Vale S.A.
Form 6-K
February 25, 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

February 2016

Vale S.A.

Avenida das Américas, 700 Bloco 8 Loja 318

Barra da Tijuca, Rio de Janeiro, RJ.

(Address of principal executive office)

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

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

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

(Check One) Yes o No x

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(Check One) Yes o No x

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

(Check One) Yes o No x

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

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Except where otherwise indicated the operational and financial information in this release is based on the consolidated figures in accordance with IFRS and, with the exception of information on investments and behavior of markets, quarterly financial statements are reviewed by the company s independent auditors. The main subsidiaries that are consolidated are the following: Compañia Minera Miski Mayo S.A.C., Mineração Corumbaense Reunida S.A., PT Vale Indonesia Tbk (formerly International Nickel Indonesia Tbk), Salobo Metais S.A, Vale Australia Pty Ltd., Vale International Holdings GMBH, Vale Canada Limited (formely Vale Inco Limited), Vale Fertilizantes S.A., Vale International S.A., Vale Manganês S.A., Vale Moçambique S.A., Vale Nouvelle-Calédonie SAS, Vale Oman Pelletizing Company LLC and Vale Shipping Holding PTE Ltd.

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Vale s performance in 2015

Rio de Janeiro, February 25, 2016 Vale S.A. (Vale) delivered a sound operational performance, achieving several annual production records in 2015, such as: (i) iron ore annual supply of 345.9 Mt; (ii) Carajás production of 129.6 Mt; and (iii) nickel production of 291,000 t; (iv) copper production of 423,800 t.

Gross revenues totaled US$ 26.047 billion in 2015, decreasing US$ 12.189 billion vs. 2014 as a result of lower prices of iron ore fines (US$ 8.614 billion), pellets (US$ 2.030 billion), nickel (US$ 1.394 billion) and others, partly offset by higher sales volumes (US$ 2.060 billion).

Quarterly gross revenues totaled US$ 5.986 billion in 4Q15, decreasing US$ 632 million vs. 3Q15, as a result of lower prices of iron ore fines (US$ 739 million), nickel (US$ 112 million) and others, partly offset by higher sales volumes (US$ 325 million).

Costs and expenses, net of depreciation charges, totaled US$ 18.846 billion in 2015, decreasing US$ 5.908 billion vs. 2014. Costs decreased US$ 4.223 billion (20%), SG&A and other expenses decreased US$ 1.260 billion (65%), R&D decreased US$ 257 million (35%) and pre-operating and stoppage expenses decreased US$ 168 million (19%) in 2015 vs. 2014.

Quarterly costs and expenses, net of depreciation charges, totaled US$ 4.595 billion in 4Q15, practically in line with the US$ 4.649 billion recorded in 3Q15. Costs increased US$ 65 million (2%), mainly due to the sales volume increase in the Ferrous Minerals and the Base Metals business segments. SG&A and other expenses decreased US$ 105 million (63%), mainly due to the positive one-off effect of the adjustment in Asset Retirement Obligations(1) (ARO) recorded in 4Q15. R&D decreased US$ 2 million (2%) and pre-operating and stoppage expenses decreased US$ 12 million (7%) in 4Q15 vs. 3Q15.

C1 cash cost FOB port per metric ton for iron ore fines ex-royalties reached the lowest mark in the iron ore industry at US$ 11.9/t in 4Q15 vs. US$ 12.7/t in 3Q15. The reduction in C1 cash cost was mainly driven by the BRL depreciation and by the ongoing cost reduction initiatives.

Adjusted EBITDA was US$ 7.081 billion in 2015, 47% lower than in 2014 mainly as a result of lower sales prices which impacted EBITDA negatively by US$ 14.005 billion. Higher sales volumes and lower costs and expenses partly offset the EBITDA impact of lower prices by US$ 1.237 billion and US$ 6.746 billion, respectively. Adjusted EBITDA margin was 27.7% in 2015.

(1) Provision for mine and other assets closures

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Quarterly adjusted EBITDA was US$ 1.391 billion in 4Q15, 26% lower than in 3Q15 mainly as a result of lower sales prices which impacted EBITDA negatively by US$ 943 million. Higher sales volumes and lower costs(2) and expenses partly offset the EBITDA impact of lower prices by US$ 57 million and US$ 334 million, respectively. Adjusted EBITDA margin was 23.6% in 4Q15.

Quarterly adjusted EBITDA was positively impacted by the above-mentioned effect of the adjustment in ARO (US$ 331 million) and negatively impacted by decisions and/or events from previous quarters, with effects in 4Q15, such as: (i) bunker oil hedge accounting program for iron fines (US$ 134 million); (ii) provisional copper price adjustments (US$ 60 million); (iii) provisional manganese ore price adjustments (US$ 28 million); and (iv) the write-off of materials inventories in Base Metals (US$ 31 million).

Capital expenditures totaled US$ 2.193 billion in 4Q15 and US$ 8.401 billion in 2015, decreasing US$ 3.578 billion vs. 2014. Investments in project execution totaled US$ 1.366 billion and US$ 5.548 billion in 4Q15 and in 2015, respectively. Sustaining capex totaled US$ 827 million and US$ 2.853 billion in 4Q15 and in 2015, respectively. Total annual capex exceeded the previous guidance by US$ 0.2 billion as a result of a better than expected execution of the S11D project and its associated logistics.

Asset sales totaled US$ 3.525 billion in 2015, with US$ 1.316 billion coming from the sale of 12 very large ore carriers to Chinese shipowners, US$ 1.089 billion coming from the sale of 36.4% of MBR preferred shares, US$ 900 million from another goldstream transaction and US$ 97 million from the sale of energy assets. In 4Q15, Vale sold four very large ore carriers of 400,000 tons deadweight to ICBC Financial Leasing. The transaction totaled US$ 423 million.

Net loss totaled US$ 12.129 billion in 2015 vs. a net income of US$ 657 million in 2014. The US$ 12.786 billion decrease in income was mostly driven by higher impairment charges recorded in 2015 vs. 2014 and the effect on financial results of the 47% end to end depreciation of the BRL against the USD in 2015. Underlying earnings were negative US$ 1.698 billion in 2015, against positive US$ 4.419 billion in 2014.

Impairments on assets and on investments(3) and the recognition of onerous contracts totaled US$ 9.372 billion in 2015. The increase of US$ 8.189 billion vs. 2014 was mainly due to the significant reduction in the price assumptions used for the impairment tests.

Quarterly net loss totaled US$ 8.569 billion in 4Q15 compared to a net loss of US$ 2.117 billion in 3Q15. The US$ 6.452 billion decrease was mostly driven by impairments, which

(2) Net effect on costs after adjusting for higher volumes.

(3) Of associates and joint ventures.

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were partly offset mainly by the effect on financial results of monetary and foreign exchange variation gains. Underlying earnings were negative US$ 1.032 billion in 4Q15, against negative US$ 961 million in 3Q15.

Gross debt totaled US$ 28.853 billion as of December 31, 2015, slightly higher than the US$ 28.675 billion as of September 30, 2015, but in line with the US$ 28.807 billion registered as of December 31, 2014. After the dividends payment of US$ 1.5 billion in 2015, net debt totaled US$ 25.234 billion vs. US$ 24.685 billion as of December 31, 2014 and US$ 24.213 billion as of September 30, 2015, with a cash balance of US$ 3.619 billion. Average debt maturity was 8.1 years with an average cost of debt of 4.47% per annum.

EBITDA from the Ferrous Minerals business segment decreased 15% in 4Q15 driven by lower realized prices despite higher volumes and reductions in costs and expenses

- Adjusted EBITDA of the Ferrous Minerals business segment was US$ 5.899 billion in 2015, 47.9% lower than in 2014, mainly as result of lower sales prices (-US$ 11.414 billion), which were partially offset by real competitiveness gains of US$ 3.477 billion such as: (i) marketing and commercial initiatives (US$ 680 million); (ii) higher sales volumes (US$ 1.599 billion); (iii) favorable renegotiations of chartering freight contracts (US$ 300 million); and (iv) the ongoing cost reduction initiatives (US$ 898 million).

- Adjusted EBITDA for Ferrous Minerals in 4Q15 was US$ 1.409 billion, US$ 243 million lower than the US$ 1.652 billion achieved in 3Q15, mainly as a result of lower realized sales prices (US$ 782 million), which were partially offset by higher sales volumes (US$ 62 million), lower expenses(4) (US$ 245 million) and lower costs(5) (US$ 188 million).

- Adjusted EBITDA will no longer be impacted by Vale s hedge accounting program since all outstanding bunker oil exposure recorded under this program was settled in 4Q15. Vale s hedge accounting program for iron ore fines had a negative impact of US$ 134 million in 4Q15 and US$ 412 million in 2015.

- Cash flow, measured as adjusted EBITDA(6) less sustaining and growth capex, was US$ 363 million in 4Q15.

- CFR dmt reference price for iron ore fines (ex-ROM) decreased US$ 10.9/t from US$ 56.0/t in 3Q15 to US$ 45.1/t in 4Q15 whereas CFR/FOB wmt price for iron ore fines

(4) The reduction in expenses is mainly driven by the positive one-off effect of the adjustment in Asset Retirement Obligations (ARO).

(5) Net effect on costs, after adjusting for volume.

(6) Excluding the positive one off effect of the Asset Retirement Obligations (ARO).

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(ex-ROM) decreased US$ 9.3/t from US$ 46.5/t per metric ton in 3Q15 to US$ 37.2/t in 4Q15 after adjusting for moisture and the effect of the lower FOB sales prices on 32% of the total sales volumes.

- Product quality measured by Fe content improved from 63.5% in 3Q15 to 63.7% in 4Q15 mostly due to the ramp-up of the N4WS and N5S mines and of the Itabirites projects.

- Unit freight cost per iron ore metric ton, excluding the impact of hedge accounting, was US$ 14.1/t in 4Q15, US$ 2.3/t lower than the US$ 16.4/t recorded in 3Q15.

- Unit cash costs and expenses for iron ore fines landed in China (and adjusted for quality and moisture and excluding the positive one-off effect of the ARO adjustment) decreased from US$ 34.2/t in 3Q15 to US$ 32.0/t in 4Q15 on a dry metric ton (dmt) basis.

- Sustaining capex for iron ore fines totaled US$ 178 million (US$ 2.3/ wmt) in 4Q15, US$ 0.8/ wmt lower than in 3Q15.

- Physical progress reached 80% at the S11D mine and plant, 57% at the railway and port, and 81% on the railway spur.

EBITDA from the Base Metals business segment decreased with lower nickel and copper prices

- Sales revenues totaled US$ 1.458 billion in 4Q15, US$ 103 million higher than in 3Q15 mainly due to higher volumes that were partially offset by lower LME nickel and copper prices.

- Realized prices were negatively impacted by US$ 60 million in provisional copper price adjustments.

- Adjusted EBITDA was US$ 111 million in 4Q15, US$ 82 million lower than in 3Q15, mainly as a result of: (i) lower prices (US$ 158 million), including the above- mentioned negative impact in provisional copper price adjustments; and (ii) the negative impact of the write-off of materials inventories in 4Q15 (US$ 31 million).

- Adjusted EBITDA was impacted by VNC s negative EBITDA of US$ 107 million in 4Q15.

- Salobo´s EBITDA remained in line with 3Q15´s EBITDA at US$ 75 million despite weaker copper prices as production reached a quarterly record of 42,000 t in 4Q15.

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- Salobo is expected to reach its full production capacity in 2H16 as rain decreases and higher grade mine faces are accessed.

EBITDA from the Coal business segment decreased as a result of one-off effects on costs and lower prices

- Adjusted EBITDA was negative US$ 149 million in 4Q15, compared to negative US$ 129 million in 3Q15, mainly driven by lower prices and higher costs in Australia.

- Costs in Mozambique in 4Q15 were in line with 3Q15, after adjusting for the effects of higher volumes whereas costs in Australia increased in 4Q15 due to the write-down of mine development expenses.

- Moatize II reached 99% physical progress with a capital expenditure of US$ 196 million while the Nacala Logistics Corridor (NLC) reached 97% physical progress with capital expenditures of US$ 259 million in 4Q15.

EBITDA from the Fertilizers business segment improved in 2015 mainly driven by lower costs and expenses

- Adjusted EBITDA for the Fertilizer business segment increased to US$ 567 million in 2015 from US$ 278 million in 2014 with an increase of US$ 289 million mainly driven by exchange rates and commercial and cost savings initiatives.

- Adjusted EBITDA for the Fertilizer business segment decreased to US$ 117 million in 4Q15 from US$ 197 million in 3Q15, mainly driven by lower sales volumes (US$ 86 million) as a result of the usual market seasonality.

In 2015 we successfully reduced our costs and expenses, progressed with the implementation of our critical projects and advanced with our divestment process while maintaining our gross debt position.

Despite all our efforts, our accomplishments in 2015 were overshadowed by Samarco s tailings dam failure in the beginning of November. We have been working diligently with Samarco since the beginning and will remain fully committed to supporting the people and the environment of the affected regions.

We acknowledge the additional challenges brought by the declining commodity prices and the consequent impact on our cash flow generation. Nonetheless we remain confident in our ability to move through these more difficult times, by maintaining operating discipline and the courage to implement the required strategic actions.

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Selected financial indicators

US$ million	2015	2014	2013	2012	2011
Gross operating revenues	26,047	38,236	47,486	48,753	62,345
Net operating revenues	25,609	37,539	46,767	47,694	60,946
Adjusted EBIT	2,734	8,497	17,576	14,430	28,748
Adjusted EBIT margin (%)	10.7	22.6	37.6	30.3	47.2
Adjusted EBITDA	7,081	13,353	22,560	19,178	33,730
Adjusted EBITDA margin (%)	27.7	35.6	48.2	40.2	55.3
Net income (loss)	(12,129)	657	585	5,197	22,652
Underlying earnings	(1,698)	4,419	12,269	10,365	23,015
Underlying earnings per share on a fully diluted basis (US$ / share)	(0.33)	0.86	2.38	2.03	4.39
Total gross debt	28,853	28,807	29,655	30,546	23,143
Cash and cash equivalent	3,619	4,122	5,324	6,078	3,531
Total Net Debt	25,234	24,685	24,331	24,468	19,612
Total gross debt/ adjusted EBITDA (x)	4.1	2.2	1.3	1.6	0.7
Capital expenditures	8,401	11,979	14,233	16,196	16,252

US$ million	4Q15	3Q15	4Q14
Gross operating revenues	5,986	6,618	9,226
Net operating revenues	5,899	6,505	9,072
Adjusted EBIT	320	834	856
Adjusted EBIT margin (%)	5.4	12.8	9.4
Adjusted EBITDA	1,391	1,875	2,187
Adjusted EBITDA margin (%)	23.6	28.8	24.1
Net income (loss)	(8,569)	(2,117)	(1,849)
Underlying earnings	(1,032)	(961)	(251)
Underlying earnings per share on a fully diluted basis (US$ / share)	(0.20)	(0.19)	(0.05)
Capital expenditures	2,193	1,879	3,747

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Operating revenues

Gross operating revenues in 2015 were US$ 26.047 billion, 31.8% lower than the US$ 38.236 billion registered in 2014. The decrease in sales revenues was mainly due to lower realized prices of iron ore fines (US$ 8.614 billion), pellets (US$ 2.030 billion) and nickel (U$ 1.394 billion) which were partially offset by higher volumes of iron ore and pellets (US$ 1.869 billion) and base metals (US$ 666 million).

