program allows early gradual payments, starting in 2014. Thus, payment can be made in accrued tranches of 20% (at the end of the second year), 30% (at the end of the third year) and 50% (at the end of the fourth year), for as long as performance conditions for each year are reached, as set forth in PAV, that is, placement of Vale within a group comprised by other 12 companies of similar size (peer group). The payment metrics is the Total Shareholder Return (TSR) relative to the peer group, taking into consideration the businesses and region in which Vale operates and the influence of the Brazilian market's fluctuation. If Vale is at the top of this ranking, the calculated value is increased by 50%. This percentage is decreasing, and on the third place, the value is unchanged, and starting on the tenth position, and lower, there is no payment whatsoever.

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For further details, see items 13.1 (b)(iii), (c), and (d) and 13.4 in this Reference Form.

### *Matching*

Like the PAV (and the ILP replaced by PAV in 2014), *Matching* is a variable, long-term form of compensation based on the Company's expected performance. The plan's purpose is to encourage an owner's feeling, while also helping to retain executives and reinforce the sustainable performance culture. The plan was established in 2008, and was altered in 2014 for purposes of changing the calculation methodology to enter the plan, now considering for such calculation (i) the portion of the

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fixed compensation received by beneficiaries of this plan, and (ii) parameters predetermined for each hierarchic level and country where the Company operates.

There have been some adjustments to the Matching program for fiscal year 2016 for purposes of allowing the engagement of the executive to this program in years when the net bonus is not sufficient for investment in the program. In those years, the executive may (i) acquire Company shares during 12 months to use the program, in pre-established purchase windows, as well as (ii) engage in the program using previously held shares (provided that these shares are not bound to the current open cycles in the program), according to criteria and conditions that are set forth in the manual of the *Matching* 2016 program. Additionally, it is important to note that adherence to the program is currently voluntary for all Vale executives, except for the President and the Board of Executive Officers, whose adherence and maintenance to the program is mandatory whenever the net bonus is sufficient for investment.

For more information, including the methodology for calculation used to determine the value of the compensation of beneficiaries under this Plan, see items 13.1(b)(iii), (c), and (d) and 13.4 in this Reference Form.

Non-Statutory Board

The non-statutory directors are Company employees with a labor contract. These directors may hold global Corporate or business unit functions or regional or local corporate functions, or are responsible for operational systems or areas in the Company's different businesses.

**Fixed Compensation**

*Pro-Labore.* Non-Statutory Directors are entitled to a fixed monthly compensation based on the Company's organizational chart, which is aligned to market practices. The aim of the fixed salary is, as set out in the labor contract signed by each executive, to remunerate the services rendered within the scope of responsibility attributed to each one undertaking their respective duties within the company.

*Direct and indirect benefits.* Non-Statutory Directors are entitled to benefits compatible with market practices, including medical healthcare, hospital and dental care, private pension scheme (Valia) and life insurance. Not only are the benefits in line with market practices, but they are also aimed at assuring the executives and their dependents peace of mind when it comes to fundamental issues such as healthcare.

For more information about the Complementary Benefits plan (Valia), see item 13.10 of the Reference Form.

*Participation on Committees.* The non-statutory directors do not have the right to remuneration for participation on committees.

**Variable compensation**

*Profit Sharing (PLR).* Variable annual payment based on the Company's earnings, and team performance, defined by indicators and objective, measurable targets derived from the strategic plan, and the annual budget approved by the Board of Directors. While assuring market competitiveness, the main aim of this program is to acknowledge the contribution by an executive, and other employees, to the Company's performance and earnings. Item 13.1 (d) below, describes in detail the methodology for calculation used to determine the value of the compensation of the Non-Board of Directors, pursuant to what is stated below.

*Other.* Non-Statutory Board members are not entitled to bonus, remuneration for participation in meetings, or commissions.

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**Post-employment benefits**

Non-Statutory Directors may enjoy the Medical, Dental, Hospital Assistance paid by the Company after termination of their employment, in order to be able to look for alternatives outside the corporate plan.

**Benefits Resulting from the Termination of Holding a Position**

Non-Statutory Directors may receive customized service of orientation for outplacement to be performed by the specialist company appointed by Vale.

**Compensation based on shares**

*Long-Term Incentive ILP (by 2013, including) and Virtual Share Program PAV (starting in 2014)*

The ILP represents a variable payment based on the Company expected future performance and aimed at retaining and engaging the Executives and aligning them with the vision of the Company. The program was introduced in 2007 and the first payment was made in January 2010. Starting in 2014, the ILP was replaced by the PAV, whose basis of calculation is the basis of compensation received by Statutory Directors, and the parameters of this calculation will be pre-established for each hierarchical level in each of the countries where the Company operates. The program lasts for 4 years and not for 3 years. Additionally, PAV allows early gradual payments, starting in 2014. Thus, payment can be made in accrued tranches of 20% (at the end of the second year), 30% (at the end of the third year) and 50% (at the end of the fourth year), for as long as performance conditions for each year are reached, as set forth in PAV, that is, placement of Vale within a group comprised by other 12 companies of similar size (peer group). The payment metrics is the Total Shareholder Return (TSR) relative to the peer group, taking into consideration the businesses and region in which Vale operates and the influence of the Brazilian market's fluctuation. If Vale is at the top of this ranking, the calculated value is increased by 50%. This percentage is decreasing, and on the third place, the value is unchanged, and starting on the tenth position, and lower, there is no payment whatsoever.

For further details, see items 13.1 (b)(iii), (c) and (d) and 13.4 in this Reference Form.

*Matching*

Like PAV (and the ILP, replaced by PAV in 2014) *Matching* is a variable, long-term form of compensation based on the Company's expected performance. The plan's purpose is to encourage a feeling of ownership, while also helping to retain executives and reinforce the sustainable performance culture. The plan was established in 2008, and was altered in 2014 for purposes of changing the calculation methodology to enter the plan, now considering for such calculation (i) the monthly portion of the fixed compensation received by beneficiaries of this plan, and

(ii) parameters predetermined for each hierarchic level and country where the Company operates.

There have been some adjustments to the Matching program for fiscal year 2016 for purposes of allowing the engagement of the executive to this program in years when the net bonus is not sufficient for investment in the program. In those years, the executive may (i) acquire Company shares during 12 months to use the program, in pre-established purchase windows, as well as (ii) engage in the program using previously held shares (provided that these shares are not bound to the current open cycles in the program), according to criteria and conditions that are set forth in the manual of the *Matching* 2016 program. Additionally, it is important to note that adherence to the program is currently voluntary for all Vale executives, except for the President and the Board of Executive Officers, whose adherence and maintenance to the program is mandatory whenever the net bonus is sufficient for investment.



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For more information, including the methodology for calculation used to determine the value of the compensation of beneficiaries under this Plan, see items 13.1(b)(iii), (c), and (d) and 13.4 in this Reference Form.

Non-Statutory Committees

The Company also has two non-statutory committees: the Risk Committee and the Communication Committee. All the seats on the non-statutory committees are held by the Company's statutory and non-statutory directors, who do not receive any extra compensation for this function, whether fixed or variable.

**ii. Regarding the last 3 fiscal years, proportion of each element to make up the total compensation package**

The approximate proportions of each element in the total compensation for fiscal years 2013, 2014, and 2015 were as shown in the tables below:

**Fiscal Year 2013**

Compensation Composition	Board of Directors	Fiscal Board	Statutory Board	Non-Statutory Board	Committees(1)
<b>Monthly Fixed Compensation</b>					
<i>Wage or Pro-Labore</i>	89.21%	83.33%	33.36%	36.00%	100.00%
<i>Direct or Indirect Benefits</i>			15.77%	10.00%	
<i>Advisory Committees</i>					
<i>Others(2)</i>	10.79%	16.67%	6.17%		
<b>Variable Compensation</b>					
<i>Bonus</i>			30.61%		
<i>Profit Sharing</i>				41.00%	
<i>Participation in Meetings</i>					
<i>Commissions</i>					
<i>Others(2)</i>			7.91%		
<i>Benefits Post Labor</i>					
<i>Resignation</i>			1.96%		
<i>Compensation Based on Shares</i>			4.22%	13.00%	
<b>TOTAL</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

(1) Excluding members of these committees who are members of the board of the Company.

(2) Payments related to Vale's portion of social security - INSS.



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Compensation Composition	Board of Directors	Fiscal Board	Statutory Board	Non-Statutory Board	Committees(1)
<b>Fixed Compensation</b>					
<i>Wage or Pro-Labore</i>	89.26%	83.33%	31.19%	33.38%	83.33.00%
<i>Direct or Indirect Benefits</i>			12.62%	17.41%	
<i>Advisory Committees</i>					
<i>Others(2)</i>	10.74%	16.67%	6.18%	10.16%	16.67%
<b>Variable Compensation</b>					
<i>Bonus</i>			39.12%		
<i>Profit Sharing</i>				25.03%	
<i>Participation in Meetings</i>					
<i>Commissions</i>					
<i>Others(2)</i>			8.34%	6.51%	
<b>Benefits Post Labor</b>					
<b>Resignation</b>					
<b>Compensation Based on Shares</b>					
<b>TOTAL</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

(1) Excluding members of these committees who are members of the board of the Company.