Gross operating revenues in 4Q15 were US$ 5.986 billion, 9.5% lower than in 3Q15. The decrease in sales revenues was mainly due to lower realized prices (US$ 956 million), partly offset by higher sales volumes (US$ 325 million).

The tables below show gross operating revenues by destination and by business segments, with the following highlights:

- Revenues by destination in 2015 were in line with 2014, with sales to Asia representing 51.3% of total gross revenues in 2015.

- Contribution by business segment was marked by: (i) the increase in the Base Metals and the Fertilizers business segment share in Vale s total gross revenues to 23.7% and 9.2% in 2015 from 20.1% and 6.8% in 2014, respectively; and (ii) the decrease in the Ferrous Minerals business segment share to 64.6% in 2015 from 68.4% in 2014.

Gross operating revenue by destination

US$ million	4Q15	3Q15	4Q14	2015	%	2014	%
North America	**450**	**409**	**642**	**2,008**	**7.7**	**2,771**	**7.2**
USA	168	188	278	855	3.3	1,368	3.6
Canada	279	206	361	1,123	4.3	1,393	3.6
Mexico	3	15	3	31	0.1	10	
South America	**964**	**1,289**	**1,769**	**4,807**	**18.5**	**7,308**	**19.1**
Brazil	871	1,191	1,645	4,396	16.9	6,624	17.3
Others	93	98	124	411	1.6	684	1.8
Asia	**3,189**	**3,550**	**4,798**	**13,371**	**51.3**	**19,590**	**51.2**
China	2,180	2,556	3,091	9,096	34.9	12,657	33.1
Japan	460	498	848	1,959	7.5	3,627	9.5
South Korea	186	171	300	790	3.0	1,555	4.1
Others	363	325	559	1,526	5.9	1,751	4.6
Europe	**1,144**	**1,114**	**1,556**	**4,663**	**17.9**	**6,697**	**17.5**
Germany	355	332	442	1,437	5.5	2,111	5.5
Italy	111	104	130	461	1.8	849	2.2
Others	678	678	985	2,765	10.6	3,737	9.8

Middle East	**170**	**227**	**288**	**969**	**3.7**	**1,266**	**3.3**
Rest of the World	**69**	**29**	**173**	**230**	**0.9**	**605**	**1.6**
Total	**5,986**	**6,618**	**9,226**	**26,047**	**100.0**	**38,236**	**100.0**

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Gross operating revenue by business segments

US$ million	4Q15	3Q15	4Q14	2015	%	2014	%
Ferrous minerals	**3,883**	**4,367**	**6,213**	**16,821**	**64.6**	**26,140**	**68.4**
Iron ore fines	2,956	3,290	4,593	12,382	47.5	19,439	50.8
ROM	14	27	42	111	0.4	233	0.6
Pellets	806	908	1,308	3,717	14.3	5,424	14.2
Manganese ore	4	24	92	101	0.4	226	0.6
Ferroalloys	10	3	51	82	0.3	218	0.6
Others	93	115	127	428	1.6	600	1.6
Coal	**108**	**127**	**201**	**526**	**2.0**	**739**	**1.9**
Metallurgical coal	98	115	181	480	1.8	661	1.7
Thermal coal	10	12	20	47	0.2	78	0.2
Base metals	**1,458**	**1,355**	**1,948**	**6,171**	**23.7**	**7,694**	**20.1**
Nickel	782	785	1,064	3,412	13.1	4,468	11.7
Copper	413	368	556	1,728	6.6	2,122	5.5
PGMs	96	59	152	404	1.6	564	1.5
Gold	122	115	115	477	1.8	418	1.1
Silver	8	7	11	31	0.1	37	0.1
Others	37	22	50	119	0.5	85	0.2
Fertilizer nutrients	**513**	**747**	**607**	**2,386**	**9.2**	**2,585**	**6.8**
Potash	33	47	45	147	0.6	169	0.4
Phosphates	387	588	432	1,818	7.0	1,904	5.0
Nitrogen	76	92	108	355	1.4	411	1.1
Others	17	20	22	66	0.3	101	0.3
Others	**24**	**22**	**257**	**143**	**0.5**	**1,078**	**2.8**
Total	**5,986**	**6,618**	**9,226**	**26,047**	**100.0**	**38,236**	**100.0**

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Costs and expenses

ANNUAL PERFORMANCE

Costs and expenses decreased to US$ 22.875 billion in 2015 from the US$ 29.042 billion recorded in 2014, due to: (i) the impact of exchange rate variations in COGS and SG&A (US$ 4.9 billion), (ii) cost savings initiatives (US$ 1.8 billion), (iii) positive one-off effects from gains on the goldstream transaction recorded in 1Q15 (US$ 0.2 billion) and from the adjustment in the Asset Retirement Obligations (ARO)(7) recorded in 4Q15 (US$ 0.3 billion); and (iv) the reduction in expenses excluding the above mentioned positive one-off effects (US$ 0.7 billion). These reductions were partly offset by higher sales volumes (US$ 1.0 billion) and by the negative impact of the bunker oil hedge accounting program for iron ore fines (US$ 0.4 billion).

Costs will no longer be impacted by Vale s hedge accounting program since all outstanding bunker oil exposure recorded under this program was settled in 4Q15. After deducting the above-mentioned positive one-off effects and the negative impact of the bunker oil hedge accounting program for iron ore fines, costs and expenses decreased US$ 6.0 billion, a reduction of 20.7%.

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Costs and expenses decreased to US$ 5.579 billion in 4Q15 from the US$ 5.671 billion recorded in 3Q15, mainly due to the positive one-off effect from the adjustment in ARO (US$ 331 million) and exchange rate variations in COGS & SG&A (US$ 210 million), which were partly offset by higher sales volumes (US$ 282 million) and by an increase in Other Operating Expenses (US$ 154 million).

Costs and expenses

US$ million	4Q15	3Q15	4Q14	2015	2014
Costs	**5,119**	**5,040**	**6,892**	**20,513**	**25,064**
Expenses	**460**	**631**	**1,324**	**2,362**	**3,978**
Total costs and expenses	**5,579**	**5,671**	**8,216**	**22,875**	**29,042**
Depreciation	984	1,022	1,242	4,029	4,288
Costs and expenses ex-depreciation	**4,595**	**4,649**	**6,974**	**18,846**	**24,754**

(7) The annual revision for the provisions for mine and other assets closures generated a positive impact as a result of the life extension of some mines and a revision on the scope of the work needed for closing the assets.

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Cost of Goods Sold (COGS)

ANNUAL PERFORMANCE

COGS(8) totaled US$ 20.513 billion in 2015, reducing US$ 4.6 billion in comparison with the US$ 25.064 billion recorded in 2014, despite the increase in sales volumes in iron ore fines, pellets and base metals in 2015. Ferrous Minerals costs decreased by US$ 3.041 billion, Fertilizers costs decreased by US$ 510 million, Base Metals costs decreased by US$ 318 million and Coal costs decreased by US$ 214 million in 2015 vs. 2014.

After adjusting for the effects of higher sales volumes, costs decreased by US$ 5.5 billion in 2015 vs. 2014. The cost reductions were mostly driven by exchange rate variations (US$ 4.2 billion) and by the positive results of cost reduction initiatives (US$ 1.8 billion), especially in the Ferrous Minerals business segment, as a result of by reductions in iron ore fines and pellets freight, the ramp-ups of the N4WS and N5S mines, and the Vargem Grande and both the Conceição I and II Itabirites projects.

QUARTERLY PERFORMANCE

COGS(9) totaled US$ 5.119 billion in 4Q15, increasing US$ 79 million in comparison with the US$ 5.040 billion recorded in 3Q15, mainly due to the increase in sales volumes of iron ore fines and base metals in 4Q15.

After adjusting for the effects of higher sales volumes, costs decreased by US$ 203 million in 4Q15 vs. 3Q15. The cost reductions were mainly driven by exchange rate variations (US$ 186 million) and by the positive results of cost reduction initiatives in iron ore fines (US$ 153 million), which were partly offset by a net increase in costs in other business segments.

Further details on cost performance are provided in the Performance of the Business Segments section.

COGS by business

US$ million	4Q15	3Q15	4Q14	2015	%	2014	%
Ferrous minerals	2,846	2,813	4,278	11,759	57.3	14,800	59.0
Base metals	1,551	1,406	1,718	5,863	28.6	6,181	24.7
Coal	296	239	285	977	4.8	1,191	4.8
Fertilizers	386	536	492	1,763	8.6	2,273	9.1
Other products	40	46	119	151	0.7	619	2.5
Total COGS	**5,119**	**5,040**	**6,892**	**20,513**	**100.0**	**25,064**	**100.0**

Depreciation	875	861	1,122	3,529	3,857
COGS, ex-depreciation	**4,244**	**4,179**	**5,770**	**16,984**	**21,207**

(8) COGS currency exposure in 2015 was made up as follows: 49% Brazilian Reais, 34% US dollar, 13% Canadian dollar,1% Australian dollar and 3% other currencies.

(9) COGS currency exposure in 4Q15 was made up as follows: 45% Brazilian Reais, 37% US dollar, 13% Canadian dollar,2% Australian dollar and 3% other currencies.

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Expenses

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Total expenses decreased to US$ 2.362 billion in 2015 from the US$ 3.978 billion recorded in 2014, mainly due to: (i) a reduction in Other Expenses(10) (US$ 851 million); (ii) SG&A (US$ 447 million); and (iii) R&D (US$ 257 million). After deducting the positive one-off effects of US$ 230 million from the goldstream transaction recorded in 1Q15 and adjusting for the Asset Retirement Obligations (ARO) of US$ 331 million recorded in 4Q15, expenses decreased by US$ 1.1 billion, a reduction of 26.5%.

SG&A totaled US$ 652 million in 2015, representing a 40.7% decrease from the US$ 1.099 billion recorded in 2014. SG&A net of depreciation reduced by US$ 357 million in 2015 vs. 2014, as a result of the depreciation of the BRL and of the CAD (US$ 179 million), as well as the simplification of corporate functions (US$ 178 million).

R&D expenses totaled US$ 477 million in 2015, representing a 35.0% decrease from the US$ 734 million recorded in 2014. R&D expenses were mostly concentrated in iron ore and pellets (US$ 128 million) and nickel (US$ 103 million).

Pre-operating and stoppage expenses totaled US$ 1.027 billion in 2015, representing a 5.6% decrease from the US$ 1.088 billion recorded in 2014. The decrease in pre-operating expenses at VNC, S11D and Vargem Grande Itabirites(11) were partly offset by their increase at Long Harbour and Nacala.

Other operating expenses(12) totaled US$ 767 million in 2015, representing a 27.4% decrease from the US$ 1.057 billion recorded in 2014.

QUARTERLY PERFORMANCE

Total expenses decreased to US$ 460 million in 4Q15 from the US$ 631 million recorded in 3Q15, mainly due to the positive one-off effect of the adjustment in ARO (US$ 331 million), partly offset by an increase in Other Expenses (US$ 154 million) and SG&A (US$ 36 million).

SG&A totaled US$ 167 million in 4Q15, representing a 27.5% increase from the US$ 131 million recorded in 3Q15, and a 45.4% decrease from the US$ 306 million recorded in 4Q14. SG&A net of depreciation increased by US$ 29 million in 4Q15 vs. 3Q15, despite the positive impact of the depreciation of the BRL and of the CAD (US$ 5 million), mainly as a result of: (i)

(10) Including the positive one-off effects of US$ 230 million from the goldstream transaction recorded in 1Q15 and of US$ 331 million from the adjustment in ARO recorded in 4Q15.

(11) Vargem Grande Itabiritos project was concluded in 2014.

(12) After deducting the positive one-off effects of US$ 230 million from the goldstream transaction recorded in 1Q15 and of US$ 331 million from the adjustment in ARO recorded in 4Q15.

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a gain on the reversal of the provision for doubtful debts recorded in 3Q15 (US$ 10 million); (ii) the impact of the collective bargaining agreement for corporate and sales functions located in Brazil (US$ 4 million); (iii) higher expenses for global IT services (US$ 3 million); and (iv) termination of corporate contracts in Australia (US$ 2 million).

R&D expenses totaled US$ 119 million in 4Q15, in line with the US$ 121 million recorded in 3Q15, and representing a 49.4% decrease from the US$ 235 million recorded in 4Q14. R&D expenses were mostly concentrated in iron ore and pellets (US$ 27 million) and nickel (US$ 30 million).

Pre-operating and stoppage expenses totaled US$ 238 million in 4Q15, representing a 10.5% decrease from the US$ 266 million recorded in 3Q15, and representing a 18.5% decrease from the US$ 292 million recorded in 4Q14. Lower pre-operating expenses at VNC were the main driver for the reduction achieved in 4Q15 vs. 4Q14.

Other operating expenses totaled US$ 267 million in 4Q15, representing a 136.3% increase from the US$ 113 million recorded in 3Q15, mainly due to write-off of assets and settlement of insurance claims, and representing a 45.6% decrease from the US$ 491 million recorded in 4Q14.

Expenses

US$ million	4Q15	3Q15	4Q14	2015	%	2014	%
SG&A ex-depreciation	**129**	**100**	**247**	**519**		**876**	
SG&A	**167**	**131**	**306**	**652**	**27.6**	**1,099**	**27.6**
Administrative	**150**	**132**	**292**	**603**	**25.5**	**1,019**	**25.6**
Personnel	55	56	118	267	11.3	436	11.0
Services	33	26	53	113	4.8	196	4.9
Depreciation	38	31	59	133	5.6	223	5.6
Others	24	19	62	90	3.8	164	4.1
Selling	**17**	**(1)**	**14**	**49**	**2.1**	**80**	**2.0**
R&D	**119**	**121**	**235**	**477**	**20.2**	**734**	**18.5**
Pre-operating and stoppage expenses(1)	**238**	**266**	**292**	**1,027**	**43.5**	**1,088**	**27.4**
VNC	93	97	141	394	16.7	549	13.8
Long Harbour	47	65	42	278	11.8	125	3.1
S11D	14	11	15	52	2.2	29	0.7
Moatize	14	25	10	62	2.6	16	0.4
Others	70	68	84	241	10.2	369	9.3
Other operating expenses(2)	**(64)**	**113**	**491**	**206**	**8.7**	**1,057**	**26.6**
Total Expenses	**460**	**631**	**1,324**	**2,362**	**100.0**	**3,978**	**100.0**
Depreciation	110	161	120	501		431	
Expenses ex-depreciation	**350**	**470**	**1,204**	**1,861**		**3,547**	

(1) Includes U$ 67 million of depreciation charges in 4Q15, US$ 83 million in 3Q15, US$ 61 million in 4Q14, US$ 314 million in 2015 and US$ 209 million in 2014.

(2) Include the positive one-off effects of US$ 230 million from the gold stream transaction recorded in 1Q15 and of US$ 331 million from the adjustment in ARO recorded in 4Q15.

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Adjusted earnings before interest, taxes, depreciation and amortization(13)

ANNUAL PERFORMANCE

Adjusted EBITDA was US$ 7.081 billion in 2015, 47% lower than the US$ 13.353 billion registered in 2014, mainly as a result of lower sales prices in ferrous minerals (-US$ 10.734 billion) and base metals (-US$ 2.195 billion). Lower costs and expenses partly offset the impact of lower prices by US$ 6.746 billion. Adjusted EBITDA margin was 27.7% in 2015.

Adjusted EBITDA was impacted by the following effects: (i) gains on the goldstream transaction recorded in 1Q15 (US$ 230 million), (ii) the adjustment in the Asset Retirement Obligations(14) which reduced expenses in 4Q15 (US$ 331 million), and (iii) the hedge accounting related to freight costs which increased iron ore fines costs (-US$ 412 million).

Adjusted EBITDA will no longer be impacted by Vale s hedge accounting program since all outstanding bunker oil exposure recorded under this program was settled in 4Q15.

Adjusted EBIT was US$ 2.734 billion in 2015, 67.8% lower than in 2014.

QUARTERLY PERFORMANCE

Adjusted EBITDA was US$ 1.391 billion in 4Q15, 25.8% lower than in 3Q15, mainly as a result of lower sales prices in most of our commodities which impacted EBITDA negatively by US$ 943 million. Lower costs and expenses partly offset the impact of lower prices by US$ 334 million. Adjusted EBITDA margin was 23.6% in 4Q15.

Quarterly adjusted EBITDA was positively impacted by the above-mentioned effect of the adjustment in ARO (US$ 331 million) and negatively impacted by decisions and/or events from previous quarters, with effects in 4Q15, such as: (i) bunker oil hedge accounting program for iron fines (US$ 134 million); (ii) provisional copper price adjustments (US$ 60 million); (iii) provisional manganese ore price adjustments (US$ 28 million); and (iv) the write-off of materials inventories in Base Metals (US$ 31 million).

Adjusted EBIT was US$ 320 million in 4Q15, 61.6% lower than in 3Q15.

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(13) Net revenues less costs and expenses net of depreciation plus dividends received.

(14) The annual revision of the provisions for mine and other assets closures generated a positive impact as a result of the extension of working life for some of the mines and a revision of the scope of the work needed for closing the assets.

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Adjusted EBITDA

US$ million	4Q15	3Q15	4Q14	2015	2014
Gross operating revenues	5,986	6,618	9,226	26,047	38,236
Net operating revenues	5,899	6,505	9,072	25,609	37,539
COGS	(5,119)	(5,040)	(6,892)	(20,513)	(25,064)
SG&A	(167)	(131)	(306)	(652)	(1,099)
Research and development	(119)	(121)	(235)	(477)	(734)
Pre-operating and stoppage expenses	(238)	(266)	(292)	(1,027)	(1,088)
Other operational expenses	64	(113)	(491)	(206)	(1,057)
Adjusted EBIT	**320**	**834**	**856**	**2,734**	**8,497**
Depreciation, amortization & depletion	984	1,022	1,242	4,029	4,288
Dividends received	87	19	89	318	568
Adjusted EBITDA	**1,391**	**1,875**	**2,187**	**7,081**	**13,353**

Adjusted EBITDA by business area

US$ million	4Q15	3Q15	4Q14	2015	2014
Ferrous minerals	1,409	1,652	1,702	5,899	11,321
Coal	(149)	(129)	(204)	(508)	(669)
Base metals	111	193	582	1,388	2,521
Fertilizer nutrients	117	197	75	567	278
Others	(97)	(38)	32	(265)	(98)
Total	**1,391**	**1,875**	**2,187**	**7,081**	**13,353**

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Net income

ANNUAL PERFORMANCE

Vale posted a net loss of US$ 12.129 billion in 2015 compared to a net gain of US$ 657 million in 2014. The US$ 12.786 billion decrease was mostly driven by: (i) lower EBITDA (-US$ 6.272 billion); (ii) higher impairments on assets, onerous contracts and investments(15) (-US$ 8.189 billion), and (iii) higher losses on foreign exchange and monetary variation (-US$ 5.280 billion). This decrease was partially offset by higher deferred taxes (US$ 5.638 billion) and lower financial expenses (US$ 1.681 billion).

Underlying earnings were a negative US$ 1.698 billion in 2015, mainly due to: (i) the impact of lower EBITDA (-US$ 6.272 billion); (ii) the financial loss on derivatives(16) (-US$ 975 million); and (iii) loss on equity income from affiliated companies (-US$ 439 million). The negative impact on underlying earnings was partly offset by deferred taxes (US$ 5.489 billion).

Impairments on assets and investments(17) and the recognition of onerous contracts totaled US$ 9.372 billion in 2015. The increase vs. 2014 was mainly due to the significant reduction in the price assumptions used for the impairment tests.

Impairments on assets and the recognition of onerous contracts (excluding impairments on investments) totaled US$ 8.926 billion in 2015 and were mainly driven by the impact of: (i) the decline in iron ore prices in the Midwestern system and the consequent production plan revision (US$ 522 million on assets and US$ 357 million on onerous contracts); (ii) the decision not to restart the pellet plants in the Northern system (US$ 55 million); (iii) the lower coal prices and the revision of mining plans in the Australian coal mines (US$ 635 million); (iv) the lower coal prices and the increase in logistic costs in Mozambique (US$ 2.403 billion); (v) the lower nickel prices in New Caledonia (US$ 1.462 billion) and in Newfoundland and Labrador (US$ 3.460 billion); (vi) the lower expectations on the recovery of amounts invested in the Rio Colorado potash project (US$ 548 million). The above-mentioned impairment charges were partially offset by impairment reversals, driven by the impact of: (i) the recovery of Onça Puma´s nickel production (US$ 252 million); and (ii) the depreciation of the BRL against the USD which benefited the Brazilian phosphate operations (US$ 391 million).

(15) Of associates and joint ventures.

(16) Composed mainly of bunker oil and commodities.

(17) Of associates and joint ventures.

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Impairment US$ million	Impairments on assets in 2015	Recognition on onerous contracts in 2015	Book Value after impairments Dec 31, 2015
Ferrous minerals			
Iron ore in the Midwestern system(1)	522	357	
Pellets plants	55		
Others	58		
Coal			
Coal assets in Mozambique	2,403		1,729
Coal assets in Australia(1)	635		74
Base metals			
Vale New Caledonia (VNC)	1,462		3,725
Vale New Foundland and Labrador (VNL)	3,460		2,353
Onça Puma	(252)		2,331
Others	62		
Fertilizers			
Phosphate assets	(391)		3,842
Rio Colorado Project (PRC)	548		20
Others	**7**		
Total	**8,569**	**357**	**14,000**

(1) Includes intangible assets of US$ 81 million.

Impairments of investments of associates and joint ventures totaled US$ 446 million, comprising investments made in Samarco of US$ 132 million and Teal Minerals, a joint venture of Vale with ARM, which holds an 80% stake in the Lubambe copper operation, of US$ 314 million. The above-mentioned impairment on Samarco´s investments relates to Vale´s share of Samarco s declared but unpaid dividends and royalties.

Impairment on investments US$ million	Total impairments in 2015	Book Value after impairments Dec 31, 2015
Iron ore		
Samarco	132	
Base metals		
Teal Minerals	314	
Total	**446**	**0**

Net financial results showed a loss of US$ 10.801 billion in 2015, compared to a loss of US$ 6.069 billion in 2014. The main components of the net financial results are: (i) financial expenses (-US$ 1.112 billion); (ii) financial revenues (US$ 268 million); (iii) foreign exchange and monetary losses (-US$ 7.480 billion); (iv) currency and interest rate swaps losses (-US$ 1.502 billion) and (v) losses on other derivatives (-US$ 975 million), composed mainly of bunker oil derivative losses of US$ 742 million.

In 2015, the 47% depreciation of the BRL against the USD led to losses of US$ 8.666 billion, of which, US$ 7.164 billion came from the US$ 16.720 billion exposure on the net position of the USD denominated liabilities and USD denominated assets recorded mainly in Vale s (parent company) financial statements, and US$ 1.502 billion loss from the mark-to-market of the swap transactions implemented to convert debt instruments into USD. In 2014, the depreciation of the BRL vs. the USD of 13% led to a US$ 2.802 billion loss.

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At the end of 2014, Brazilian corporate tax legislation was amended by Law number 12.973/13, taking effect in 2015. Under the amended legislation, income from foreign subsidiaries is recognized on an accrual basis for Brazilian tax purposes and top-up taxes are applicable in Brazil up to the standard Brazilian corporate tax rate of 34%. In compliance with the Brazilian legislation, and based on the tax losses carried forward at foreign subsidiaries and on economic and financial projections, US$ 2.952 billion was recorded as a deferred tax asset in 3Q15.

QUARTERLY PERFORMANCE

Vale posted a net loss of US$ 8.569 billion in 4Q15 compared to a net loss of US$ 2.117 billion in 3Q15. The US$ 6.452 billion loss was mostly driven by the above mentioned impairments on assets, onerous contracts and investments of US$ 9.372 billion, which was partially offset by gains on monetary and foreign exchange variation of US$ 5.290 billion. Underlying earnings were a negative US$ 1.032 billion in 4Q15 after excluding the one-off effects, mainly due to financial expenses result of US$ 246 million and financial losses on derivatives(18) of US$ 289 million.

Net financial results showed a gain of US$ 353 million in 4Q15, compared to a loss of US$ 7.176 billion in 3Q15. The main components of net financial results are: (i) financial expenses (-US$ 326 million); (ii) financial revenues (US$ 80 million); (iii) foreign exchange and monetary gains in USD denominated debt (US$ 173 million); (iv) currency and interest rate swap gains (US$ 715 million) as a result of the mark-to-market of Vale s swap liabilities driven by the increase in Vale s Credit Default Swap (CDS) and (v) losses on other derivatives (-US$ 289 million), composed mainly of bunker oil derivatives losses of US$ 212 million.

Differently from the 28% depreciation of the BRL vs. the USD throughout 3Q15 which led to a US$ 6.221 billion loss, the 2% appreciation of the BRL against the USD in 4Q15 led to a US$ 970 million gain, of which US$ 255 million came from the US$ 17.402 billion exposure on the net position of the USD denominated liabilities and USD denominated assets recorded(19) in Vale s (parent company) financial statements, and US$ 715 million from the mark-to-market of the swap liabilities.

Equity income from affiliated companies

ANNUAL PERFORMANCE

Equity income from affiliated companies was a negative US$ 439 million in 2015 against a positive US$ 505 million recorded in 2014. The main negative contributors to equity income

(18) Composed mainly of bunker oil and commodities.

(19) The US$ 216 million gain includes the impact of the BRL appreciation on: (i) the USD denominated debt recorded as financial results (US$ 134 million); and (ii) other assets and liabilities (US$ 82 million).

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were CSP (US$ 307 million) and Samarco (US$ 167 million) due to the impact of the BRL depreciation on the USD denominated debt of these companies, and Teal Minerals (US$ 129 million). Positive contributors to Vale s equity income were the leased pelletizing companies in Tubarão (US$ 106 million), Aliança Geração Energia (US$ 50 million) and VLI (US$ 46 million), MRS (US$ 43 million) and MRN (US$ 40 million).

QUARTERLY PERFORMANCE

Equity income from affiliated companies was a negative US$ 37 million in 4Q15 against a negative US$ 349 million recorded in 3Q15. The main negative contributors to equity income were Teal Minerals (-US$ 99 million) and CSA (-US$ 20 million). Positive contributors to Vale s equity income were the leased pelletizing companies in Tubarão (US$ 26 million), Aliança Geração Energia (US$ 24 million), MRN (US$ 20 million), VLI (US$ 14 million) and MRS (US$ 11 million).

Underlying earnings

US$ million	4Q15	3Q15	4Q14	2015	2014
Underlying earnings	**(1,032)**	**(961)**	**(251)**	**(1,698)**	**4,419**
Items excluded from basic earnings					
Impairment on assets and investments	(9,372)		(378)	(9,372)	(1,152)
Gain (loss) on fair value on non-current assets	(29)	(48)	(167)	61	(167)
Deferred Income tax - foreign subsidiaries		2,990		2,990	
Shareholders Debentures	252	75	62	963	(315)
Foreign Exchange	255	(5,025)	(1,186)	(7,164)	(2,119)
Monetary variation	(82)	(92)	(71)	(316)	(81)
Currency and interest rate swaps	715	(1,196)	(524)	(1,502)	(683)
Fair value on financial instruments	(80)	29	17	(69)	(115)
Gain (loss) on sale of investments				97	(61)
Foreign exchange gain (loss) on equity results					(159)
Tax effects of Impairment	1,164		70	1,164	(57)
Income tax over excluded items	(360)	2,111	579	2,717	1,147
Net Income (loss)	**(8,569)**	**(2,117)**	**(1,849)**	**(12,129)**	**657**

Financial results

US$ million	4Q15	3Q15	4Q14	2015	2014
Financial expenses	**(326)**	**(352)**	**(502)**	**(1,112)**	**(2,936)**
Gross interest(1)	(229)	(239)	(259)	(891)	(1,148)
Tax and labour contingencies	(19)	10	(22)	(59)	(91)
Others(2)	43	15	(56)	386	(1,014)
Financial expenses (REFIS)	(121)	(138)	(165)	(547)	(683)
Financial income	**80**	**92**	**55**	**268**	**401**
Derivatives	**426**	**(1,799)**	**(1,087)**	**(2,477)**	**(1,334)**
Currency and interest rate swaps	715	(1,196)	(524)	(1,502)	(683)
Others (bunker oil, commodities, etc)	(289)	(603)	(563)	(975)	(651)
Foreign Exchange	**255**	**(5,025)**	**(1,186)**	**(7,164)**	**(2,119)**

Monetary variation	**(82)**	**(92)**	**(71)**	**(316)**	**(81)**
Financial result, net	**353**	**(7,176)**	**(2,791)**	**(10,801)**	**(6,069)**

(1) The capitalization of interest over assets under construction amounted to US$ 193 million in 4Q15, US$ 195 million in 3Q15, US$ 96 million in 4Q14, US$ 761 million in 2015 and US$ 588 million in 2014.

(2) Other financial expenses include the mark-to-market of shareholder debentures which amounted to US$ 253 million in 4Q15, US$ 75 million in 3Q15, US$ 62 million in 4Q14, US$ 964 million in 2015 and -US$ 315 million in 2014.

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EFFECTS OF CURRENCY PRICE VOLATILITY ON VALE S FINANCIAL PERFORMANCE

ANNUAL PERFORMANCE

In 2015, from end to end, the Brazilian Real (BRL) depreciated 47% against the US Dollar (USD) from BRL 2.66/ USD as of December 30th, 2014 to BRL 3.90/ USD as of December 30th, 2015. On an annual average, the exchange rate depreciated by 42%, from an average BRL 2.35/ USD in 2014 to an average BRL 3.34/USD in 2015.

Although Vale reports its financial performance in USD, the BRL depreciation impacts its results since the functional currency of Vale s parent company, Vale S. A., is the BRL.

The end to end depreciation of the BRL against the USD and other currencies caused mainly non-cash losses of US$ 8.666 billion on our earnings before taxes in 2015, driven by its impact on:

- The net position of the USD and other currency denominated liabilities and the USD and other currency denominated assets (accounts receivable and others) which amounted to a loss of US$ 7.164 billion in 2015, recorded in the financial statements as Foreign exchange .

- The forward and swaps derivatives that are used to reduce the volatility of our cash flows in USD. In 2015, the changes in fair value and the settlements of the currency swaps from the BRL and other currencies to the USD caused one-off losses of US$ 1.502 billion.

The BRL depreciation, on an annual average, had positive impacts on our cash flows. In 2015 most of our revenues were denominated in USD, while our COGS were 49% denominated in BRL, 34% in USD and 13% in Canadian dollars (CAD) and about 75% of our capital expenditures were denominated in BRL. The depreciation of the BRL and of other currencies in 2015 reduced our costs and expenses by US$ 4.862 billion.