(2) Payments related to Vale's portion of social security - INSS.

**Fiscal Year 2015**

Compensation Composition	Board of Directors	Fiscal Board	Statutory Board	Non-Statutory Board	Committees(1)
<b>Monthly Fixed Compensation</b>					
<i>Wage or Pro-Labore</i>	87.95%	83.33%	23.88%	42.00	85.77%
<i>Direct or Indirect Benefits</i>			10.29%	10.00%	
<i>Advisory Committees</i>					
<i>Others(2)</i>	12.05%	16.67%	4.76%		14.23%
<b>Variable Compensation</b>					
<i>Bonus</i>			28.79%		
<i>Profit Sharing</i>				42.00%	
<i>Participation in Meetings</i>					
<i>Commissions</i>					
<i>Others(2)</i>			10.03%		
<b>Benefits Post Labor</b>					
<b>Resignation</b>			20.55%		
<b>Compensation Based on Shares</b>			1.71%	6.00%	
<b>TOTAL</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

- (1) *Excluding members of these committees who are members of the board of the Company.*
- (2) *Payments related to Vale's portion of social security - INSS.*

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**iii. Methodology for the calculation and readjustment of each compensation element**

The global annual compensation to managers, including members of the Board of Directors, the Statutory Board, the Fiscal Board and Advisory Committees, is determined at the Annual General Meeting and distributed by the Board of Directors.

Board of Directors

The fixed compensation of the principal members of the Board of Directors is represented by the fixed monthly payments (fees), while the fixed monthly compensation for deputies is 50% of the value received by the principal members of the Board of Directors. Values are annually defined according to the market practice, checked through referential researches conducted by specialized companies, where the effect of the compensation for similar companies can be observed. There is no variable compensation for the members of the Board of Directors.

Fiscal Board

The fixed compensation of the members of the Fiscal Board is represented by the fixed monthly payments (fees), having as reference the value of 10% of the compensation that, in average, is granted to the Statutory Directors, not computing the benefits, representation monies, and profits participation. The members of the Fiscal Board also have the right to a refund for transport and lodging expenses that are necessary in performing their duties, and deputies will be paid only when they act as members due to vacancy, impediment or absence of the respective member. There is no variable compensation for the members of the Fiscal Board.

Advisory Committees

For members of the Advisory Committees of the Board of Directors - Strategic Committee, Financial Committee, Executive Performance Committee, Controlling Committee, and Governance and Sustainability Committee compensation considers solely the payment of a fixed monthly compensation (fees), except for committee members that are Vale managers, who will not receive compensation for sitting in the committees, as per the terms of §2 of Article 15 of Vale's Bylaws. The members of the Advisory committee also do not receive any other type of fixed compensation. Contractual compensation has the purpose of compensating the services of each advisor within the scope of the responsibility attributed to each of the Company's Advisory Committees, defined by the Board of Directors. Determination and adjustment of the compensation for the member of the Advisory Committee are based on the fixed compensation determined for the Board of Directors.

Executive (Statutory) Directors

The fixed compensation of the Statutory Directors is represented by the fixed monthly payment, defined according to the market practice, checked through referential researches conducted by specialized companies where the effect of the compensation for similar companies can be

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observed, and annually readjusted by the National Broad Consumer Price Index (IPCA), and assessed by the Executive Development Committee and approved by the Board of Directors.

Direct and indirect benefits (medical healthcare, hospital care, dental care, private pension plan, and life insurance) to which they have the right, are calculated according to the market practice checked through referential research conducted by specialized companies where the effect of the concession of benefits for the participating companies of similar size can be observed and assessed by the Executive Development Committee and approved by the Board of Directors.

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The bonus of the Statutory Directors is calculated based on the earnings of the Company, and may vary between 0% and 200% of the target established considering the market; this depends on the goals set forth and the cash generation of the Company for each fiscal year. Adjustment of fees arising out of IPCA or other merits reflect directly on other elements of the compensation, since they use the fees as basis.

Until 2013 (including), the methodology for the calculation of the compensation based on shares of the Statutory Directors (under the ILP) considered the 75% percentage of the bonus for Executive Directors, and 125% of the bonus for the President, out of the value effectively paid as such, and transformed, as reference, into a number of common shares issued by Vale (virtual shares), considered the average quotation of the common shares issued by the Company during the last 60 trading days of the last fiscal. If the executive member remains in the Company, by the end of three years the number of virtual shares is transformed into a monetary value by the average quotation of the common shares issued by the Company of the last 60 trading days of the third year. Additionally, the program also took into consideration the performance of the Company (Total Shareholder Return (TSR)) regarding a group of 20 similar companies (peer group). If Vale is first in this ranking, the value settled will be increased in 50%. This is a decreasing percentage, so in the 5th position the value remains unchanged, and as of the 15th position, there is no payment. Terms and conditions above are applicable to the beneficiaries of cycles starting in 2011, 2012, and 2013 under the respective program, considering that these cycles have ended, and the cycle beginning in 2013 has ended in December 2015.

Starting in 2014, the ILP was replaced by PAV, whose basis of calculation is the basis of compensation received by Statutory Directors, and the parameters of this calculation will be pre-established for each hierarchical level in each of the countries where the Company operates. The program lasts for 4 years and not for 3 years, as described in the above paragraph. The program allows early gradual payments, starting in 2014. Thus, payment can be made in accrued tranches of 20% (at the end of the second year), 30% (at the end of the third year) and 50% (at the end of the fourth year), for as long as performance conditions for each year are reached, as set forth in PAV, that is, placement of Vale within a group comprised by other 12 companies of similar size (peer group). The payment metrics is the Total Shareholder Return (TSR) relative to the peer group, taking into consideration the businesses and region in which Vale operates and the influence of the Brazilian market's fluctuation. If Vale is at the top of this ranking, the calculated value is increased by 50%. This percentage is decreasing, and on the third place, the value is unchanged, and starting on the tenth position and lower, there is no payment whatsoever.

Until 2013 (including), the calculation of the Matching determined that the executive member could allocate 30% or 50% of his short-term variable payment (bonus) to the purchase of class A preferred shares issued by Vale, through a pre-defined financial institution, under market conditions and without any benefit offered by Vale, on the days set forth in the plan. The bonus percentage that could be allocated by each executive member for participating in the Matching Plan is defined as of the valuation of his performance and potential. This is to be granted to those executive members who acquire shares as per the terms and conditions set forth in the Matching Plan and who three years after the acquisition, still remain linked to Vale and have kept the ownership of all the shares acquired. At the end of the three year period, the administrators end the cycle, and shall give a calculation of effective compliance of the conditions set forth in the manual of the above referred plan. If the terms of the plan have been adhered to, the Company shall pay the executive member a liquid value, as a prize, equal to the amount he bought in shares at the beginning of the program. After the payment of the incentive, the executive members can freely negotiate the preferred shares issued by Vale to be acquired in order to become eligible for the Matching Plan and in agreement with the law in force. Terms and conditions above are applicable to the beneficiaries of cycles starting in 2011, 2012, and 2013 under the respective program.

Starting in 2014, the calculation methodology to the Matching program was determined as the fixed compensation received by beneficiaries of this plan, and parameters predetermined for each hierarchic level and country where the Company operates.

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There have been some adjustments to the Matching program for fiscal year 2016 for purposes of allowing the engagement of the executive to this program in years when the net bonus is not sufficient for investment in the program. In those years, the executive may (i) acquire Company shares during 12 months to use the program, in pre-established purchase windows, as well as (ii) engage in the program using previously held shares (provided that these shares are not bound to the current open cycles in the program), according to criteria and conditions that are set forth in the manual of the *Matching* 2016 program. Additionally, it is important to note that adherence to the program is currently voluntary for all Vale executives, except for the President and the Board of Executive Officers, whose adherence and maintenance to the program is mandatory whenever the net bonus is sufficient for investment.

Non-Statutory Board

The fixed compensation for the Non-Statutory Directors with a labor contract is represented by a fixed monthly payment. Every year, the Department of Human Resources of Vale hire specialized companies to perform analysis of compensations; the analysis is made pursuant to the complexity of each position compared in the market. The comparison is made with national and multinational companies of similar sizes of several sectors, and the equalization of the comparison is through a scoring system. This system of valuation is known as *Hay System*, a system of points created by The Hay Group that evaluates the weight of the positions based on their complexity, allowing their global ranking. This system is one of the most used worldwide for this purpose. There is no predetermined index or periodicity for the readjustment of the fixed compensation and when there are readjustments, they are based on the market evolution and the merit of the executive member.

There is no predefined percentage or frequency to adjust the fixed wage and, when there are salary adjustments, they are based on market changes and the performance of the Non-Statutory Director (merit-based).

Direct and indirect benefits (medical healthcare, hospital care, dental care, private pension plan, and life insurance) to which they have right, are calculated according to the market practice checked through referential research conducted by specialized companies where the effect of the concession of benefits for similar companies in the same segment can be observed.

The component of profit sharing of the Non-Statutory Directors is calculated based on the earnings of the Company, and it ranges from 0% to 200% of the target established according to market reference, depending on the goals set forth and the company cash generation for each fiscal year. The adjustment of the fees arising out of the IPCA or other merit forms reflects directly on other compensation elements, as they use the fees as basis.