QUARTERLY PERFORMANCE

In 4Q15, from end to end, the Brazilian Real (BRL) appreciated 1.7% against the US Dollar (USD) from BRL 3.97/ USD as of September 30th, 2015 to BRL 3.90/ USD as of December 30th, 2015. On a quarterly average, the exchange rate depreciated by 8.7%, from an average BRL 3.54/ USD in 3Q15 to an average BRL 3.84/USD in 4Q15.

The end to end appreciation of the BRL against the USD and other currencies caused mainly

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non-cash gains of US$ 970 million on our earnings before taxes in 4Q15, driven by its impact on:

- The net position of the USD and other currency denominated liabilities and the USD and other currency denominated assets (accounts receivable and others) which amounted to a gain of US$ 255 million in 4Q15, recorded in the financial statements as Foreign exchange .

- The forward and swaps derivatives that are used to reduce the volatility of our cash flows in USD. In 4Q15, the changes in fair value and the settlements of the currency swaps from the BRL and other currencies to the USD caused one-off gains of US$ 715 million.

The BRL depreciation on a quarterly average had positive impacts on our cash flows. In 4Q15 most of our revenues were denominated in USD, while our COGS were 45% denominated in BRL, 37% in USD and 13% in Canadian dollars (CAD) and about 75% of our capital expenditures were denominated in BRL. The depreciation of the BRL and of other currencies in 4Q15 reduced our costs and expenses by US$ 210 million.

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Investments

Capital expenditures totaled US$ 8.401 billion in 2015 with US$ 5.548 billion in project execution and US$ 2.853 billion in sustaining capital. Capital expenditures decreased US$ 3.578 billion in 2015 vs. the U$ 11.979 billion spent in 2014. Total annual capex exceeded the previous guidance by US$ 0.2 billion as a result of a better than expected execution of the S11D project and its associated logistics.

In 4Q15, Vale s capital expenditures totaled US$ 2.193 billion with US$ 1.366 billion in project execution and US$ 827 million in sustaining capital.

Project execution and sustaining by business area

US$ million	4Q15	3Q15	4Q14	2015	%	2014	%
Ferrous minerals	1,087	1,099	2,382	4,946	58.9	7,140	59.6
Coal	464	333	555	1,539	18.3	2,336	19.5
Base metals	533	370	608	1,556	18.5	1,604	13.4
Fertilizer nutrients	97	55	122	257	3.1	320	2.7
Power generation	10	16	59	78	0.9	160	1.3
Steel	3	6	15	22	0.3	222	1.9
Others			8	3		195	1.6
Total	**2,193**	**1,879**	**3,749**	**8,401**	**100.0**	**11,979**	**100.0**

Project execution

Vale´s investments in project execution decreased from US$ 7.920 billion in 2014 to US$ 5.548 billion in 2015, with the completion of projects, scope optimization and the positive impact of exchange rates.

The Ferrous Minerals and the Coal business segments accounted for about 65% and 32%, respectively, of the total investment in capital execution in 4Q15.

Project execution by business area

US$ million	4Q15	3Q15	4Q14	2015	%	2014	%
Ferrous minerals	894	878	1,523	3,878	69.9	4,836	61.1
Coal	431	311	510	1,472	26.5	2,184	27.6
Base metals	16	10	149	54	1.0	462	5.8
Fertilizer nutrients	13	11	27	45	0.8	63	0.8

Power generation	9	16	56	77	1.4	155	2.0
Steel	3	6	15	22	0.4	222	2.8
Total	**1,366**	**1,232**	**2,279**	**5,548**	**100.0**	**7,920**	**100.0**

FERROUS MINERALS

About 85% of the US$ 894 million invested in Ferrous Minerals in 4Q15 relates to project execution in iron ore, primarily on the S11D project and the expansion of its associated infrastructure (US$ 760 million).

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Assembly area between System 4 and Transfer House 01

S11D (including mine, plant and associated logistics CLN S11D) reached combined physical progress of 67% in 4Q15 with 80% progress at the mine site and 57% at the logistic sites. The railway spur reached 81% physical progress and the off-shore pile-driving in the north berth reached 99% physical progress. The existing railway capacity increased to 147 Mtpy with the duplication of 59 Km upon completion of 8 segments.

EFC (Estrada de Ferro Carajás) railway expansion bridge over the Cajuapara river

Cauê Itabiritos, with nominal capacity of 7 Mtpy of sinter feed and 16 Mtpy of pellet feed is in the process of ramp-up and final tie-ins. The project was delivered on time and budget with total investments of US$ 926 million and physical progress of 95% at this point.

The 5th line of Brucutu projects concluded its ramp-up in 3Q15. The Conceição I and the Vargem Grande Itabirites projects concluded their ramp-up in 4Q15. The Conceição II Itabirites project started in 2Q15 and has been ramping up as planned.

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COAL

Investments in the Moatize II project and in the Nacala Logistics Corridor totaled US$ 196 million and US$ 259 million, respectively, in 4Q15.

Moatize II achieved physical progress of 99% in 4Q15 with commissioning on the handling system and cargo testing in one line of the CPP (Coal Preparation Plant) initiated. The two lines are expected to have their cargo testing completed by March.

The upgrade of the brownfield sections of the railway was completed in 4Q15. The Nacala Logistics Corridor (NLC) successfully transported and discharged 523,000 tons of thermal coal at the Nacala port, having completed the four shipments of coal as of January 2016.

Description and status of main projects

Project	Description	Capacity (Mtpy)	Status
Ferrous Minerals projects			
Carajás Serra Sul S11D	• Development of a mine and processing plant, located in the Southern range of Carajás, Pará, Brazil.	90	• Delivery of eletrocenters of the mine and plant ongoing • Transmission line connecting Carajás to Canaã energized
CLN S11D	• Duplication of 570 km railway, with construction of rail spur of 101 km. Acquisition of wagons, locomotives, and onshore and offshore expansions at PDM maritime terminal.	(80)(a)	• Foundation work on the PDM port expansion ongoing pile driving in the off-shore north berth reached 99% physical progress • Duplication of the railway reached 41% physical progress • Railway spur reached 81% physical progress
CSP(b)	• Development of a steel slab plant in partnership with Dongkuk and Posco, located in Ceará, Brazil.	1.5	• Assembly of the steel structure reached 97% physical progress

			• Civil works reached 99% physical progress
Coal Projects			
Moatize II	• New pit and duplication of the Moatize CHPP, as well as all related infrastructure, located in Tete, Mozambique.	11	• Electromechanical assembly reached 99% physical progress • Commissioning on the belt conveyors initiated • Testing on one line of the CHPP initiated

(a) Net additional capacity.
(b) Relative to Vale s stake in the project.

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Progress indicators(20)

Project	Capacity (Mtpy)	Estimated start-up	Executed capex (US$ million) 2015	Executed capex (US$ million) Total	Estimated capex (US$ million) 2016	Estimated capex (US$ million) Total	Physical progress
Ferrous minerals projects							
Carajás Serra Sul S11D	90	2H16	1,163	4,655	921	6,405(c)	80%
CLN S11D	230(80)(b)	1H14 to 2H18	1,814	4,467	1,372	7,850(d)	57%
CSP(a)	1.5	1H16		1,055	188	1,224(e)	97%
Coal projects							
Moatize II	11	1H16	558	1,942	105	2,068(f)	99%

(a) Relative to Vale s stake in the project.

(b) Net additional capacity.

(c) Original capex budget of US$ 8.089 billion.

(d) Original capex budget of US$ 11.582 billion.

(e) Original capex of US$ 2.734 billion; Out of the original capex - US$ 1.491 billion financed directly by the CSP project.

(f) Original capex of US$ 2.068 billion plus US$ 0.45 billion of rolling stock.

Sustaining capex

Sustaining capital expenditures decreased from US$ 4.059 billion in 2014 to US$ 2.853 billion in 2015.

On a quarter on quarter basis, Vale s investment increased due to seasonality. Sustaining capital expenditures amounted to US$ 827 million in 4Q15, increasing US$ 180 million vs. 3Q15. The base metals and ferrous minerals business segment accounted for 62% and 23%, respectively, of the total sustaining capex in 4Q15.

Sustaining capital expenditures for the ferrous minerals business segment included, among others: (i) the replacement and acquisition of new equipment (US$ 94 million), (ii) the improvement in the current standards of health and safety and environmental protection (US$ 23 million), (iii) the maintenance, improvement and expansion of tailing dams (US$ 17 million) and (iv) operational enhancements (US$ 20 million). Maintenance of railways and ports in Brazil and Malaysia accounted for US$ 65 million.

Sustaining investments in iron ore (excluding sustaining investments in pellets plants) amounted to US$ 178 million, equivalent to US$ 2.3/wmt of iron ore fines in 4Q15, a 25.8% decrease vs. US$ 3.1/wmt in 3Q15. This quarter over quarter decrease reflects scope optimization, positive impact of the depreciation of the BRL and the effect of higher volumes.

Sustaining capex in the base metals business segment operations was mainly dedicated to: (i) operational enhancement (US$ 371 million), (ii) improvement in the current standards of

(20) In this table we do not include pre-operating expenses in the estimated capex for the year, although these expenses are included in the total estimated capex column, in line with our Board of Directors approval process. Moreover, our estimated capex for the year is only reviewed once a year.

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health and safety and environmental protection (US$ 69 million), (iii) replacement and acquisition of new equipment (US$ 48 million) and (iv) maintenance, improvement and expansion of tailing dams (US$ 21 million).

Capex for operational enhancements in the base metals business segment in 4Q15 was 52.9% higher than in 3Q15. The increase was mainly driven by higher than average payments for services related to Long Harbour project in 4Q15, according to the usual seasonality and in line with the 2015 budget. Long Harbour achieved an important milestone of operating exclusively with feed from Voisey s Bay by the end of 4Q15. For 2016, the Base Metals business segment budget for sustaining investments is roughly 25% lower than in 2015.

Sustaining capex by type - 4Q15

US$ million	Ferrous Minerals	Coal	Base Metals	Fertilizer	TOTAL
Operations	114	14	419	54	**601**
Waste dumps and tailing dams	17	3	21	7	**48**
Health and Safety	19	1	65	8	**92**
CSR - Corporate Social Responsibility	10		5	10	**25**
Administrative & Others	35	15	7	4	**61**
Total	**194**	**33**	**517**	**83**	**827**

Sustaining capex by business area

US$ million	4Q15	3Q15	4Q14	2015	%	2014	%
Ferrous minerals	193	221	859	1,068	37.4	2,305	56.7
Coal	33	22	46	67	2.3	153	3.8
Base metals	517	360	459	1,502	52.6	1,144	28.2
Fertilizer nutrients	83	44	95	212	7.4	258	6.4
Power generation	1		3	1	0.1	5	0.1
Others			8	3	0.1	197	4.8
Total	**827**	**647**	**1,470**	**2,853**	**100.0**	**4,061**	**100.0**

Portfolio management

Vale sold four very large ore carriers of 400,000 tons deadweight to ICBC Financial Leasing in 4Q15. The transaction totaled US$ 423 million.

Sales of assets totaled US$ 3.525 billion in 2015, with US$ 1.316 billion coming from the sale of 12 very large ore carriers to Chinese shipowners, US$ 1.089 billion coming from the sale of 36.4% of MBR preferred shares, US$ 900 million from another goldstream transaction and US$ 97 million from the sale of energy assets.

Corporate social responsibility

Investments in corporate social responsibility totaled US$ 366 million in 4Q15, of which US$ 269 million dedicated to environmental protection and conservation and US$ 97 million dedicated to social projects.

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Debt indicators

Gross debt totaled US$ 28.853 billion as of December 31st, 2015, slightly higher than the US$ 28.675 billion as of September 30th, 2015 mainly as a result of the: (i) distribution of dividends in the amount of US$ 500 million in October and (ii) impact of exchange rate on the translation of BRL denominated debt into USD(21). Those impacts were partly offset by the cash proceeds of US$ 423 million from the sale of vessels in 4Q15. Gross debt was in line with the US$ 28.807 billion as of December 31st, 2014. Net debt increased by US$ 1.021 billion compared to the end of the previous quarter, totaling US$ 25.234 billion based on a cash position of US$ 3.619 billion as of December 31st, 2015.

Debt position

After currency and interest rates hedge, Vale s gross debt on December 31st, 2015 was composed of 24% of floating and 76% of fixed interest rates, and 93% was denominated in US dollars.

Average debt maturity decreased slightly to 8.1 years. The average cost of debt, after the above-mentioned hedge, increased to 4.47% per annum on December 31st, 2015, against 4.37% on September 30th, 2015.

Interest coverage, measured by the ratio of the LTM(22) adjusted EBITDA to LTM interest payment, was 4.8x on December 31st, 2015 against 5.3x on September 30th, 2015.

(21) In 4Q15, from end to end, the BRL appreciated 1.7% against the USD.

(22) Last twelve months.

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Gross debt to LTM adjusted EBITDA was 4.1x as of December 31st, 2015. Although the vast majority of financing agreements do not contain financial covenants, Vale had 21% of total debt at the end of 2015 with this leverage measure as a financial covenant in contracts with BNDES and other export and development agencies. As a preventive measure, during the last quarter of 2015, Vale reached agreements to increase the upper limit of the gross debt to adjusted EBITDA financial covenant from 4.5x to 5.5x, until the end of 2016. This measure brings more flexibility during a period in which Vale is finalizing its investment cycle.

Debt indicators

US$ million	**4Q15**	**3Q15**	**4Q14**
Gross debt	28,853	28,675	28,807
Net debt	25,234	24,213	24,685
Gross debt / adjusted LTM EBITDA (x)	4.1	3.6	2.2
Adjusted LTM EBITDA / LTM interest expenses (x)	4.8	5.3	8.6

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Performance of the business segments

The share of the Ferrous Minerals business segment in the adjusted EBITDA decreased to 83.3% in 2015 from 84.8% in 2014, while the Base Metals business segment increased its share in total EBITDA to 19.6% from 18.9% in 2014 and the Fertilizers business segment improved its share to 8.0% from 2.1% in 2014. The contribution from the Coal business segment and Others went from -5.0% in 2014 to -7.2% in 2015 and from -0.7% in 2014 to -3.7% in 2015, respectively.

The Ferrous Minerals business segment contribution to total EBITDA in 4Q15 reached 101.3%, followed by the Fertilizer business segment which contributed with 8.4%, the Base Metals business segment contributed with 8.0%, while the Coal business segment and Others contributed with -10.7% and -7.0% of Vale´s total adjusted EBITDA, respectively.

Segment information 2015, as per footnote of financial statements

	Operating revenues		Expenses					
US$ million	**Gross**	**Net**	**Cost**	**SG&A and others**	**R&D**	**Pre operating & stoppage**	**Dividends**	**Adjusted EBITDA(1)**
Ferrous minerals	16,821	16,562	(10,241)	(380)	(128)	(169)	255	5,899
Iron ore fines	12,382	12,330	(7,604)	(398)	(121)	(124)	22	4,105
ROM	111	102	(50)	0	0	0	0	52
Pellets	3,717	3,600	(2,121)	9	(4)	(24)	225	1,685
Others ferrous	428	368	(291)	8	(3)	(2)	8	88
Mn & Alloys	183	162	(175)	1	0	(19)	0	(31)
Coal	526	526	(839)	(140)	(22)	(61)	28	(508)
Base metals	6,171	6,163	(4,296)	44	(111)	(412)	0	1,388
Nickel(2)	4,693	4,693	(3,393)	(154)	(103)	(411)	0	632
Copper(3)	1,478	1,470	(903)	198	(8)	(1)	0	756
Fertilizer nutrients	2,386	2,225	(1,469)	(37)	(82)	(70)	0	567
Others	143	133	(139)	(160)	(134)	0	35	(265)
Total	26,047	25,609	(16,984)	(673)	(477)	(712)	318	7,081

(1) Excluding non-recurring effects.

(2) Including copper and by products from our nickel operations.
(3) Including by products from our copper operations.

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Segment information 4Q15, as per footnote of financial statements

	Operating revenues		Expenses					
US$ million	**Gross**	**Net**	**Cost**	**SG&A and othes**	**R&D**	**Pre operating & stoppage**	**Dividends**	**Adjusted EBITDA(1)**
Ferrous minerals	3,883	3,830	(2,497)	120	(27)	(61)	44	1,409
Iron ore fines	2,956	2,945	(1,924)	128	(26)	(50)	22	1,095
ROM	14	13	(4)					9
Pellets	806	780	(453)	(7)	(1)	(5)	22	336
Others ferrous	93	79	(71)	(4)		(1)		3
Mn & Alloys	14	13	(45)	3		(5)		(34)
Coal	108	108	(260)	(9)	(4)	(12)	28	(149)
Base metals	1,458	1,458	(1,131)	(95)	(32)	(89)		111
Nickel(2)	1,107	1,107	(892)	(74)	(30)	(89)		22
Copper(3)	351	351	(239)	(21)	(2)			89
Fertilizer nutrients	513	481	(319)	(14)	(22)	(9)		117
Others	24	22	(37)	(63)	(34)		15	(97)
Total	**5,986**	**5,899**	**(4,244)**	**(61)**	**(119)**	**(171)**	**87**	**1,391**

(1) Excluding non-recurring effects.

(2) Including copper and by products from our nickel operations.

(3) Including by products from our copper operations.

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Ferrous minerals

Adjusted EBITDA of the Ferrous Minerals business segment was US$ 5.899 billion in 2015, 47.9% lower than in 2014, mainly as result of lower sales prices (-US$ 11.414 billion), which were partially offset by real competitiveness gains of US$ 3.477 billion such as: (i) marketing and commercial initiatives (US$ 680 million); (ii) higher sales volumes (US$ 1.599 billion); (iii) favorable renegotiations of chartering freight contracts (US$ 300 million); and (iv) the ongoing cost reduction initiatives (US$ 898 million).

Commercial, marketing and operational initiatives amounted to roughly US$ 680 million and thus positively impacted sales revenues in 2015. Those initiatives were mainly: (i) the increase in the average negotiated premiums for iron ore fines; (ii) the increase in realized prices for FOB sales contracts; (iii) the change in the mix of products; and (iv) the increase in product quality.

EBITDA variation

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Iron ore

ANNUAL PERFORMANCE

EBITDA

Adjusted EBITDA of iron ore fines was US$ 4.105 billion in 2015, 49.2% lower than in 2014, which negatively impacted adjusted EBITDA by US$ 3.971 billion mainly as a result of lower sales prices.

Adjusted EBITDA will no longer be impacted by Vale s hedge accounting program since all outstanding bunker oil exposure recorded under such program was settled in 4Q15. Vale s hedge accounting program for iron ore fines had a negative impact of US$ 412 million in 2015.

SALES REVENUES AND VOLUME

Net sales revenues for iron ore fines, excluding pellets and Run of Mine (ROM), decreased to US$ 12.330 billion in 2015, 36.1% lower than in 2014. The decrease was a result of lower iron ore sales prices (US$ 8.549 billion), which were partially offset by the sales volumes increase, which contributed with US$ 1.578 billion to sales revenues when compared to 2014.

The main factors that contributed to the increase in sales volumes of iron ore fines from the 255.9 Mt in 2014 to 276.4 Mt in 2015 were the annual supply record of 345.9 Mt of iron ore fines (including the acquisition of iron ore from third parties). ROM sales totaled 12.3 Mt in 2015.

Vale s realized CFR/FOB wmt price(23) for iron ore fines (ex-ROM) was US$ 44.6 per metric ton in 2015, significantly lower than the US$ 75.4 per metric ton in 2014.

COST AND EXPENSES

Iron ore fines costs totaled US$ 7.604 billion (or US$ 8.720 billion with depreciation charges) in 2015 against US$ 9.532 billion in 2014. After adjusting for the effects of higher sales volumes (US$ 1.023 billion) and exchange rate variations (-US$ 1.442 billion), costs decreased by US$ 1.510 billion when compared to 2014, driven by the ongoing cost reduction initiatives and the ramp-up of both the N4WS and N5S extension mines, Conceição Itabiritos II and Vargem Grande Itabiritos.

Total cash cost at the port (mine, plant, railroad and port, ex-royalties) was US$ 3.825 billion. Cash cost was calculated after deducting from COGS: (i) iron ore freight costs of US$ 2.825

(23) The realized CFR/FOB wmt price is the weighted average price of Vale s CFR sales and Vale s FOB sales

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billion; (ii) depreciation of US$ 1.116 billion; (iii) iron ore acquired from third parties of US$ 210 million and (iv) bunker oil hedge costs accounted for as hedge accounting of US$ 412 million. Cash cost per metric ton (ex-ROM and ex-royalties) in 2015 was US$ 14.4/t, significantly lower than the US$ 20.8/t from 2014.

SG&A and other expenses significantly decreased to US$ 398 million, 68.4% lower than in 2014, after the adjustment of the US$ 322 million from the Asset Retirement Obligations (ARO).

Pre-operational expenses decreased to US$ 124 million, 25.5% lower than in 2014 as a result of the ramp-up of the N4WS, N5S extension, Conceição Itabiritos II and Vargem Grande Itabiritos.

Adjusted EBITDA margin for iron ore fines (excluding ROM and third party ores) was US$ 14.7 /t in 2015.

QUARTERLY PERFORMANCE

EBITDA

Adjusted EBITDA for iron ore fines was US$ 1.095 billion in 4Q15, US$ 127 million lower than the US$ 1.222 billion achieved in 3Q15, mainly due to the decrease in sales prices (-US$ 738 million), which was partially offset by higher sales volumes (US$ 125 million), lower SG&A and other expenses (US$ 258 million) as result of the positive impact of adjustments to the Asset Retirement Obligations (US$ 322 million).

Adjusted EBITDA will no longer be impacted by Vale s hedge accounting program since all outstanding bunker oil exposure recorded under such program was settled in 4Q15. Vale s hedge accounting program for iron ore fines had a negative impact on EBITDA of US$ 134 million in 4Q15.

SALES REVENUES AND VOLUME

Net sales revenues for iron ore fines were US$ 2.945 billion in 4Q15, 10.1% lower than in 3Q15 due to lower sales prices. ROM sales revenues in 4Q15 were US$ 13 million.

Iron ore own production, excluding Samarco s attributable production and third party ore, was 85.4 Mt in 4Q15, a quarterly production record for a fourth quarter and 2.4 Mt higher than in 4Q14. The good operational performance was driven by the ramp-up of the N4WS, N5S extension,

Conceição Itabiritos II and Vargem Grande Itabiritos.

Sales volumes of iron ore fines reached 79.2 Mt in 4Q15, 12.3% higher than in 3Q15 and 6.2% higher than in 4Q14 on the back of: (i) production of 85.4 Mt; (ii) acquisition of 3.1 Mt of

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iron ore from third parties; (iii) deduction of 11.6 Mt of iron ore fines used for the production of pellets; (iv) consumption of 3.9 Mt allocated from product inventories and (v) deduction of 1.6 Mt of ROM sales.

CFR sales of iron ore fines increased from 44.9 Mt in 3Q15 to 53.6 Mt in 4Q15, representing 68% of all iron ore fines sales volumes in 4Q15. The increase was mainly due to higher sales to China, which are mostly negotiated on a CFR basis.

Net Operating revenue by product

US$ million	4Q15	3Q15	4Q14	2015	2014
Iron ore fines	2,945	3,278	4,568	12,330	19,301
ROM	13	24	42	102	215
Pellets	780	883	1,270	3,600	5,263
Manganese & Ferroalloys	13	26	131	162	392
Others	79	101	105	368	526
Total	3,830	4,312	6,116	16,562	25,697

Volume sold

000 metric tons	4Q15	3Q15	4Q14	2015	2014
Iron ore fines	79,213	70,530	74,603	276,393	255,877
ROM	1,627	3,546	3,552	12,269	14,075
Pellets	10,837	11,961	12,686	46,284	43,682
Manganese ore	568	448	828	1,764	1,879
Ferroalloys	12	3	36	69	150

REALIZED PRICES

Iron ore sales in 4Q15 were distributed across three pricing systems: (i) 47% based on the current quarter, month and daily spot prices, including provisional price sales that were settled within the quarter; (ii) 42% based on provisional prices with settlement price based on the market price defined on the delivery date, in which case prices had not yet been settled at the end of the quarter; and (iii) 11% linked to past prices (quarter-lagged).

Vale s CFR dmt reference price for iron ore fines (ex-ROM) decreased by US$ 10.9/t from US$ 56.0/t in 3Q15 to US$ 45.1/t in 4Q15, being US$ 1.6/t lower than the average Platts IODEX 62% of US$ 46.7/t in 4Q15.

Vale s CFR/FOB wmt price for iron ore fines (ex-ROM) decreased by US$ 9.3/t from US$ 46.5/t in 3Q15 to US$ 37.2/t in 4Q15, after adjusting for moisture and the effect of FOB sales on 32% of the total sales volumes.

Price realization in 4Q15 was impacted by:

- Provisional prices set at the end of 3Q15 at US$ 51.5/t, which were later adjusted based on the price of delivery in 4Q15, impacted prices in 4Q15 by a negative US$ 1.0/t compared to a negative US$ 0.7/t in 3Q15 as a result of the downward trend curve observed in the IODEX in 4Q15.

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- Provisional prices set at the end of 4Q15 at US$ 41.0/t vs. the IODEX average of US$ 46.7/t in 4Q15, negatively impacted prices in 4Q15 by US$ 2.4/t compared to a negative impact of US$ 1.1/t in 3Q15.

- Quarter-lagged contracts, priced at US$ 56.7/t based on the average prices for Jun-Jul-Aug, positively impacted prices in 4Q15 by US$ 1.1/t compared to a positive impact of US$ 0.2/t in 3Q15.

In 4Q15, iron ore sales of 33.3 Mt, or 42% of Vale s sales mix, were recorded under the provisional pricing system, which was set at the end of 4Q15 at US$ 41.0/t. The final prices of these sales and the required adjustment to sales revenues will be determined and recorded in 1Q16.

The decrease in bunker oil prices positively impacted the settlement of FOB prices in 4Q15 by US$ 1.0/t compared to a reduction of US$ 1.3/t in 3Q15. Bunker oil prices impacted the settlement of FOB sales prices as the decrease in bunker oil prices led to a lower freight deduction from the IODEX CFR reference price used to determine the FOB price.

Price realization iron ore fines

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Average sale price

US$/ metric ton	4Q15	3Q15	4Q14	2015	2014
Iron ore - Metal Bulletin 65% index	50.09	62.11	82.90	62.12	105.82
Iron ore - Platts s 62% IODEX	46.65	54.90	74.28	55.50	96.70
Iron ore fines CFR reference price (dmt)	45.10	56.00	75.50	54.60	92.70
Iron ore fines CFR/FOB realized price	37.18	46.48	61.21	44.61	75.43
ROM	7.99	6.77	11.82	8.31	15.28
Pellets CFR/FOB (wmt)	71.98	73.80	100.11	77.78	120.48
Manganese ore	7.04	52.14	111.11	58.44	118.15
Ferroalloys	750.00	836.67	1,083.33	904.16	1,125.83

COSTS AND EXPENSES

Costs for iron ore fines amounted to US$ 1.924 billion (or US$ 2.183 billion with depreciation charges) in 4Q15. Costs decreased by US$ 131 million when compared to 3Q15 after deducting the effects of higher sales volumes (US$ 280 million) and exchange rates variations (-US$ 63 million). The decrease was mainly driven by lower freight costs (-US$ 122 million), lower materials costs (-US$ 17 million), and lower energy costs (-US$ 9 million).

Energy (electricity, diesel and gas) totaled US$ 118 million in 4T15 against US$ 112 million in 3T15. Oil costs, more specifically, in the form of diesel totaled US$ 108 million in 4Q15 against US$ 92 million in 3Q15. Costs increased by US$ 13 million in 4Q15 after adjusting for higher volumes (US$ 10 million) and exchange rates variations (-US$ 7 million). Falling oil prices had a limited positive impact on fuel costs, since there is no direct correlation between prices of diesel in Brazil and international oil prices.

Maritime freight costs, which are fully accrued as cost of goods sold, totaled US$ 757 million in 4Q15, showing a decrease of US$ 122 million after adjusting for higher volumes (US$ 143 million) as a result of lower freight rates and lower bunker oil prices when compared to 3Q15.

Unit freight cost per iron ore metric ton was US$ 14.1/t in 4Q15, US$ 2.3/t lower than the US$ 16.4/t recorded in 3Q15. This US$ 2.3/t decrease is explained by the positive impact of lower bunker oil prices in our chartering contracts and higher exposure to the freight spot market. Vale s average bunker oil price decreased from US$ 296.6/t in 3Q15 to US$ 235.0/t in 4Q15.

The impact of the outstanding bunker oil hedge position accounted for as hedge accounting in Vale s unit freight cost was US$ 2.5/t with the final settlement of 472,500 tons of bunker oil derivative contracts from the 472,500 tons of contracts that were outstanding at the end of September 2015, totaling a negative EBITDA impact of US$ 134 million. EBITDA will be favourably impacted as of next year as there will be no hedge accounting impact in 2016. For further details, please refer to the The Impact of Bunker Oil Hedging on Vale s Financial Performance box on page 49.

The acquisition of products (cost of ore acquired from third parties) amounted to US$ 44 million on 2.8 Mt sold in 4Q15. On a per-ton basis, cost of ore acquired from third parties

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decreased from US$ 17.7/t in 3Q15 to US$ 15.9/t in 4Q15. Other operational costs amounted to US$ 160 million, decreasing from US$ 177 million in 3Q15.

Iron ore COGS - 3Q15 x 4Q15

		Variance drivers				
US$ million	**3Q15**	**Volume**	**Exchange Rate**	**Others**	**Total Variation 3Q15 x 4Q15**	**4Q15**
Personnel	185	20	(14)	4	10	195
Outsourced services and Materials	274	31	(17)	(8)	6	280
Energy (electricity, diesel & gas)	112	12	(9)	3	6	118
Acquisition of products	40	9		(5)	4	44
Maintenance	205	22	(19)	28	31	236
Maritime Freight	736	143		(122)	21	757
Bunker oil hedge	109	21		4	25	134
Other Operational	177	22	(4)	(35)	(17)	160
Total costs before depreciation and amortization	**1,838**	**280**	**(63)**	**(131)**	**86**	**1,924**
Depreciation	269	30	(18)	(22)	(10)	259
Total	**2,107**	**310**	**(81)**	**(153)**	**76**	**2,183**

C1 CASH COST

Total C1 cash cost at the port (mine, plant, railroad and port, ex-royalties) was US$ 906 million after deducting depreciation of US$ 259 million, iron ore acquired from third parties of US$ 44 million, iron ore freight costs of US$ 757 million and bunker oil hedge accounting effects of US$ 134 million.