Until 2013 (including), the methodology for the calculation of the compensation based on shares of the Non-Statutory Directors, under the ILP, took into account 75% out of the bonus granted for directors responsible for global corporate duties or business units and the 50% out of the bonus granted for directors responsible for regional or local corporate duties of the value actually paid for this purpose. This amount is transformed, as reference, into a number of common shares issued by Vale (virtual shares), and considered the average quotation of the common shares issued by the Company during the last 60 trading days of the last fiscal year. If the executive member remains in the Company, by the end of three years the number of virtual shares is transformed into a monetary value by the average quotation of the common shares issued by the Company of the last 60 trading days of the third year. Additionally, the program also takes into consideration the performance of the Company (Total Shareholding Return (TSR)) regarding a group of 20 similar companies (peer group). If Vale is first in this ranking, the value settled will be increased in 50%. This is a decreasing percentage, so in the 5th position the value remains unchanged, and as of the 15th position, there is no payment. Terms and conditions above are applicable





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to the beneficiaries of cycles starting in 2011, 2012, and 2013 under the respective program, noting that these cycles have ended, and that the cycle beginning in 2013 has ended in December 2015.

Starting in 2014, the ILP was replaced by PAV, whose basis of calculation is the basis of compensation received by Statutory Directors, and the parameters of this calculation will be pre-established for each hierarchical level in each of the countries where the Company operates. The program lasts for 4 years and not for 3 years, as described in the above paragraph. The program allows early gradual payments, starting in 2014. Thus, payment can be made in accrued tranches of 20% (at the end of the second year), 30% (at the end of the third year) and 50% (at the end of the fourth year), for as long as performance conditions for each year are reached, as set forth in PAV, that is, placement of Vale within a group comprised by 12 other companies of similar size (peer group). The payment metrics is the Total Shareholder Return (TSR) relative to the peer group, taking into consideration the businesses and region in which Vale operates and the influence of the Brazilian market's fluctuation. If Vale is at the top of this ranking, the calculated value is increased by 50%. This percentage is decreasing, and on the third place, the value is unchanged, and starting on the tenth position and lower, there is no payment whatsoever.

Until 2013 (including), the calculation of the Matching determined that the executive member could allocate 30% or 50% of his short-term variable payment (bonus) to the purchase of class A preferred shares issued by Vale, through a pre-defined financial institution, under market conditions and without any benefit offered by Vale, on the days set forth in the plan. The bonus percentage that could be allocated by each executive member for participating in the Matching Plan is defined as of the valuation of his performance and potential. This is to be granted to those executive members who acquire shares as per the terms and conditions set forth in the Matching Plan and who three years after the acquisition, still remain linked to Vale and have kept the ownership of all the shares acquired. At the end of the three-year period, the administrators end the cycle, and shall give a calculation of effective compliance of the conditions set forth in the manual of the above referred plan. If the terms of the plan have been adhered to, the Company shall pay the executive member a liquid value, as a prize, equal to the amount he bought in shares at the beginning of the program. After the payment of the incentive, the executive members can freely negotiate the preferred shares issued by Vale to be acquired in order to become eligible for the Matching Plan and in agreement with the law in force. Terms and conditions above are applicable to the beneficiaries of cycles starting in 2011, 2012, and 2013 under the respective program.

Starting in 2014, the calculation methodology to the Matching program was determined as the fixed compensation received by beneficiaries of this plan, and parameters predetermined for each hierarchic level and country where the Company operates.

Some adjustments have been made to Matching for fiscal year 2016 for purposes of enabling the executive engagement in such program in years where net PLR was not sufficient to invest in the program. In those years, the executive may (i) acquire Company shares during 12 months to use the program, in pre-established purchase windows, as well as (ii) engage in the program using previously held shares (provided that these shares are not bound to the current open cycles in the program), according to criteria and conditions that are set forth in the manual of the *Matching* 2016 program. Additionally, it is important to note that adherence to the program is currently voluntary for all Vale executives, except for the President and the Board of Executive Officers, whose adherence and maintenance to the program is mandatory whenever the net bonus is sufficient for investment.

**iv. Reasons that justify the composition of the compensation**

Reasons that justify the composition of the compensation are incentive to management improvement, better performance, and retention of executives with the Company, aiming to achieve gains due to the commitment to long-term results and short-term performance of the Company. For directors, Vale adopts a composition model of the compensation that concentrates a significant payment of the total compensation in the variable components (both of short- and long-term), being a part of the policy of risk and earnings sharing with the main executive members of

the Company.

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**v. Existence of members that are not paid by the issuer and the reason for that**

On the date of this Form, the Company does not have members that are not paid, except (i) for two (2) members of the Board of Directors that fully waive the receipt of remuneration, (ii) the members of the Advisory Committees of the Company who are also managers of Vale, who are not entitled to receive remuneration for participation in the committees, and (iii) members of Non-Statutory Committees, who are not paid for this position, as they are paid as executives or employees of the Company.

For purposes of calculating the global value of the annual remuneration in the current fiscal year amounts due to all members of the Board of Directors are taken into consideration, because, in the future, there might be no possibility to waive the remuneration.

**c. Main performance indicators that are taken into consideration when determining each element of the compensation package**

All the definitions concerning the compensation are sustained by market research, supported by one or more specialized consultancies. Regarding Statutory Directors, these definitions are also assessed by the Executive Development Committee and approved by the Board of Directors.

The main performance indicators taken into account while defining compensation are those related to Company's performance, for instance EBITDA and Free Cash Flow, as well as general productivity and sustainability indicators.

The performance indicators taken into account while determining compensation of the ILP (replaced by PAV in 2014), PAV and Matching are the value of the Company's shares in the market, and in the case of the ILP (replaced by PAV) and PAV, the Company position in relation to a group of companies of similar size (peer group).

**d. How the compensation package is structured to reflect the development of the performance indicators**

The definition of the executives' performance targets, which are used to structure the payment of their profit share and bonus, derive from the strategic plan and the budget, both approved by the Board of Directors, which are reviewed each year to sustain the targets and expected results for the Company.

The performance indicators taken into account while determining compensation of the long term incentive plans, namely the ILP (in force until 2013), PAV (in force since 2014) and Matching are the value of the Company's shares in the market, and in the case of the PAV, its position in

relation to a group of other 12 companies of similar size (peer group). The peer group applicable to the ILP, replaced in 2014 by PAV, was comprised by 20 companies of similar size.

**e. How the compensation policy is aligned with the issuer's short-, medium- and long-term interests**

The Company compensation policy is based on its performance and financial sustainability in the short, medium, and long term, in line with its strategic plan, while also assuring shareholder value.

As such, the ILP (replaced by PAV in 2014) and Matching were structured with three-year grace period for the payment of compensation, and PAV, with a four-year grace period. These terms were established to align these programs with the evolution of the Company's performance indicators.

Table of Contents**f. Existence of compensation supported by subsidiaries, and direct or indirect affiliates or holding companies**

One of the Company's executive directors was also the President and Chief Executive Officer of Vale Canada Limited, a Vale subsidiary. As such, part of this executive's fixed and variable compensation and benefits are paid by Vale Canada Limited. For more information, see item 13.15 in this Reference Form.

**g. Existence of any compensation or benefits connected to the occurrence of a given corporate event, such as the sale of the issuer's controlling interest**

There is no compensation or benefit for the members of the Fiscal or Board of Directors, Statutory or Non-Statutory Committees, or the Executive or Non-Board of Directors that is in any way connected to the occurrence of any corporate event.

**13.2 Total Compensation of the Board of Directors, statutory board, and fiscal board****Total Compensation Estimates for the Current Fiscal Year to be Ended on December 31, 2016 Annual Amounts**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Fiscal Board</b>	<b>Total</b>
Total Number of members	22.00	8.00	5.00	35.00
Number of paid members	22.00	8.00	5.00	35.00
<b>Annual fixed compensation (in R\$)</b>				
Salaries or pro-labore fees	5,445,000.00	24,346,609.87	1,521,663.12	31,313,272.99
Direct and indirect benefits	0.00	7,236,850.96	0.00	7,236,850.96
Compensation for participation in Committees	0.00	0.00	0.00	0.00
		5,679,636.71	304,332.62	7,072,969.33
	1,089,000.0			
Other	0			
Description of other fixed compensation	Vale's Portion of Social Security [INSS]	Vale's Portion of Social Security [INSS]	Vale's Portion of Social Security [INSS]	
<b>Variable Compensation (in R\$)</b>				
Bonus	0.00	0.00	0.00	0.00
Profit share	0.00	0.00	0.00	0.00
Compensation for participation in meetings	0.00	0.00	0.00	0.00
Commissions	0.00	0.00	0.00	0.00
Other		7,336,839.00		7,336,839.00
Description of other variable compensation		Vale's Portion of Social Security [INSS]		
<b>Post-employment benefits</b>	0.00	0.00	0.00	0.00

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<b>Employment termination benefits</b>	0.00	33,534,375.25	0.00	33,534,375.25
<b>Stock-based compensation, including options</b>	0.00	3,273,745.45	0.00	3,273,745.45