C1 cash cost FOB port per metric ton of iron ore fines (ex-ROM and ex-royalties) was US$ 11.9/t in 4Q15 vs. US$ 12.7/t in 3Q15, reducing US$ 0.8/t mostly due to the depreciation of the BRL against the USD. C1 cash cost FOB port per metric ton of iron ore fines in BRL increased slightly from R$ 45.2/t in 3Q15 to R$ 45.6/t in 4Q15 (or R$ 44.9/t after excluding the negative effect of R$ 55.5 million of the collective bargain agreement settled with our employees in Brazil).

Iron ore expenses, net of depreciation, excluding the positive effect of US$ 322 million of the asset retirement obligation, amounted to US$ 270 million in 4Q15 vs. the US$ 218 million recorded in 3Q15. Expenses increased by US$ 62 million when compared to 3Q15 after adjusting for the effects of exchange rates (-US$ 10 million). R&D amounted to US$ 26 million, the same as in 3Q15. Pre-operating and stoppage expenses, net of depreciation, amounted to US$ 50 million, US$ 27 million higher than the US$ 23 million recorded in 3Q15, mainly due to stoppage expenses in the Southeastern Mining System due to the rupture of the Samarco tailings dam.

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Unit cash costs and expenses (adjusted for quality and moisture, excluding ore from third parties, ROM and the positive effect of the ARO) landed in China decreased from US$ 34.2/t in 3Q15 to US$ 32.0/t in 4Q15.

Evolution of iron ore fines cash cost, freight and expenses

Cost and expenses landed in China for iron ore fines

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Iron ore fines cash cost and freight

	4Q15	3Q15	4Q14	2015	2014
Costs (US$ million)					
COGS, less depreciation and amortization	1,924	1,838	2,831	7,604	9,532
Costs of ore acquired from third parties	44	40	89	210	443
Maritime freight	757	736	1,037	2,825	3,325
Bunker oil hedge	134	109		412	
One-off items			48		48
FOB at port costs (ex-ROM and ex-third party ores)(1)	**989**	**953**	**1,657**	**4,157**	**5,716**
FOB at port costs (ex-ROM, ex-third party ores and ex-royalties)	**906**	**868**	**1,534**	**3,825**	**5,079**
Sales volumes (Mt)					
Total iron ore volume sold	80.8	74.1	78.2	288.7	270.0
Volume acquired from third parties	2.8	2.3	3.2	11.1	12.2
Total ROM volume sold	1.6	3.5	3.6	12.3	14.1
Volume sold of Vale s own ore (ex-ROM)	76.4	68.3	71.4	265.3	243.7
% of CFR sales	68.0%	64.0%	64.2%	64.1%	57.4%
% of FOB sales	32.0%	38.0%	35.8%	35.9%	42.6%
Vale s iron ore cash cost (ex-ROM, ex-royalties), FOB (US$ /t)	**11.9**	**12.7**	**21.5**	**14.4**	**20.8**
Freight					
Volume CFR (Mt)	53.6	44.9	47.9	177.1	146.9
Vale s iron ore unit freight cost (US$/t)	16.6	18.8	21.7	18.3	22.6
Vale s iron ore unit freight cost (ex- bunker oil hedge) (US$/t)	**14.1**	**16.4**	**21.7**	**16.0**	**22.6**

Iron ore fines unit cost + expenses adjusted for quality landed in China

US$/t	4Q15	3Q15	4Q14	2015	2014
Vale s iron ore cash cost (ex-ROM, ex-royalties), FOB (US$ /t)	11.9	12.7	21.5	14.4	20.8
Iron ore fines freight cost (ex-bunker oil hedge)	14.1	16.4	21.7	16.0	22.6
Iron ore fines expenses(1) & royalties	4.6	4.4	11.0	4.9	9.7
Iron ore fines moisture adjustment	2.6	2.8	4.7	3.0	4.8
Iron ore fines quality adjustment	-1.1	-2.1	0.9	-1.9	0.9
Iron ore fines unit cost + expenses landed in China (US$/dmt)	**32.0**	**34.2**	**59.8**	**36.4**	**58.9**

(1) Net of depreciation, excluding the positive one-off effect of the ARO adjustment.

Iron Ore Fines Costs and Expenses in BRL

R$/t	4Q15	3Q15	4Q14	2015	2014
Costs	45.6	45.2	54.5	47.9	50.1
Expenses(1)	12.9	10.8	16.0	12.2	22.6
Total	**58.5**	**56.0**	**70.5**	**60.1**	**72.7**

(1) Net of depreciation.

Iron ore pellets

ANNUAL PERFORMANCE

Adjusted EBITDA for pellets was US$ 1.685 billion in 2015, 43.5% lower than the US$ 2.981 billion recorded in 2014. The decrease of US$ 1.296 billion was mainly a result of lower sales prices (US$ 1.986 billion) which were partially offset by higher sales volumes (US$ 204 million), lower costs (US$ 163 million) and exchange rate variations (US$ 551 million).

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Net sales revenues for pellets were US$ 3.600 billion in 2015, 31.6% lower than in 2014, mainly due to the decrease in sales prices, from US$ 120.48 per metric ton in 2014 to US$ 77.8 per metric ton in 2015. Sales prices negatively impacted sales revenues by US$ 1.986 billion in 2015 compared with 2014. Sales volumes increased to 46.28 Mt vs. 43.68 Mt in 2014 as a result of the ramp-up of Tubarão VIII pellet plant.

Costs for pellets totaled US$ 2.121 billion in 2015 (or US$ 2.436 billion with depreciation charges). Costs decreased by US$ 162 million when compared to 2014 after adjusting for the effects of higher volumes (US$ 119 million) and exchange rate variations (-US$ 540 million). This decrease is mainly due to lower leasing costs (-US$ 63 million), lower diesel costs (-US$ 57 million) and lower materials costs (-US$ 45 million).

QUARTERLY PERFORMANCE

Adjusted EBITDA for pellets in 4Q15 was US$ 336 million, compared to the US$ 382 million in 3Q15. Adjusted EBITDA was negatively impacted by the lower sales prices (-US$ 18 million), lower sales volumes (-US$ 32 million) and higher costs (-US$ 20 million) in 4Q15 vs. 3Q15. The unfavorable impacts were partly offset by exchange rate variations (US$ 22 million) and higher dividends received from the leased pelletizing plants (US$ 22 million).

Net sales revenues for pellets amounted to US$ 780 million in 4Q15, decreasing US$ 103 million from the US$ 883 million recorded in 3Q15 as a result of the lower sales prices of US$ 72.0 per ton in 4Q15 vs. US$ 73.8 /t in 3Q15 and of the 1.2 Mt decrease in sales volumes to 10.8 Mt in 4Q15 from 12.0 Mt in 3Q15. Sales volumes decreased by 1.8 Mt in 4Q15 vs. 4Q14.

Production reached 10.4 Mt in 4Q15, 1.8 Mt lower than in 3Q15 mainly due to scheduled maintenance stoppages in some plants.

Pellet CFR/FOB prices decreased by US$ 1.8/t, from US$ 73.8/t in 3Q15 to US$ 72.0 per metric ton in 4Q15, whereas the Platt s IODEX iron ore reference price (CFR China) decreased by US$ 8.3/t in the quarter.

The decrease in Vale´s realized pellet price was less than the decrease in the average Platts IODEX as a result of higher pellet premiums and the positive impact of pricing systems.

CFR pellet sales of 2.4 Mt in 4Q15 represented 22% of total pellets sales and were 0.7 Mt lower than in 3Q15. FOB pellet sales decreased from 8.9 Mt in 3Q15 to 8.5 Mt in 4Q15.

Pellet costs totaled US$ 453 million (or US$ 524 million with depreciation charges) in 4Q15. Costs increased by US$ 20 million when compared to 3Q15 after adjusting for the effects of lower volumes (-US$ 53 million) and exchange rate variations (-US$ 22 million).

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The increase in pellets costs is mainly due to higher maintenance costs (US$ 9 million) and higher leasing costs (US$ 7 million). Pre-operating and stoppage expenses for pellets were US$ 5 million in 4Q15, in line with the previous quarter.

EBITDA unit margin for pellets ex-Samarco was US$ 31.0/t in 4Q15, US$ 0.9/t lower than in 3Q15 mainly due to the decrease in sales prices (-US$ 18 million).

Pellets - EBITDA ex-Samarco

	4Q15		3Q15	
	US$ million	**US$/wmt**	**US$ million**	**US$/wmt**
Gross Revenues / Realized Price	806	74.4	908	75.9
Net Revenues / Realized Price	780	72.0	883	73.8
Dividends Received (Leased pelletizing plants) ex-Samarco	22	2.0		
Cash Costs (Iron ore, leasing, freight, overhead, energy and other)	-453	-41.8	-508	-42.5
Expenses (SG&A, R&D and other)	-13	-1.2	7	0.6
EBITDA ex-Samarco	336	31.0	382	31.9

Manganese and ferroalloys

ANNUAL PERFORMANCE

Adjusted EBITDA of manganese and ferroalloys was negative US$ 31 million in 2015, US$ 126 million lower than in 2014, mainly due to lower prices (US$ 98 million), lower volumes (US$ 73 million) and higher costs (US$ 46 million) which were partially offset by exchange rates variations (US$ 82 million) and expenses reductions (US$ 9 million).

Net sales revenues for manganese decreased to US$ 100 million in 2015, down from US$ 222 million in 2014, due to the effect of lower prices (US$ 108 million) and lower sales volumes (US$ 14 million). In 2015, manganese ore production totaled to 2.441 Mt, slightly higher than in 2014.

Net sales revenues for ferroalloys decreased in 2015 to US$ 62 million from US$ 170 million in 2014, mainly due to the effect of lower sales volumes (US$ 118 million) and lower prices. In 2015, the output of ferroalloys was 99,000 t, significantly lower than in 2014.

QUARTERLY PERFORMANCE

Adjusted EBITDA of Manganese ore and ferroalloys was negative US$ 34 million in 4Q15, US$ 23 million lower than the negative US$ 11 million in 3Q15, mainly due to the impact of provisional prices from previous quarters (-US$ 28 million), which were partially offset by exchange rate variations (US$ 2 million) and higher sales volumes (US$ 1 million).

Net sales revenues for manganese decreased to US$ 4 million from US$ 23 million in 3Q15 due to lower sales prices. In 4Q15, production of manganese ore reached 651,000 t, compared to 644,000 t in 3Q15 and 723,000 t in 4Q14.

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Net sales revenues for ferroalloys amounted to US$ 9 million, increasing US$ 6 million from the US$ 3 million in 3Q15, due to higher sales volumes. Ferroalloys production decreased to 20,000 t in 4Q15 from the 21,000 t recorded in 3Q15.

Market outlook - iron ore

The price of iron ore averaged US$ 55.5/t in 2015, 42% lower than in 2014. The price reduction was driven by an oversupply of iron ore amid lower than expected steel production in China and in the rest of the world.

The price of iron ore decreased 15%, from US$ 54.90/t in 3Q15 to US$ 46.65/t in 4Q15, as steel production deteriorated whilst iron ore supply increased driven by seasonality factors.

According to the World Steel Association (WSA), world crude steel production totaled 1.622Mt in 2015, declining 2.8% vs. 2014. China s crude steel production totaled 803.8Mt, declining 2.3% year-on-year. The annual production decline was the first one since 1981 as the country continues its transition towards an economy more reliant on domestic consumption and services.

China s GDP grew 6.9% in 2015, slowing down mainly as a result of a decline in fixed asset investments, and growing only 10% year-on-year vs. 15.7% growth in 2014. Chinese steel demand declined, leading steel mills to rely more on overseas market to maintain their production levels. Net exports of finished steel reached a record 100Mt, rising 25.5% year-on-year, in 2015.

The increasing exports from China impacted steel production in other regions such as the Middle East, South East Asia, Europe, where production contracted by 0.5%, 3.6% and 1.8% year-on-year respectively, and to a certain extent India. The excess supply with the high export volumes from China translated into lower worldwide steel prices.

The seaborne iron ore supply amounted to roughly 1.410 Mt in 2015, increasing 30 Mt, or approximately 2% year-on-year with additional production from major iron ore players, such as Brazil and Australia. Brazil, Australia, South Africa and Peru increased their exports to China whilst all other regions together reduced exports by 62 Mt, representing a 39% year-on-year reduction.

2016 should still be a challenging year for iron ore producers as no major stimulus is expected from the Chinese government to boost investments. Steel demand and production should remain mild, posing additional challenges for higher cost iron ore producers.

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Volume sold by destination Iron ore and pellets

000 metric tons	4Q15	3Q15	4Q14	2015	%	2014	%
Americas	**8,549**	**10,760**	**11,590**	**41,187**	**12.3**	**44,071**	**14.1**
Brazil	7,346	9,363	10,078	35,665	10.6	37,623	12.0
Others	1,203	1,397	1,512	5,522	1.6	6,448	2.1
Asia	**65,574**	**59,597**	**62,563**	**229,268**	**68.4**	**208,536**	**66.5**
China	52,898	46,512	46,411	179,470	53.6	156,692	50.0
Japan	7,782	8,548	7,505	29,499	8.8	27,229	8.7
Others	4,894	4,537	8,648	20,299	6.1	24,615	7.8
Europe	**15,006**	**13,014**	**13,209**	**53,385**	**15.9**	**49,042**	**15.6**
Germany	5,471	5,219	4,660	21,991	6.6	19,075	6.1
France	1,474	1,497	2,103	5,814	1.7	6,242	2.0
Others	8,061	6,298	6,446	25,580	7.6	23,725	7.6
Middle East	**2,095**	**2,401**	**2,337**	**9,745**	**2.9**	**8,694**	**2.8**
Rest of the World	**453**	**265**	**1,141**	**1,360**	**0.4**	**3,291**	**1.0**
Total	**91,677**	**86,037**	**90,841**	**334,946**	**100.0**	**313,634**	**100.0**

Selected financial indicators - Ferrous minerals

US$ million	4Q15	3Q15	4Q14	2015	2014
Net Revenues	3,830	4,312	6,116	16,562	25,697
Costs(1)	(2,497)	(2,447)	(3,792)	(10,241)	(13,063)
Expenses(1)	120	(153)	(504)	(380)	(1,289)
Pre-operating and stoppage expenses(1)	(61)	(32)	(48)	(169)	(221)
R&D expenses	(27)	(28)	(117)	(128)	(329)
Dividends received	44		47	255	526
Adjusted EBITDA	1,409	1,652	1,702	5,899	11,321
Depreciation and amortization	(388)	(402)	(548)	(1,669)	(1,930)
Adjusted EBIT	977	1,250	1,107	3,975	8,865
Adjusted EBIT margin (%)	25.5	29.0	18.1	24.0	34.5

(1) Net of depreciation and amortization.

Selected financial indicators - Iron ore fines (excluding third party ores)

	4Q15	3Q15	4Q14	2015	2014
Adjusted EBITDA (US$ million)	1,040	1,180	1,060	3,912	7,759
Volume Sold (Mt)	76.432	68.261	71.394	265.313	243.650
Adjusted EBITDA (US$/t)	13.61	17.29	14.84	14.75	31.85

Selected financial indicators - Pellets (excluding Samarco)

	4Q15	3Q15	4Q14	2015	2014
Adjusted EBITDA (US$ million)	336	382	526	1,539	2,579
Volume Sold (Mt)	10.837	11.961	12.686	46.284	43.682
Adjusted EBITDA (US$/t)	31.00	31.94	41.46	33.24	59.04

Selected financial indicators - Iron ore fines and Pellets

	4Q15	3Q15	4Q14	2015	2014
Adjusted EBITDA (US$ million)	1,376	1,562	1,586	5,451	10,338
Volume Sold (Mt)	87.269	80.222	84.080	311.598	287.332
Adjusted EBITDA (US$/t)	15.77	19.47	18.86	17.49	35.98

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MANAGERIAL ALLOCATION CHANGES

Vale will promote changes in its reporting estimates beginning 2016. These changes will not modify absolute cost and expense levels but will alter the allocation of costs and expenses by nature or business segments. The main impact of these changes will be in the allocation of costs between (i) SG&A, (ii) ICMS; and (iii) distribution costs intra business unit. The impacts of the proposed changes are as follows:

(i) SG&A

Currently a disproportionate amount of Vale s SG&A expenses in Brazil is allocated to the iron ore division, more specifically to iron ore fines. Upon re-assessing the allocation of SG&A across business segments, a decision was made on the use of different allocation criteria from 1Q16 onwards

(ii) ICMS

ICMS is a kind of value-added tax in Brazil. Vale is exposed to different ICMS tax regimes in the states where its operations are located. In general ICMS is credited on the acquisition of goods and services and realized upon sales into the domestic market, negotiations of credits with governments and third parties. Historically Vale has accumulated ICMS tax credits without being able to use them fully since exports from Brazil are exempted from the ICMS charge.

Given the continuous accumulation of ICMS without use, Vale periodically impairs the excessive tax credits and records the respective losses under other expenses account .

In order to reflect the regular nature of the ICMS tax credit impairment, Vale will record them as Cost of Goods Sold (COGS) on a more regular basis as of 1Q16, thus increasing COGS but at the same time not charging other expenses account .

The above mentioned changes will not alter absolute levels of costs and expenses for Vale s business units as a whole, being only a slightly relocation of absolute amounts between business units and from expenses to costs.

(iii) DISTRIBUTION COSTS

Currently, Vale includes its distribution costs into its C1 cash cost FOB port in Brazil. However, a higher percentage of these distribution costs are being incurred overseas after the implementation of the pellet plant in Oman, the distribution center in Malaysia and the more frequent

utilization of ports in China for blending iron ore.

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In order to adjust for these recent changes in its supply chain, Vale will report the distribution costs incurred in Oman, Malaysia, China and other facilities outside Brazil as a separate line item, named Distribution Costs . Maritime freight costs and distribution costs will be reported separately.

Iron ore fines unit cost + expenses adjusted for quality landed in China After accounting reporting changes

US$/t	1Q15	2Q15	3Q15	4Q15	2015
Vale s iron ore cash cost (ex-ROM, ex-royalties), FOB (US$ /t)	18.6	16.1	13.1	12.1	14.7
Iron ore fines freight cost (ex-bunker oil hedge)	17.2	16.8	16.4	14.1	16.0
Distribution costs	0.4	0.5	0.3	0.5	0.4
Iron ore fines expenses(1) & royalties	4.6	4.2	3.6	3.9	4.1
Iron ore fines moisture adjustment	3.4	3.1	2.8	2.5	3.0
Iron ore fines quality adjustment	-1.3	-2.0	-2.1	-1.1	-1.9
Iron ore fines unit cost + expenses landed in China (US$/dmt)	**42.9**	**38.7**	**34.1**	**32.0**	**36.3**

(1) Net of depreciation

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THE IMPACT OF BUNKER HEDGING ON VALE S FINANCIAL PERFORMANCE

The total effect of bunker oil prices on Vale s financial performance is dependent on the bunker oil hedge previously taken out by Vale. Vale stopped contracting bunker oil hedges since the structural decline in oil prices, but still faces the impact of the outstanding hedge positions. However, costs will no longer be impacted in 2016 since all outstanding bunker oil exposure recorded under hedge accounting program was settled in 4Q15.

As previously discussed, bunker oil hedges are recorded as follows:

(i) The hedge of the bunker oil exposure associated with our FOB and domestics sales is marked-to-market every quarter and recorded as financial results.

(ii) The hedge of the bunker oil exposure associated with our CFR sales is recorded as hedge accounting, being marked-to-market every quarter and recorded in other comprehensive income and impacting costs of goods sold only at the actual settlement dates.

Impact of bunker oil hedging in Vale s financial performance

Concept			Current impact	Drivers of future impact		
Freight contract type	**Hedge accounting**	**Impact of derivative positions in P/L statement**	**Impact incurred in 4Q15 P/L statement**	**Type of Instrument**	**Bunker oil derivative open positions (,000 tons)**	**Average strike price (US$/t)**
CFR	Yes	Impact on COGS at settlement date	US$2.5/t (US$134 million) increase on iron ore COGS	NA	0	NA
FOB	No	Impact on financial results	US$242 million decrease on financial results	Forward Zero Cost Collar	2,206 2,042	508 314 - 385

More specifically, the impact of the hedged positions in Vale s results can be summarized as follows:

(i) Impact on the financial statements related to the derivatives under Vale s hedge accounting program:

a. In 4Q15: freight costs increased by US$ 2.5/t with the settlement of derivatives contracts in 4Q15, driving COGS up.

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b. In 1Q16 and subsequent quarters: no impact

(ii) Impact on the financial statements related to the trades that are not under Vale´s hedge accounting program:

a. In 4Q15: a negative impact of US$ 242 million recognized in 4Q15 as financial expenses due to the realized loss on the settlements which occurred in the quarter and on the mark-to-market of the open positions on December 31st, 2015.

b. In 1Q16 and subsequent quarters: financial results will be impacted by the changes in the mark-to-market of the open derivative positions at the end of each quarter and by the gains or losses related to the settlements recorded in each quarter.

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SAMARCO DAM FAILURE

On November 5, 2015, one of Samarco´s sand tailings dam (Fundão) failed unexpectedly, sending 32Mm(3) tailings downstream and impacting several communities including the community at Bento Rodrigues, a small mining town of 600 people. The dam failure resulted in 17 fatalities, with 2 people still missing, and caused extensive property and environmental damage to the affected areas in the states of Minas Gerais and Espírito Santo.

Immediately after the dam failure, together with the Civil Defense, Fire Department, Military Police and other authorities, Samarco provided first aid, food, water, housing, social assistance and financial aid to hundreds of affected families and individuals. As of now, Samarco has already: (i) finished the recovery of all the seven bridges impacted by the dam failure; (ii) accommodated 369 families who lost their homes (100%); (iii) distributed 2,907 financial-aid cards for residents of the affected communities (75% of total affected families); (iv) provided psychological and social support for 1,185 families; (v) distributed 553 million liters of drinkable water and 59 million liters of mineral water. Both Vale and BHP Billiton, Samarco s shareholders, have been actively involved in supporting Samarco during this crisis.

Besides the community and welfare initiatives, Samarco has been monitoring the affected area and carrying out emergency work to contain any tailings movement, reinforcing the dams and dikes structures to ensure the safety of the region.

As well as cooperating with the investigations conducted by the Civil & Federal Police, and also the public prosecutors, Samarco, together with its shareholders, also engaged a specialized firm to conduct an external investigation. There is no set date for the completion of the report, due to the complexity of the event.

In order to assess the environmental and socio-economic impacts of the dam failure and assist in the development of a remediation plan, Samarco has engaged two external experts: a world class consulting specialist in engineering, environment and environmental emergencies; and another international firm specialized in environmental, health & safety, social and security services. The above-refferred plan will also include programs for the recovery of regional economic activity.

The impact of the dam failure on Samarco s activities was mainly the immediate stoppage of its mining operations in the state of Minas Gerais. Vale s operation in the Mariana Complex, near to Samarco s mining area, was also negatively impacted with the destruction of a major conveyor belt. Consequently, Vale´s production in the Mariana region was 3Mt lower in 4Q15 (which was offset by the increase in output from other mines) and will probably be 9Mt lower in 2016 (which will be offset by the increase in output from other mines). Vale has also

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interrupted the sale of its ROM to Samarco s processing plant in Minas Gerais.

As a consequence of the Fundão dam failure, Samarco incurred in expenses, wrote off assets and recognized provisions for remediation, which affected its balance sheet and income statement. Vale accounts for Samarco s results under the equity method, and, therefore, the impacts of Samarco´s dam failure on Vale´s balance sheet and income statement are limited to Vale´s interest in Samarco´s capital as per the Brazilian Corporation Law. Vale s investment in Samarco was reduced to zero and no liability was recognized in Vale s financial statements. The dam failure had no effect on Vale s cash flow for the year ended December 31, 2015.(24).

Vale S.A. was summoned by the Federal Union, the States of Minas Gerais and Espirito Santo, and other entities in a public civil action filed at the 12ª Vara Federal of Belo Horizonte. The action, which was brought against Samarco S.A. (Samarco) and its shareholders, BHP Billiton Brasil Ltda. (BHP) and Vale, requests (i) a freeze on transfer of the mining rights of the three respondents, without, however, limiting their commercial and production activities and (ii) remediation of the damages caused by the failure of the Samarco Fundão dam. The claimants valued the action at R$ 20.2 billion. Vale has adopted the necessary measures to guarantee its right of defense.

(24) For more details on accounting effects, please refer to IFRS note 4.

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Base Metals

Annual performance

Base Metals adjusted EBITDA totaled US$ 1.388 billion in 2015, representing a decrease of US$ 1.133 billion from the US$ 2.521 billion recorded in 2014. The decrease was mainly due to lower base metals prices (US$ 2.195 billion) and higher costs (US$ 137 million), which were partly offset by favorable exchange rate variations (US$ 594 million) and higher volumes (US$ 498 million).

SALES REVENUES AND VOLUME

Gross sales from base metals and their by-products totaled US$ 6.172 billion in 2015 against US$ 7.694 billion in 2014. The decrease was mainly driven by lower nickel prices (US$ 1.394 billion) and lower copper prices (US$ 641 million), which were partially offset by higher sales of nickel (US$ 338 million) and copper (US$ 246 million).

Nickel production achieved the new annual record of 291,000 t, 16,000 t higher than in 2014, as a result of the higher production at VNC and Onça Puma. Copper production, supported by Salobo s ramp-up, totaled 423,800 t, 44,100 t higher than in 2014 and a new annual record. Gold production reached a record 420,100 troy ounces (oz) in 2015, an all-time record, with the continued ramp-up of Salobo.

COSTS AND EXPENSES

Base metals COGS were US$ 4.296 billion (US$ 5.863 billion including depreciation). After adjusting for the effects of volumes (US$ 168 million) and exchange rate variations (-US$ 594 million), costs increased by US$ 137 million vs. 2014. The primary reason for the higher cost was the increased allocation of VNC pre-operating expenses to COGS.

SG&A and other expenses, excluding depreciation, were a positive US$ 44 million in 2015 due to the positive effect of US$ 230 million from the gold stream transaction recorded in the 1Q15. SG&A and other expenses, excluding the positive effects of insurance (US$ 276 million) in 2014 and of the gold streaming transaction in 1Q15, remained stable in 2015 vs. 2014.

Pre-operating and stoppage expenses, net of depreciation, totaled US$ 412 million, US$ 117 million lower than in 2014, mainly reflecting the lower expenses with VNC (US$ 129 million) and Salobo (US$ 15 million), which were partially offset by higher expenses in Long Harbour (US$ 26 million).

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Quarterly performance

Adjusted EBITDA totaled US$ 111 million in 4Q15, decreasing US$ 82 million vs. 3Q15 mainly as a result of lower prices (US$ 158 million) and the write-off of materials inventories related to the initial construction of Onça Puma and Salobo of -US$ 31 million, which were partly compensated by higher sales volumes (US$ 93 million) and favorable exchange rates variation (US$ 30 million). Adjusted EBITDA was negatively impacted by VNC s EBITDA of -US$ 107 million and by the provisional copper price adjustments of -US$ 60 million.

SALES REVENUES AND VOLUMES

Nickel gross sales revenues totaled US$ 782 million in 4Q15, in line with 3Q15. The negative impact of lower nickel realized prices in 4Q15 (US$ 112 million) was offset by higher sales volumes (US$ 109 million). Sales volumes were 84 kt in 4Q15, 12 kt higher than in 3Q15.

Copper gross sales revenues totaled US$ 413 million in 4Q15, increasing 12.2% vs. 3Q15, mainly as a result of higher volumes (US$ 54 million). Copper sales volumes totaled 108 kt in 4Q15 vs. 94 kt in 3Q15.

PGMs (platinum group metals) gross sales revenues totaled US$ 96 million in 4Q15, increasing 62.7% vs. 3Q15, due to higher sales volumes of 140 koz in 4Q15 vs. 83 koz in 3Q15. PGMs sales volumes increased as Sudbury operated without the major maintenance stoppage which occurred in the third quarter.

Gold gross sales revenues totaled US$ 122 million in 4Q15, 6.1% higher than in 3Q15 as a result of higher sales volumes of 114 koz in 4Q15 vs. 105 koz in 3Q15.

Gross operating revenue by product

US$ million	4Q15	3Q15	4Q14	2015	2014
Nickel	782	785	1,064	3,412	4,468
Copper	413	368	556	1,728	2,122
PGMs	96	59	152	404	564
Gold	122	115	115	477	418
Silver	8	7	11	31	37
Others	37	22	50	120	85
Total	**1,458**	**1,355**	**1,948**	**6,172**	**7,694**

NICKEL REALIZED PRICES

Nickel realized price was US$ 9,310/t, US$ 127/t lower than the average nickel LME price of US$ 9,437/t in 4Q15.

Vale s nickel products are divided in two categories, refined nickel (pellets, powder, cathode, FeNi, Utility Nickel and Tonimet) and intermediates (concentrates, matte, NiO and NHC).

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Refined nickel products have greater nickel content, typically commanding a premium over the average LME nickel price, whereas nickel intermediates are less pure as they are only partially processed. Due to this difference, intermediate products are sold at a discount. The amount of the discount will vary depending on the amount of processing still required, product forms and level of impurities. The sales product mix is also an important driver of nickel price realization. Refined nickel sales accounted for 87% of total nickel sales in 4Q15; with intermediate sales accounting for the balance. This was the same ratio as in 3Q15.

The realized nickel price differed from the average LME price in 4Q15 based on the following impacts:

- Premium for refined finished nickel products averaging US$ 313/t, with an impact on the aggregate realized nickel price of US$ 270/t;

- Discount for intermediate nickel products averaging US$ 2,943/t, with an impact on the aggregate realized nickel price of -US$ 397/t.

Price realization - nickel

COPPER REALIZED PRICES

Copper realized price was US$ 3,824/t, US$ 1,068/t lower than the average copper LME price of US$ 4,892/t in 4Q15. Vale s copper products are mostly intermediate forms of copper, predominately in the form of concentrate which is sold at a discount to the LME. These

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products are sold on provisional pricing during the quarter with final prices determined at a future period, generally one to four months forward(25).

The realized copper price differed from the average LME price in 4Q15 based on the following impacts:

- Current period price adjustments: mark-to-market of invoices still open in the quarter based on the copper price forward curve(26) at the end of the quarter (-US$ 317/t).

- Prior period price adjustments: variance between the price used in final invoices (and on the mark-to-market of invoices from previous quarters still open at the end of the current quarter) and the provisional prices used for sales in previous quarters (US$ -239/t).