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**Total Compensation Estimates for the Current Fiscal Year to be Ended on December 31, 2016 Annual Amounts**

Notes	Board of Directors	Statutory Board	Fiscal Board	Total
	<p>1. The total number of members corresponds to the estimate annual average of the management entity, determined monthly, according to the terms in Circular CVM/SEP 002/16.</p>	<p>1. The total number of members corresponds to the estimate annual average of the management entity, determined monthly, according to the terms in Circular CVM/SEP 002/16.</p>	<p>1. The total number of members corresponds to the estimate annual average of the management entity, determined monthly, according to the terms in Circular CVM/SEP 002/16.</p>	
	<p>2) The field Total number of members includes the regular members (11 members) and deputy members (11 members) of the Board of Directors.</p>	<p>2) The field Stock-based compensation includes the amounts paid in the PAV program (2014 cycle) and IPL program (2013 cycle) as well as the estimated amounts of the Matching.</p>	<p>2) The field Total number of members includes the regular members (5 members) of the Fiscal Council</p>	
	<p>3) The number of paid members corresponds to the estimate annual average of members of this management entity, calculated monthly, to whom compensation recognized in the financial statement shall imply, as set forth in Circular CVM/SEP 002/16.</p>	<p>3) The number of paid members corresponds to the estimate annual average of members of this management entity, calculated monthly, to whom compensation recognized in the financial statement shall imply, as set forth in Circular CVM/SEP 002/16.</p>	<p>3) The number of paid members corresponds to the estimate annual average of members of this management entity, calculated monthly, to whom compensation recognized in the financial statement shall imply, as set forth in Circular CVM/SEP 002/16.</p>	
		<p>2. The amount presented in the field Bonus refers to the value that would be paid in the 2016 fiscal year</p>		



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		relative to the goals of the 2015 fiscal year.		
Total amount of compensation	6,534,000.00	81,408,057.24	1,825,995.74	89,768,052.98

**Total Compensation Estimates for the Current Fiscal Year to be Ended on December 31, 2015 Annual Amounts**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Fiscal Board</b>	<b>Total</b>
Total Number of members	21.00	8.00	4.75	33.75
Number of paid members	19.00	8.00	4.75	31.75
<b>Annual fixed compensation (in R\$)</b>				
Salaries or pro-labore fees	4,115,016.26	22,278,939.57	1,250,589.68	27,644,545.51
Direct and indirect benefits	0.00	9,596,806.72	0.00	9,596,806.72

Table of Contents**Total Compensation Estimates for the Current Fiscal Year to be Ended on December 31, 2015 Annual Amounts**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Fiscal Board</b>	<b>Total</b>
Compensation for participation in Committees	0.00	0.00	0.00	0.00
Other	563,539.45	4,440,137.09	250,117.94	5,253,794.48
Description of other fixed compensation	Vale's Portion of Social Security [INSS]	Vale's Portion of Social Security [INSS]	Vale's Portion of Social Security [INSS]	
<b>Variable Compensation (in R\$)</b>				
Bonus	0.00	26,860,815.72	0.00	26,860,815.72
Profit share	0.00	0.00	0.00	0.00
Compensation for participation in meetings	0.00	0.00	0.00	0.00
Commissions	0.00	0.00	0.00	0.00
Other		9,361,109.14		9,361,109.14
Description of other variable compensation	0.00	Vale's Portion of Social Security [INSS]	0.00	
<b>Post-employment benefits</b>	0.00	0.00	0.00	0.00
<b>Employment termination benefits</b>	0.00	19,170,196.17	0.00	19,170,196.17
<b>Stock-based compensation, including options</b>	0.00	1,596,622.42	0.00	1,596,622.42

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**Total Compensation Estimates for the Current Fiscal Year to be Ended on December 31, 2015 Annual Amounts**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Fiscal Board</b>	<b>Total</b>
<b>Notes</b>	1. The total number of members corresponds to the estimate annual average of the management entity, determined monthly, according to the terms in Circular CVM/SEP 002/16.	1. The total number of members corresponds to the estimate annual average of the management entity, determined monthly, according to the terms in Circular CVM/SEP 002/16.	1. The total number of members corresponds to the estimate annual average of the management entity, determined monthly, according to the terms in Circular CVM/SEP 002/16.	
	2) The field Total number of members includes the regular members (11 members) and deputy members (11 members) of the Board of Directors.	2) The field Stock-based compensation includes the amounts paid in the PAV program (2014 cycle) and IPL program (2013 cycle) as well as the estimated amounts of the Matching.	2) The field Total number of members includes the regular members (5 members) of the Fiscal Council	
	3) The number of paid members corresponds to the estimate annual average of members of this management entity, calculated monthly, to whom compensation recognized in the financial statement shall imply, as set forth in Circular CVM/SEP 002/16.	3) The value informed in the field Bonus refers to the amount paid in the fiscal year 2015 regarding goals of fiscal year 2014.	3) The number of paid members corresponds to the estimate annual average of members of this management entity, calculated monthly, to whom compensation recognized in the financial statement shall imply, as set forth in Circular CVM/SEP 002/16.	
		4) The number of paid members corresponds to the estimate annual average of members of this management entity, calculated monthly, to whom compensation recognized in the financial statement shall imply, as set forth in Circular CVM/SEP 002/16.		
Total amount of compensation	R\$ 4,678,555.71	R\$ 93,304,626.83	R\$ 1,500,707.62	R\$ 99,483,890.16



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**Total Compensation for the Fiscal Year Ended on December 31, 2014 Annual Amounts**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Fiscal Board</b>	<b>Total</b>
Total number of members	21.00	8.00	4.00	33.00
Number of members	18.75	8.00	4.00	30.75
<b>Annual fixed compensation (in R\$)</b>				
Salaries or pro-labore fees	4,067,493.34	22,681,831.09	1,098,276.19	27,847,600.62
Direct and indirect benefits	0.00	9,174,933.52	0.00	9,174,933.52
Compensation for participation in Committees	0.00	0.00	0.00	0.00
Other	489,548.16	4,495,819.46	219,655.24	5,205,022.86
Description of other fixed compensation	Vale s Portion of Social Security [INSS]	Vale s Portion of Social Security [INSS]	Vale s Portion of Social Security [INSS]	
<b>Variable Compensation (in R\$)</b>				
Bonus	0.00	28,450,477.47	0.00	28,450,477.47
Profit share	0.00	0.00	0.00	
Compensation for participation in meetings	0.00	0.00	0.00	
Commissions	0.00	0.00	0.00	
Other	0.00	6,061,536.03	0.00	6,061,536.03
Description of other variable compensation		Vale s Portion of Social Security [INSS]		
<b>Post-employment benefits</b>	0.00	0.00	0.00	0.00
<b>Employment termination benefits</b>	0.00	0.00	0.00	0.00
<b>Stock-based compensation</b>		1,857,202.70		1,857,202.70
<b>Observation</b>	1. The total number of members corresponds to the average over the year of the cited administrative entity as determined monthly. in accordance with Circular Letter CVM/SEP 002/16	1 The total number of members corresponds to the average over the year of the cited administrative entity as determined monthly. in accordance with Circular Letter CVM/SEP 002/16.	1 The total number of members corresponds to the average over the year of the cited administrative entity as determined monthly. in accordance with Circular Letter CVM/SEP 002/16.	
	2. The field Total Number of members includes the regular members and deputy members of the Board of Directors.	2. The amounts shown in the field Stock- based compensation includes the amounts paid in 2012 cycle of the ILP and amounts related to the Matching programs	2 - The field Total Number of members includes the regular members (4 members) of the Fiscal Council.	

3) The number of paid members corresponds to the estimate annual average of members of this management entity, calculated monthly, to whom compensation recognized in the financial statement shall imply, as set forth in Circular CVM/SEP 002/16.

3. The amount presented in the field Bonus refers to the value paid in the 2014 fiscal year relative to the goals of 2013.

4) The number of paid members corresponds to the estimate annual average of members of this management entity, calculated

3) The number of paid members corresponds to the estimate annual average of members of this management entity, calculated monthly, to whom compensation recognized in the financial statement shall imply, as set forth in Circular

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		monthly, to whom compensation recognized in the financial statement shall imply, as set forth in Circular CVM/SEP 002/16.	CVM/SEP 002/16.	
Total compensation	4,557,041.50	72,721,800.27	1,317,931.43	78,596,773.20

**Total Compensation for the Fiscal Year Ended on December 31, 2013 Annual Amounts**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Fiscal Board</b>	<b>Total</b>
Total number of members	21.00	8.00	4.00	33.00
Number of paid members	19.00	8.00	4.00	31.00
<b>Annual fixed compensation (in R\$)</b>				
Salaries or pro-labore fees	4,188,228.00	20,064,877.00	994,465.00	25,247,570.00
Direct and indirect benefits	0.00	9,485,211.00	0.00	9,485,211.00
Compensation for participation in Committees	0.00	0.00	0.00	0.00
Other	506,540.00	3,713,500.82	198,893.00	4,418,933.82
Description of other fixed compensation	Vale s Portion of Social Security - INSS	Vale s Portion of Social Security - INSS	Vale s Portion of Social Security - INSS	
<b>Variable Compensation (in R\$)</b>				
Bonus	0.00	18,413,629.00	0.00	18,413,629.00
Profit share	0.00	0.00	0.00	0.00
Compensation for participation in meetings	0.00	0.00	0.00	0.00
Commissions	0.00	0.00	0.00	0.00
Other	0.00	4,757,767.95	0.00	4,757,767.95
Description of other variable compensation		Vale s Portion of Social Security [INSS]		
<b>Post-employment benefits</b>	0.00	0.00	0.00	0.00
<b>Employment termination benefits</b>	0.00	1,181,879.00	0.00	1,181,879.00
<b>Stock-based compensation, including options</b>	0.00	2,537,872.00	0.00	2,537,872.00

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**Total Compensation for the Fiscal Year Ended on December 31, 2013 Annual Amounts**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Fiscal Board</b>	<b>Total</b>
Total number of members	21.00	8.00	4.00	33.00
<b>Observation</b>	<p>1 The total number of members corresponds to the average over the year of the cited administrative entity as determined monthly. in accordance with Circular Letter CVM/SEP 002/16.</p> <p>2 - The field Total number of members includes the regular members and deputy members of the Board of Directors, as they are all entitled to the compensation.</p> <p>3) The number of paid members corresponds to the estimate annual average of members of this management entity, calculated monthly, to whom compensation recognized in the financial statement shall imply, as set forth in Circular CVM/SEP 002/16.</p>	<p>1 The total number of members corresponds to the average over the year of the cited administrative entity as determined monthly. in accordance with Circular Letter CVM/SEP 002/16.</p> <p>2 - The amounts shown in the field Stock-based compensation includes the amounts paid in the ILP Program and the Matching.</p> <p>3. The amount presented in the field Bonus refers to the effective value paid in the 2013 fiscal year relative to the goals of the 2012 fiscal year. Two of the Executive Directors of Vale started in their positions during fiscal year 2012 and, as such, the amount paid as bonus exclusively for these directors was calculated <i>pro rata temporis</i>, according to</p>	<p>1 The total number of members corresponds to the average over the year of the cited administrative entity as determined monthly. in accordance with Circular Letter CVM/SEP 002/16.</p> <p>2 - The field Number of members includes the regular members (4 members) of the Fiscal Council</p> <p>3) The number of paid members corresponds to the estimate annual average of members of this management entity, calculated monthly, to whom compensation recognized in the financial statement shall imply, as set forth in Circular CVM/SEP 002/16.</p>	



rules in the plan. Regarding other directors who have stayed in their positions throughout the fiscal year 2012, the bonus was paid.

4) The number of paid members corresponds to the estimate annual average of members of this management entity, calculated monthly, to whom compensation recognized in the financial statement shall imply, as set forth in Circular CVM/SEP 002/16.

Total amount of compensation	4,694,768.00	60,154,736.77	1,193,358.00	66,042,862.77
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	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Fiscal Board</b>	<b>Total</b>
<b>Total number of members</b>	<b>22.00</b>	<b>8.00</b>	<b>5.00</b>	<b>35.00</b>
Number of paid members(1)	0.00	0.00	0.00	0.00
<b>Bonus</b>				
Minimum amount estimated by compensation plan		0.00		0.00
Maximum amount estimated by compensation plan(2)		46,743,030.66		46,743,030.66
Amount estimated by the compensation plan if pre-established goals are met ( Target )(3)		23,371,515.33		23,371,515.33
<b>Profit share</b>				
Minimum amount estimated by compensation plan				
Maximum amount estimated by compensation plan				
Amount estimated by the compensation plan if pre-established goals are met				

(1) The total number of members corresponds to the average over the year of the number of members of the administrative entity as determined monthly, under the terms in item 13.2

(2) Corresponds to the estimate number of Board of Executive Officers and board members, as applicable, to whom variable compensation is expected to be attributed as recognized in the income of the issuer at the close of the fiscal year, in accordance with the provision of Circular Letter CVM/SEP 02/2016.

(3) Amount corresponding to 200% of the target set forth as market reference.

(4) Amount corresponding to 100% of the target set forth as market reference.

(5) The amount above considered the amount estimated if goals relative to fiscal year 2015 had been met. However, considering that the goals were not met, there will be no payment of bonus in 2016 relative to fiscal year ended on December 31, 2015

**Estimates for the fiscal year to be ended on December 31, 2015**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Fiscal Board</b>	<b>Total</b>
Total number of members	21.00	8.00	4.75	33.75
Number of paid members(1)	0.00	8.00	0.00	8.00
<b>Bonus</b>				
Minimum amount estimated by compensation plan				

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Maximum amount estimated by compensation plan(2)	46,576,742.04	46,576,742.04
Amount estimated by the compensation plan if pre-established goals are met ( Target )(3)	23,288,371.02	23,288,371.02
Amount effectively paid at the close of the fiscal year(4)	26,860,815.72	26,860,815.72

**Profit share**

Minimum amount estimated by compensation plan		
Maximum amount estimated by compensation plan		
Amount estimated by the compensation plan if pre-established goals are met ( Target )		

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(1) The total number of members corresponds to the average over the year of the number of members of the administrative entity as determined monthly, under the terms in item 13.2

(2) Corresponds to the estimate number of Board of Executive Officers and board members, as applicable, to whom variable compensation is expected to be attributed as recognized in the income of the issuer at the close of the fiscal year, in accordance with the provision of Circular Letter CVM/SEP 02/2016.

(3) Amount corresponding to 200% of the target set forth as market reference.

(4) Amount corresponding to 100% of the target set forth as market reference

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(5) The amount presented in the field **Bonus** refers to the effective value paid in the 2015 fiscal year relative to the goals of the 2014 fiscal year.

**Fiscal year ended on December 31, 2014**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Fiscal Board</b>	<b>Total</b>
<b>Total number of members</b>	<b>21.00</b>	<b>8.0</b>	<b>4.00</b>	<b>33.00</b>
<b>Number of paid members (1)</b>	0.00	8,00	0.00	8,00
<b>Bonus</b>				
Minimum amount estimated by compensation plan				
Maximum amount estimated by compensation plan(2)		45.363.662,18		45.363.662,18
Amount estimated by the compensation plan if pre-established goals are met ( Target )(3)		22.681.831,09		22.681.831,09
Amount effectively paid at the close of the fiscal year(4)		28.450.477,47		28.450.477,47
<b>Profit share</b>				
Minimum amount estimated by compensation plan				
Maximum amount estimated by compensation plan				
Amount estimated by the compensation plan if pre-established goals are met ( Target )				
Amount effectively paid at the close of the fiscal year				

(1) The total number of members corresponds to the average over the year of the number of members of the administrative entity as determined monthly, under the terms in item 13.2

(2) Corresponds to the estimate number of Board of Executive Officers and board members, as applicable, to whom variable compensation is expected to be attributed as recognized in the income of the issuer at the close of the fiscal year, in accordance with the provision of Circular Letter CVM/SEP 02/2016.

(3) Amount corresponding to 200% of the target set forth as market reference.

(4) Amount corresponding to 100% of the target set forth as market reference

(5) The amount presented in the field **Bonus** refers to the effective value paid in the 2015 fiscal year relative to the goals of the 2014 fiscal year.

**Fiscal year ended on December 31, 2013**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Fiscal Board</b>	<b>Total</b>
<b>Total number of members</b>	<b>21.00</b>	<b>8.0</b>	<b>4.00</b>	<b>33.00</b>
<b>Number of paid members (1)</b>	0.00	8.00	0.00	8.00
<b>Bonus</b>				
Minimum amount estimated by compensation plan				

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Maximum amount estimated by compensation plan(2)	30,097,316.00	30,097,316.00
Amount estimated by the compensation plan if pre-established goals are met ( Target )(3)	20,064,877.00	20,064,877.00
Amount effectively paid at the close of the fiscal year(4)	18,413,629.00	18,413,629.00

**Profit share (in R\$)**

Minimum amount estimated by compensation plan		
Maximum amount estimated by compensation plan		
Amount estimated by the compensation plan if pre-established goals are met ( Target )		
Amount effectively paid at the close of the fiscal year		

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(1) The total number of members corresponds to the average over the year of the number of members of the administrative entity as determined monthly, under the terms in item 13.2

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- (2) Corresponds to the estimate number of Board of Executive Officers and board members, as applicable, to whom variable compensation is expected to be attributed as recognized in the income of the issuer at the close of the fiscal year, in accordance with the provision of Circular Letter CVM/SEP 02/2016.
- (3) Amount corresponding to 200% of the target set forth as market reference.
- (4) Amount corresponding to 100% of the target set forth as market reference
- (5) The amount presented in the field **Bonus** refers to the effective value paid in the 2015 fiscal year relative to the goals of the 2014 fiscal year

**13.4 Stock-based compensation plan for the Board of Directors and the Statutory Board:**

The Company has two stock-based compensation plans for the Statutory Board, which do not extend to the Board of Directors. Neither plan grants permission for Company stock purchasing option, but only the payment of a bonus as per the market quotation for the Company stock.

**a. General Terms and Conditions**

**Long-Term Program ( ILP ) (until 2013) and the Virtual Shares Program ( PAV ) (starting in 2014)**

ILP is a long-term incentive program introduced in 2007 based on the Company's expected performance. The amount to be paid to the Statutory Directors in the ILP was defined based on the percentage of the short-term (bonus) variable tranche, of 125% for the President and 75% for the other members of the board, from the amount to be effectively paid for this purpose. This amount was transformed, as a reference, in a number of common shares issued by Vale (virtual shares), during the last 60 trading days of the last fiscal. If the executive member remains in the Company, by the end of three years the number of virtual shares is transformed into a monetary value [by the average quotation of the common shares issued by the Company of the last 60 trading days of the third year. The program also takes into consideration the performance of the Company regarding a group of 20 similar companies (peer group). If Vale is first in this ranking, the value settled will be increased in 50%. This is a decreasing percentage, so in the 5th position the value remains unchanged, and as of the 15th position, there is no payment. The terms and conditions described above are applicable to beneficiaries from the 2011, 2012 and 2013 cycle within the scope of said program, considering that these cycles have ended, and the cycle beginning in 2013 has ended in December 2015.

Starting in 2014, the ILP was replaced by PAV, whose basis of calculation is the basis of compensation received by Statutory Directors, and the parameters of this calculation will be pre-established for each hierarchical level in each of the countries where the Company operates. The program lasts for 4 years and not for 3 years, as described in the above paragraph. The program allows early gradual payments, starting in 2014. Thus, payment can be made in accrued tranches of 20% (at the end of the second year), 30% (at the end of the third year) and 50% (at the end of the fourth year), for as long as performance conditions for each year are reached, as set forth in PAV, that is, placement of Vale within a group comprised by other 12 companies of similar size (peer group). The payment metrics is the Total Shareholder Return (TSR) relative to the peer group, taking into consideration the businesses and region in which Vale operates and the influence of the Brazilian market's fluctuation. If Vale is at the top of this ranking, the calculated value is increased by 50%. This percentage is decreasing, and on the third place, the value is

unchanged, and starting on the tenth position and lower, there is no payment whatsoever.

*Matching*

This is a variable, long-term form of compensation created in 2008, based on the Company's expected performance. The main purpose of this program is to encourage an ownership feeling as well as to leverage executive retention and reinforce a sustainable performance culture. To become eligible for the

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Matching program, an executive may allocate 30.0% to 50.0% of his/her bonus (short-term variable compensation) for the purchase of Class A preferred stock issued by Vale, through the mediation of a pre-defined financial institution, under market conditions, on the days set in the scheme, without any benefit being offered by Vale.

Those executives who acquire shares under the terms and conditions of the Matching scheme on the stipulated dates and who are still in the employment of Vale three years after they were acquired and who have kept the ownership of all the shares purchased are eligible for a cash prize. At the end of the three-year period, when the cycle reaches its conclusion, the Managers check that the terms of the scheme, as set forth in the manual, have been followed. Assuming that the terms of the plan have been observed, the Company pays the executive a net value, as a prize, based in the market value of the Company's shares held by the executive during the program. After the incentive has been paid, the executives are free to sell the preferred stock issued by Vale that they had acquired to be eligible to the Matching scheme, in compliance with existing legislation. Until 2013 (including), the bonus percentage to be allocated to each executive to be part of the Matching Plan was defined based on the analysis of its performance and potential. The terms and conditions above described are applicable to the beneficiaries of the 2011, 2012 and 2013 cycles in the scope of said program.

Starting in 2014, the basis of calculation for the Matching program is the fixed remuneration received by the Company Statutory Directors, and the parameters for this calculation will be pre-established for each of the hierarchical levels for each of the countries in which the Company operates.

There have been some adjustments to the Matching program for fiscal year 2016 for purposes of allowing the engagement of the executive to this program in years when the net bonus is not sufficient for investment in the program. In those years, the executive may (i) acquire Company shares during 12 months to use the program, in pre-established purchase windows, as well as (ii) engage in the program using previously held shares (provided that these shares are not bound to the current open cycles in the program), according to criteria and conditions that are set forth in the manual of the *Matching* 2016 program.

Additionally, it is important to note that currently, adherence to the program is voluntary for all Vale executives, except for the President and Board of Executive Officers, for whom adherence and maintenance in the program is mandatory whenever there is net bonus payment sufficient for investment.

**b. Major Plan Objectives**

The major objectives of the compensation programs based on shares aforementioned are retention of the Company's major executives, keep them engaged to the Company and encourage the ownership feeling, so that they become committed to mid and long terms results.

**c. How the plans contribute for the achievement of these objectives**



The compensation plans based on shares aforementioned promote the alignment of the stockholders and the Statutory Directors interests, as they ensure that there are only gains for the executives as long as there are gains for the Company as well.

**d. Where the plans fit into the issuer s compensation policy**

The compensation plans based on shares aforementioned fit into Vale s compensation policy once they respond for the long-term alignment of executives with the interests of the Company and the shareholders, contributing for sustainability, and fostering a competitiveness level that complies with the Company business and retention of qualified professionals. They have been designed upon the support provided by specialized consulting services and upon the consideration of domestic and international market trends and moves.

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**e. How the plans promote the alignment between management and the issuer interests at short, mid and long term**

The design of compensation plans based on shares aforementioned incorporates the Company performance rate factors upon company stocks fluctuated value in three (for ILP and Matching) or four years (for PAV) and, in case of ILP or the replacing PAV starting in the 2014 cycle, Company performance relative to other companies of similar size within the same industry and the same reference period. This peer group is comprised by 20 companies, in the case of the ILP, and 12 companies, for PAV, currently in force for cycles starting in 2014. Thus, the plans align the medium- and long-term interests of both the managers and the Company. For further information on the changes made to the aforementioned programs, see item (a) above).

**f. Maximum number of comprised stocks**

Not applicable. No stock purchasing option is granted within the scope of either the ILP or PAV (replacing the ILP) or the Matching programs.

The number of virtual ordinary stocks granted as reference within the scope of the ILP varied with the short-term variable remuneration of each executive and with the average market price of the common shares issued by Vale at a set number of trading days before the approval. In case of PAV, replacing the ILP, the number of virtual shares granted as reference under this plan varies according to the base compensation of each executive and the average quotation of common shares issued by Vale in a specific number of trade days prior to the granting.

In the Matching Program, until 2013 (including), the executive had the option to allocate 30 or 50% of his bonus to purchase Company's class A preferred stocks and become eligible to participate in the program, after their potential and performance assessment. Starting in 2014, the calculation base for the Matching program was the fixed compensation received by Statutory Directors of the Company, and parameters for this calculation are pre-determined for each hierarchic level and each country where the Company operates. There have been some adjustments to the Matching program for fiscal year 2016 for purposes of allowing the engagement of the executive to this program in years when the net bonus is not sufficient for investment in the program. In those years, the executive may (i) acquire Company shares during 12 months to use the program, in pre-established purchase windows, as well as (ii) engage in the program using previously held shares (provided that these shares are not bound to the current open cycles in the program), according to criteria and conditions that are set forth in the manual of the *Matching 2016* program.

Additionally, it is important to note that adherence to the program is currently voluntary for all Vale executives, except for the President and the Board of Executive Officers, whose adherence and maintenance to the program is mandatory whenever the net bonus is sufficient for investment.

**g. Maximum number of options to be granted**

Not applicable. No stock purchasing option is granted within the scope of the compensation plans based on shares aforementioned.

**h. Stock purchasing conditions**

Not applicable. The ILP and Matching programs do not grant stock purchasing options to executives. Once assessed, the amount owed to executives within the scope of these plans is paid in cash.

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**i. Criteria for stock pricing or option reference period**

Not applicable. As no stock purchasing option is granted within the scope of either Plan, it makes no sense setting criteria for stock pricing or option reference period.

In the ILP, replaced by PAV, the amount owed to executives was calculated as per the valuation of a given number of Vale's virtual stocks within the period of the past three years, and is based upon the average quotation of Vale's ordinary stocks in the last 60 stock market floor sessions prior to the incentive grant, and the average quotation of Vale's ordinary stocks at the closing of the last 60 stock market floor sessions of the third year. This amount is then multiplied by a factor of Company performance relative to a peer group of 20 global companies of a similar size. Based on the Company's position relative to this group of global companies, the ILP may be increase in 50% or it may drop to zero.

Under PAV, starting in 2014, the calculation base is the base compensation received by Statutory Directors, and the parameters of this calculation will be pre-established for each hierarchical level in each of the countries where the Company operates. The program lasts for 4 years and not for 3 years, as described in the above paragraph. The program allows early gradual payments, starting in 2014. Therefore, payment may be done in accrued tranches of 20% (by the end of the second year), 30% (by the end of the third year), and 50% (by the end of the fourth year), provided that the performance condition at each is met, as set forth in PAV, namely, placement of Vale within the group comprised by 12 companies of similar size (peer group). The payment metric is the Total Shareholder Return (TSR) related to the peer group, considering the businesses and areas where Vale operates and the influence of variations in the Brazilian market. This percentage is decreasing, and on the third place, the value is unchanged, and starting on the tenth position and lower, there is no payment whatsoever.

However, for the Matching Plan, the net amount to be paid to executives as incentives is calculated upon the number of Company class A preferred stocks purchased by the executive to become eligible for the Plan.

**j. Criteria for establishing the reference period**

Not applicable. As mentioned above, compensation plans based on shares aforementioned do not grant stock purchasing option. Therefore, there is no reference period. However, both Programs pre-establish that the payment of incentives be made after a grace period of three years (for ILP and Matching) or four years (for PAV, replacing the ILP since 2014). In case of PAV, payment may be done in cumulative installments equal to 20% (by the end of the second year), 30% (by the end of the third year), and 50% (by the end of the fourth year), provided that the performance condition at each is met, as set forth in PAV, namely, placement of Vale within the group comprised by other 12 companies of similar size (peer group). The payment metric is the Total Shareholder Return (TSR) related to the peer group.

**k. Liquidation conditions**

Both compensation plans based on shares aforementioned pre-establish that premiums be paid in cash.

**I. Restrictions to stock transfer**

With respect to the Matching Plan, the executive will lose his/her right to the premium if he/she transfers, within the three-year period, any Company preferred stock that is plan-bonded.

Also under the Plan, operations with derivatives are void, when involving the sale of securities of Vale, as well as the lease to third parties of shares held by the member of the program, considering that one of the goals of the Matching program is the exposure and alignment of the executive to the Company traded shares in the period of the Plan. Operations described above are void as well (involving the sale of derivatives and share lease) related to any of Vale shares held by the executive, even when acquired out of the Plan, while the executive is an active member of the Plan.

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Not applicable to the ILP or PAV (replacing the ILP), though, once this Plan's participants are not required to retain their stockholding position in the company nor are they granted any stocks within the scope of the Plan.

**m. Criteria and events that, upon occurrence, shall result in the plan suspension, change or extinction**

With respect to the Matching Plan, any transference of Vale's issued preferred stocks that are plan-bonded before the three-year grace period or the executive's severance generate the extinction of any rights whatsoever that they would otherwise be entitled to within the scope of the Plan.

However, with respect to the ILP or the PAV (replacing the ILP), the executive's severance generates the extinction of any rights whatsoever that they would otherwise be entitled to within the scope of the Plan.

**n. Effects generated by the issuer's Board and Committee Manager's departure upon his/her rights as provided by the stock-based compensation plan**

As the Plan works as a retention mechanism, if the Manager resigns, he/she shall lose all his/her rights to share-based compensation. In case the Manager's contract is rescinded or not renewed by the Company, the participant shall receive the values he had purchased prior to the contract rescission or termination date.

**13.5 Stock-based compensation for Board of Directors and the statutory board.**

The Long Term Incentive (ILP), the Virtual Shares Program (PAV) (replaced the ILP) and Matching described in detail in 13.4, as they do not include or grant stock purchasing option, because they are based on the quotations of the Company's common and preferred shares, as applicable, in order to define the value in kind to be paid as incentive to the executive directors.

Thus, most information, as for instance, information related to the average weighted price in the fiscal year for (a) outstanding options at the beginning of the fiscal year, (b) options that are not redeemed during the fiscal year, (c) options redeemed during the fiscal year, (d) options expired during the fiscal year, and potential dilution in case all granted options were redeemed, is not applicable to the Company. Considering the above, tables below present, for reference purposes, information related to the incentive, including amounts paid each period.

**Share-based compensation for the current fiscal year (2016)**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Total</b>
<b>Number of members(1)</b>	22.00	8.00	8.00
Number of paid members (2)	0.00	8.00	8.00
<b>Weighted average price:</b>			
(a) Outstanding options at the beginning of the fiscal year	n/a	n/a	n/a
(b) Options that are not redeemed during the fiscal year	n/a	n/a	n/a
(c) Options redeemed during the fiscal year	n/a	n/a	n/a
(d) Options expired during the fiscal year	n/a	n/a	n/a
<b>Potential dilution in case all granted options were redeemed</b>	n/a	n/a	n/a

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(1) The total number of members corresponds to the average over the year of the number of members of the administrative entity as determined monthly, under the terms in item 13.2

(2) Corresponds to the number of directors and board members, as applicable, assigned with the share based compensation acknowledged in the results of the fiscal year, as set forth in Resolution CVM/SEP 02/2016.

Table of Contents**Share-based compensation for the current fiscal year (2015)**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Total</b>
<b>Number of members(1)</b>	21.00	8.00	29.00
Number of paid members (2)	0.00	8.00	8.00
Weighted average price:			
(a) Outstanding options at the beginning of the fiscal year	n/a	n/a	n/a
(b) Options that are not redeemed during the fiscal year	n/a	n/a	n/a
(c) Options redeemed during the fiscal year	n/a	n/a	n/a
(d) Options expired during the fiscal year	n/a	n/a	n/a
<b>Potential dilution in case all granted options were redeemed</b>	n/a	n/a	n/a

(1) The total number of members corresponds to the average over the year of the number of members of the administrative entity as determined monthly, under the terms in item 13.2

(2) Corresponds to the number of directors and board members, as applicable, assigned with the share based compensation acknowledged in the results of the fiscal year, as set forth in Resolution CVM/SEP 02/2016.

**Share-based compensation for the current fiscal year (2014)**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Total</b>
<b>Number of members(1)</b>	21.00	8.00	29.00
Number of paid members (2)	0.00	8.00	8.00
Weighted average price:			
(a) Outstanding options at the beginning of the fiscal year	n/a	n/a	n/a
(b) Options that are not redeemed during the fiscal year	n/a	n/a	n/a
(c) Options redeemed during the fiscal year	n/a	n/a	n/a
(d) Options expired during the fiscal year	n/a	n/a	n/a
<b>Potential dilution in case all granted options were redeemed</b>	n/a	n/a	n/a

(1) The total number of members corresponds to the average over the year of the number of members of the administrative entity as determined monthly, under the terms in item 13.2

(2) Corresponds to the number of directors and board members, as applicable, assigned with the share based compensation acknowledged in the results of the fiscal year, as set forth in Resolution CVM/SEP 02/2016.

**Share-based compensation for the current fiscal year (2013)**



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	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Total</b>
<b>Number of members(1)</b>	21.00	8.00	29.00
Number of paid members (2)	0.00	8.00	8.00
<b>Weighted average price:</b>			
(a) Outstanding options at the beginning of the fiscal year	n/a	n/a	n/a
(b) Options that are not redeemed during the fiscal year	n/a	n/a	n/a
(c) Options redeemed during the fiscal year	n/a	n/a	n/a
(d) Options expired during the fiscal year	n/a	n/a	n/a
<b>Potential dilution in case all granted options were redeemed</b>	n/a	n/a	n/a

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(1) The total number of members corresponds to the average over the year of the number of members of the administrative entity as determined monthly, under the terms in item 13.2

(2) Corresponds to the number of directors and board members, as applicable, assigned with the share based compensation acknowledged in the results of the fiscal year, as set forth in Resolution CVM/SEP 02/2016.

Table of Contents**Stock-based compensation paid in the current fiscal year (2016)**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Total</b>
Grant of stock options (Incentive Grant)			
Grant date (Grant date of incentive)		January 2013 and 2014 and March 2013 (1)	
Number of granted options	n/a	n/a	n/a
Deadline for options to become redeemable (Deadline to receive the incentive)		December 2015 and March 2016(2)	
Deadline for redeeming options	n/a	n/a	n/a
Grace period for stock transfer	n/a	n/a	n/a
Fair option price on grant date (Incentive Value)		3,273,745.45	3,273,745.45

(1) In January 2013 and 2014 the ILP and PAV cycles began and in March 2013 the Matching cycle began.

(2) On December 31, 2015 the ILP cycle beginning in 2013 January ended, as well as the first window of anticipation of the PAV cycle beginning in 2014 and in March 2016, the Matching cycle ended.

**Stock-based compensation paid in the fiscal year ended on December 31, 2015**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Total</b>
Grant of stock options (Incentive Grant)			
Grant date (Grant date of incentive)		January and March 2012(1)	
Number of granted options	n/a	n/a	n/a
Deadline for options to become redeemable (Deadline to receive the incentive)		December 2014 and March 2015(2)	
Deadline for redeeming options	n/a	n/a	n/a
Grace period for stock transfer	n/a	n/a	n/a
Fair option price on grant date (Incentive Value)		1,596,622.42	1,596,622.42

(1) In January 2012 the ILP cycle began and in March 2012 the Matching cycle began.

(2) On December 31, 2014 the ILP cycle ended and in March 2015 the Matching cycle ended.

**Stock-based compensation paid in the fiscal year ended on December 31, 2014**

	Board of Directors	Statutory Board	Total
<b>Grant of stock options (Incentive Grant)</b>			
Grant date (Grant date of incentive)		January and March 2011 (1)	
Number of granted options	n/a	n/a	n/a
Deadline for options to become redeemable		December 2013 and March 2014 (2)	
Deadline for redeeming options	n/a	n/a	n/a
Grace period for stock transfer	n/a	n/a	n/a
<b>Fair option price on grant date (Incentive Value)</b>		1,857,202.70	1,857,202.70

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(1) In January 2011 the ILP cycle began and in March 2011 the Matching cycle began.

(2) On December 31,2013 the ILP cycle ended and in March 2014 the Matching cycle ended.

Table of Contents**Stock-based compensation paid in the fiscal year ended on December 31, 2013**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Total</b>
<b>Grant of stock options (Incentive Grant)</b>			
Grant date (Grant date of incentive)		January and March 2010 (1)	
Number of granted options	n/a	n/a	n/a
Deadline for options to become redeemable		December 2012 and March 2013 (2)	
Deadline for redeeming options	n/a	n/a	n/a
Grace period for stock transfer	n/a	n/a	n/a
<b>Fair option price on grant date (Incentive Value)</b>		2,537,872.00	2,537,872.00

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(1) In January 2010 the ILP cycle began and in March 2011 the Matching cycle began.

(2) On December 31, 2012 the ILP cycle ended and in March 2013 the Matching cycle ended.

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**13.6 Information on outstanding options held by the Board of Directors and the Statutory Board**

Not applicable, since the remuneration plans based on Company shares do not include the granting of options for the purchase of shares, since they are based on the quote for Company shares or the compensation received by Company managers to define the cash amount to be paid as incentive to executive directors. For more information, see items 13.4 and 13.5 in this Reference Form

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**13.7. Options redeemed and shares delivered relative to stock-based remuneration for the Board of Directors and the Statutory Board**

Not applicable, since the remuneration plans based on Company shares do not include the granting of options for the purchase of shares, since they are based on the quote for Company shares or the compensation received by Company managers to define the cash amount to be paid as incentive to executive directors. For more information, see items 13.4 and 13.6 in this Reference Form.

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**13.8. Relevant information aiming at a broader understanding of data presented under items 13.5 through 13.7 above - pricing method used for stock and option values**

Not applicable. See items 13.4 and 13.7 in this Reference Form.

Table of Contents**13.9 Participation in stock, quotas, or other convertible securities held by Board of Executive Officers and fiscal council members by board or committee**

a. **The number of stocks or quotas issued by the Company, held directly or indirectly, in Brazil or overseas, and other stock-convertible securities by its board of directors members, statutory directors, or fiscal council members, grouped by board or committee, on the closing day of the last accounting reference period:**

**Shares issued by VALE S.A.**

<b>Stockholders 12/31/2015</b>	<b>Common</b>	<b>Preferred</b>
Board of Directors	6,700	15,780
Board of Executive Officers	9,300	1,593,367(*)
Fiscal Council	0	31,650
<b>Total</b>	<b>16,000</b>	<b>1,640,797</b>

[\*] Including 136,919 VALE.P shares owned as *American Depositary Receipts* (ADRs), at the New York Stock Exchange.

b. **The number of stocks or quotas and other securities convertible into shares or quotas issued by the direct or indirect controllers of the Company, held directly or indirectly, either in Brazil or overseas, by its board members, statutory directors, or fiscal council members, grouped by board or committee, on the closing day of the last accounting reference period:**

**Shares issued by VALEPAR S.A.**

<b>Stockholders 12/31/2015</b>	<b>Common</b>	<b>Preferred</b>
Board of Directors	0	0
Board of Executive Officers	0	0
Fiscal Council	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

**Shares issued by BNDES Participações S.A.**

<b>Stockholders 12/31/2015</b>	<b>Common</b>	<b>Preferred</b>
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Board of Directors	0	0
Board of Executive Officers	0	0
Fiscal Council	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

Shares Issued by LITEL PARTICIPAÇÕES S.A.

Stockholders 12/31/2015	Common	Preferred
Board of Directors	0	0
Board of Executive Officers	0	0
Fiscal Council	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

Table of Contents**Shares issued by BRADESPAR S.A.**

<b>Stockholders</b>		
<b>12/31/2015</b>	<b>Common</b>	<b>Preferred</b>
Board of Directors	300	59,437
Board of Executive Officers	0	0
Fiscal Council	0	0
<b>Total</b>	<b>300</b>	<b>59,437</b>

**Shares issued by MITSUI & CO., LTD**

<b>Stockholders</b>		
<b>12/31/2015</b>	<b>Common</b>	<b>Preferred</b>
Board of Directors	31,472	0
Board of Executive Officers	0	0
Fiscal Council	0	0
<b>Total</b>	<b>31,472</b>	<b>0</b>

**Shares issued by ELETRON S.A**

<b>Stockholders</b>		
<b>12/31/2015</b>	<b>Common</b>	<b>Preferred</b>
Board of Directors	0	0
Board of Executive Officers	0	0
Fiscal Council	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

**Shares issued by OPPORTUNITY ANAFI PARTICIPAÇÕES S.A**

<b>Stockholders</b>		
<b>12/31/2015</b>	<b>Common</b>	<b>Preferred</b>
Board of Directors	0	0
Board of Executive Officers	0	0
Fiscal Council	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

**Shares issued by BELAPART S.A**

<b>Stockholders</b>		
<b>12/31/2015</b>	<b>Common</b>	<b>Preferred</b>

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Board of Directors	0	0
Board of Executive Officers	0	0
Fiscal Council	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

Table of Contents**Shares issued by VALETRON S.A.**

<b>Stockholders</b>		
<b>12/31/2015</b>	<b>Common</b>	<b>Preferred</b>
Board of Directors	0	0
Board of Executive Officers	0	0
Fiscal Council	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

c. **The number of stocks or quotas and other securities convertible into shares or quotas issued by the Company's subsidiaries or companies under common control, held directly or indirectly, either in Brazil or overseas, by its board members, statutory directors, or fiscal council members, grouped by board or committee, on the closing day of the last accounting reference period:**

**Shares issued by MRS LOGÍSTICA S.A.**

<b>Stockholders</b>		
<b>12/31/2015</b>	<b>Common</b>	<b>Preferred</b>
Board of Directors	0	0
Board of Executive Officers	0	0
Fiscal Council	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

**Shares issued by PT VALE INDONESIA TBK**

<b>Stockholders</b>		
<b>12/31/2015</b>	<b>Common</b>	<b>Preferred</b>
Board of Directors	0	0
Board of Executive Officers	0	0
Fiscal Council	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

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**13.10 Information on Private Pension Funds granted to members of the Board of Directors and the statutory board**

Pursuant to contract provisions, the Company pays for both the employer's and the employee's share, up to 9% of the fixed compensation, to Valia - Fundação Vale do Rio Doce de Seguridade Social (Vale do Rio Doce Social Security Foundation), or to any other private pension fund chosen by the Statutory Board member.

At Valia, the minimum required age for a retirement plan is 45 years of age, after having contributed for the given plan for a minimum grace period of five years.

**Valia - Vale do Rio Doce Social Security Foundation**

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Total</b>
Total number of members (1)	21.00	8.00	29.00-
Number of paid members (2)	0.00	7.00	7.00
Plan name	Benefits Plan - Vale Mais (Plano de Beneficio Vale Mais)		
Number of managers that are eligible for retirement benefits	5, of which (i) 3 with Normal Retirement Income; and (ii) 1 with Early Retirement Income; and (iii) 1 with Differed Benefit Income through Retirement.(3)		
Eligibility for early retirement	<ul style="list-style-type: none"> <li>- be at least 45 years old;</li> <li>- have at least 5 years of uninterrupted participation in VALIA, counting from the most recent date of entering the Vale Mais Plan (except for participants migrating from the Defined Benefit Plan (Benefits Plan now closed) to the Vale Mais Plan;</li> <li>- have rescinded the labor contract with the employer or have lost the position of administrator.</li> </ul>		
Updated value of accumulated contributions to social security and pension plan up until the closing of the last accounting reference period, minus	R\$ 11,390,825.81 (4)		

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amounts paid by managers

Total accumulated amount of

contributions paid throughout the last  
accounting reference period, minus

amounts paid by managers

R\$ 1,574,639.67(5)

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Eligibility for advanced redemption and conditions

- The active participant who, on the date of rescission of his/her labor contract with the employer or on the date of loss of the position of administrator, does not opt to become an independent contributor or associate, nor opts for the institution of portability and is not enjoying benefits from the Vale Mais Plan, is eligible to receive the redemption.

The amount of the redemption shall be equal to: 100% of the participant's account + 1% of the employer's account per month of normal, ordinary contribution made by the participant to the Vale Mais Plan up to a maximum of 80% of this account.

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(1) The total number of members corresponds to the average over the year of the number of members of the administrative entity as determined monthly, under the terms in item 13.2

(2) Corresponds to the number of Board of Executive Officers and board members, as applicable, enrolled in the benefits plan, in accordance with Circular Letter CVM/SEP 02/2016.

(3) (2) One of the managers is entitled to two (2) benefits, one (1) Normal Retirement Income and one (1) Differed Benefit Income through Retirement.

(4) Amount corresponding to the sum of the Accounts of the Employer belonging to the participants on 12/31/2015.

(5) Amount corresponding to the sum of the ordinary contributions made by the employer in the name of each one of the participants during the fiscal year of 2015

	<b>Board of Directors</b>	<b>Statutory Board</b>	<b>Total</b>
Total number of members (1)	21.00	8.00	29.00-
Number of paid members (2)	0.00	1.00	1.00