- TC/RCs, penalties, premiums and discounts for intermediate products (-US$ 512/t).

Price realization copper

The total impact of the provisional pricing system (mark-to-market of open invoices and differences between provisional and final prices) on sales revenues was US$ 60 million as the net result of: (i) current period price adjustment for the mark-to-market of invoices still open in the quarter based on the copper price forward curve (-US$ 317/t on 108 kt(27) of copper sales volumes, resulting in -US$ 34 million); and (ii) prior period price adjustment based on the variance between the price used in final invoices and provisional prices used in previous quarters (-US$ 239/t on 108 kt of copper sales volumes, resulting in -US$ 26 million).

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(25) At December 31, 2015 Vale had provisionally priced copper sales totaling 81,229 tons valued at a LME forward price of US$ 4,710/t, subject to final pricing over the next several months.

(26) Includes a small amount of final invoices that were provisionally priced and settled within the quarter.

(27) Copper production includes 43 kt in North Atlantic nickel operations and 65 kt in South Atlantic copper operations.

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Average sale price

US$/ metric ton	4Q15	3Q15	4Q14	2015	2014
Nickel - LME	9,437	10,561	15,799	11,807	16,867
Copper - LME	4,892	5,259	6,624	5,494	6,862
Nickel	9,310	10,866	15,420	11,684	16,426
Copper	3,824	3,892	5,842	4,353	6,015
Platinum (US$/oz)	818	1,005	1,225	1,020	1,262
Gold (US$/oz)	1,064	1,095	1,190	1,123	1,193
Silver (US$/oz)	10.00	13.49	14.16	12.63	19.42
Cobalt (US$/lb)	8.55	14.54	9.34	9.95	10.67

PRODUCTION PERFORMANCE

Nickel production reached a quarterly record of 82,700 t in 4Q15, being 15.4% higher than in 3Q15, as a result of higher finished nickel production from the operations in Canada, Indonesia, New Caledonia and Brazil.

Copper production reached the quarterly record of 112,500 t in 4Q15, being 13.4% higher than in 3Q15, as a result of the higher copper production from the Canadian operations and the ramp-up of Salobo II.

Gold production reached the quarterly record of 117,500 oz in 4Q15, being 17.6% higher than in 3Q15, as a result of Salobo s ongoing ramp-up.

Volume sold

000 metric tons	4Q15	3Q15	4Q14	2015	2014
Nickel operations & by products					
Nickel	84	72	69	292	272
Copper	43	32	37	148	156
Gold (000 oz)	15	15	20	79	103
Silver (000 oz)	582	374	574	1,655	1,431
PGMs (000 oz)	140	83	168	519	577
Cobalt (metric ton)	1,433	468	1,311	3,840	3,188
Copper operations & by products					
Copper	65	62	58	249	197
Gold (000 oz)	99	90	76	346	248
Silver (000 oz)	178	154	182	648	458

COSTS AND EXPENSES

Costs totaled US$ 1.131 billion in 4Q15 (or US$ 1.551 billion including depreciation). After adjusting for the effects of higher sales volumes (US$ 168 million) and exchange rate variations (-US$ 30 million), costs decreased by US$ 45 million vs. 3Q15, mainly due to the higher dilution of fixed costs in Sudbury (US$ 42 million).

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Base metals COGS - 3Q15 x 4Q15

US$ million	3Q15	Variance drivers Volume	Exchange Rate	Others	Total Variation 3Q15 x 4Q15	4Q15
Personnel	205	37	(7)	(7)	23	228
Outsourced services and Materials	218	39	(7)	(7)	25	243
Energy (Electricity, fuel & gas)	137	25	(4)	(4)	17	154
Acquisition of products	106			(15)	(15)	91
Maintenance	236	43	(8)	(8)	27	263
Others	136	24	(4)	(4)	16	152
Total costs before depreciation and amortization	**1,038**	**168**	**(30)**	**(45)**	**93**	**1,131**
Depreciation	368	2	(11)	61	52	420
Total	**1,406**	**170**	**(41)**	**16**	**145**	**1,551**

SG&A and other expenses, excluding depreciation, totalled US$ 95 million in 4Q15, being negatively impacted by the write-off of materials inventories in 4Q15 (US$ 31 million).

Pre-operating and stoppage expenses, net of depreciation, totaled US$ 89 million, being US$ 8 million lower than in 3Q15, mainly reflecting lower expenses at VNC (US$ 7 million) and Long Harbour (US$ 2 million).

Performance by operation

The breakdown of the Base Metals EBITDA components per operation is detailed below.

Base Metals EBITDA overview 4Q15

US$ millions	North Atlantic	PTVI Site	VNC Site	Sossego	Salobo	Onça Puma	Other(1)	Total Base Metals
Net Revenues	**729**	**177**	**84**	**103**	**248**	**64**	**53**	**1,458**
Costs(2)	(490)	(145)	(113)	(83)	(156)	(55)	(89)	(1,131)
SG&A and others	(11)	2	(10)	(3)	(17)	(19)	(36)	(95)
R&D	(18)	(5)	(3)	(3)		(0)	(3)	(32)
Pre-operating & stoppage	(23)		(65)				(1)	(89)
EBITDA	**187**	**28**	**(107)**	**14**	**75**	**(10)**	**(76)**	**111**
Ni deliveries (kt)	43	23	10			7	2	84
Cu deliveries (kt)	43			23	42			108

(1) Includes the PTVI and VNC off-takes, intercompany sales and purchase of finished nickel and corporate center for base metals.

(2) Costs without by-products credits.

Base metals EBITDA by operation

US$ million	4Q15	3Q15	4Q14
North Atlantic operation(1)	187	139	435
PTVI	28	57	91
VNC	(107)	(115)	(118)
Onça Puma	(10)	12	5
Sossego	14	36	58
Salobo	75	77	71
Other(2)	(76)	(14)	40
Total	**111**	**193**	**582**

(1) Includes the operations in Canada and in the United Kingdom.

(2) Includes the PTVI and VNC off-takes, intercompany sales and purchase of finished nickel and corporate center for base metals

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Base metals EBITDA per ton by operation

US$ million	4Q15	3Q15	4Q14
North Atlantic operation(1)	2,179	1,961	5,764
PTVI	1,231	2,543	4,483
Onça Puma	(1,405)	2,291	1,000
Sossego	614	1,397	2,191
Salobo	1,790	2,099	2,240

(1) Includes the operations in Canada and in the United Kingdom.

EBITDA

Details of Base Metals adjusted EBITDA by operations are as follows:

(i) North Atlantic operations EBITDA was US$ 187 million, increasing by US$ 48 million compared with 3Q15 mainly as a result of lower costs and expenses (US$ 81 million) and higher volumes (US$ 66 million) partially offset by lower prices (US$ 91 million).

(ii) PTVI s EBITDA was US$ 28 million, decreasing US$ 29 million vs. 3Q15 mainly as a result of lower prices (US$ 30 million) while costs and expenses remained stable in 4Q15 vs 3Q15.

(iii) VNC s EBITDA was -US$ 107 million, increasing US$ 8 million vs. 3Q15 mainly as a result of lower costs and expenses (US$ 13 million).

(iv) Onça Puma s EBITDA was -US$ 10 million, decreasing by US$ 22 million vs. 3Q15 as a result of higher expenses (US$ 25 million), which was primarily associated with a one-time inventory write-off of US$ 16 million related to materials purchased for initial construction.

(v) Sossego s EBITDA was US$ 14 million, decreasing by US$ 22 million mainly as a result of higher costs and expenses (US$ 22 million) related to a 10.2% production decline due to lower grades and an inventory write-off of US$ 2 million.

(vi) Salobo s EBITDA was US$ 75 million, decreasing by US$ 2 million vs. 3Q15 mainly as a result of a one-time materials inventory write-off related to material purchased for the initial construction (US$ 13 million) and lower sales prices (US$ 3 million). These negative impacts were partially offset by higher sales volumes (US$ 17 million) and positive exchange rate impacts (US$ 12 million).

Unit cash cost in the North Atlantic Operations decreased in 4Q15 due to higher sales volumes, higher by-product deliveries and the dilution of fixed costs. Cash cost in Onça Puma was positively impacted by the depreciation of the BRL. Sossego s costs increased due to lower copper grades.

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Base Metals unit cash cost of sales, net of by-product credits(1)

US$ / t	4Q15	3Q15	4Q14
Nickel			
North Atlantic Operations (nickel)	3,582	6,242	5,267
PTVI (nickel)	6,326	6,157	7,990
Onça Puma (nickel)	7,710	8,596	13,831
Copper			
Sossego (copper)	2,840	2,301	3,668
Salobo (copper)	1,571	1,520	2,218

(1) North Atlantic figures include Clydach and Acton refining costs while PTVI only includes the standalone operation.

As previously reported, VNC was subject to a production test that it had to meet by December 31, 2015 pursuant to the shareholder s agreement between Vale and Sumic Nickel Netherlands B.V., (Sumic) a joint venture between Sumitomo Metal Mining Co., Ltd. and Mitsui & Co., Ltd,. While VNC set a new production record in the fourth quarter producing 9,600 t of nickel, it did not achieve the threshold required for Sumic to remain a shareholder in VNC. With respect to the test which had a nickel oxide threshold and a total nickel threshold, VNC achieved 93% of the target nickel oxide level and 77% of the total nickel target. Sumic will exit VNC by March 31, 2016 and Vale will pay them proceeds of US$ 135 million in March 2017 for their equity stake. Vale will then hold 95% of the shares of VNC. A further US$ 218 million is due to Sumic in March 2017 for debt funding they provided to VNC.

Market outlook base metals

Base metal prices were negatively impacted in the fourth quarter reflecting decelerating growth of Chinese industrial production and consumer spending.

NICKEL

LME cash nickel prices declined steadily over 4Q15 mainly due to weakening demand in China which resulted in continued decline in stainless steel production. LME prices averaged US$ 9,437/t in the quarter, representing a 10.6% decline vs. 3Q15 and a 40.3% decline vs. 4Q14. Total nickel inventories in major exchanges increased from 478kt at the end of 3Q15 to 493kt at the end of 4Q15, as inventory was added to the SHFE.

Ore shipments from the Philippines into China declined 1.7Mt (18%) in 4Q15 vs. 4Q14 while ore inventories declined 1.2Mt during the fourth quarter, suggesting lower NPI production. Net imports of finished nickel into China remained relatively high with 91kt being imported in 4Q15 vs. exports of 2.7kt for the same period of 2014. Ferronickel net imports in 4Q15 were also high, with 28kt contained Ni vs. 20kt in 4Q14.

While the duration of the current price weakness is uncertain, at these prices well over half of nickel operations have negative cash flows. Global supply is anticipated to decline in 2016 led by falling NPI production and an anticipated fall in non-China refined production as producers

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become unable to sustain losses. Relatively flat demand outlook coupled with reduced production should positively impact prices as the market moves into a deficit in 2016.

COPPER

LME cash copper prices also declined in 4Q15 averaging US$ 4,892/t. Prices declined 7% vs. 3Q15 and 26% vs. 4Q14. Inventories on all three major exchanges declined over the quarter with total exchange inventories ending the quarter at 484kt from 520kt at the beginning. Copper concentrate imports into China have been strong, having increased 11% in 2015 year-over-year vs. 2014 while refined copper imports decreased slightly (-0.6%) in 2015 year-over-year vs. 2014. Over 100kt of price related supply cuts were announced in the fourth quarter along with the postponement of several projects, including expansion projects for key copper mines in Latin America. However, over the same period additional copper units were added to supply resulting in a net increase year-over-year moving the market into surplus for 2015. In 2016, with relatively flat demand outlook the market is expected to remain in surplus.

Selected financial indicators - Base Metals

US$ million	**4Q15**	**3Q15**	**4Q14**	**2015**	**2014**
Net Revenues	1,458	1,347	1,953	6,163	7,692
Costs (1)	(1,131)	(1,038)	(1,205)	(4,296)	(4,587)
Expenses (1)	(95)	7	15	44	89
Pre-operating and stoppage expenses(1)	(89)	(97)	(136)	(412)	(530)
R&D expenses	(32)	(26)	(45)	(111)	(143)
Adjusted EBITDA	111	193	582	1,388	2,521
Depreciation and amortization	(484)	(437)	(563)	(1,840)	(1,791)
Adjusted EBIT	(373)	(244)	19	(452)	730
Adjusted EBIT margin (%)	(25.6)	(18.1)	1.0	(7.3)	9.5

(1) Net of depreciation and amortization

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Coal

Annual performance

Adjusted EBITDA for the Coal business segment was negative US$ 508 million in 2015, compared to negative US$ 669 million in 2014. The increase of US$ 161 million was mainly driven by the stoppage of the Integra and Isaac Plains operations, by lower expenses and by the Australian Dollar devaluation, which were partly offset by lower prices.

Gross sales revenues of metallurgical coal decreased to US$ 480 million in 2015, compared to US$ 661 million in 2014. The decrease of US$ 181 million was driven by lower prices (US$ 108 million) and by lower sales volumes (US$ 73 million) in 2015 as a result of the stoppage of Integra and Isaac Plains. Gross sales revenues of thermal coal decreased to US$ 46 million in 2015 from US$ 78 million in 2014, as a result of lower prices (US$ 12 million) and lower sales volumes (US$ 20 million).

Sales volumes of metallurgical coal reached 5.6 Mt in 2015 decreasing by 716 kt vs. 2014, while sales volumes of thermal coal reached 892 kt in 2015, 260 kt lower than in 2014 as a result of the above-mentioned stoppage of the Integra and Isaac Plains operations.

Coal costs amounted to US$ 839 million (or US$ 977 million with depreciation charges) in 2015, decreasing US$ 232 million in comparison with the US$ 1.071 billion recorded in 2014. After adjusting for the effects of lower volumes (US$ 134 million) and for the AUD depreciation (US$ 84 million), costs decreased by US$ 14 million.

Coal expenses, excluding depreciation charges, decreased by US$ 142 million from US$ 365 million in 2014 to US$ 223 million in 2015. The decrease was mainly due to lower inventory adjustments on thermal coal in Mozambique.

Annual performance by operation

Highlights by operation are:

Australia

- Adjusted EBITDA for the Australian operations was negative US$ 28 million in 2015 compared to the negative US$ 191 million in 2014. The increase of US$ 163 million vs. 2014 was mainly driven by the

above-mentioned stoppage of the non-profitable operations of Isaac Plains and Integra, as well as the good operational performance of Carborough Downs, partly offset by lower prices, the write-down of assets and the write-down of mine development expenses.

- Free Cash Flow for the Australian operations totaled US$ 24 million in 2015, after deducting the above-mentioned non-cash write-down events.

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- Costs net of depreciation for the Australian operations amounted to US$ 256 million in 2015, decreasing by US$ 261 million vs. 2014. After adjusting for the effects of lower volumes (-US$ 134 million) and the AUD depreciation (-US$ 84 million), costs decreased by US$ 43 million as a result of the above-mentioned stoppage of Integra and Isaac Plains, as well as the good operational performance and cost reduction initiatives in Carborough Downs.

Mozambique

- Adjusted EBITDA for the Mozambique operations was negative US$ 508 million in 2015 in line with the negative US$ 506 million registered in 2014. The negative impact of lower prices was mainly offset by lower expenses.

- Mozambique costs, net of depreciation, amounted to US$ 583 million in 2015, increasing by US$ 29 million, mainly as a result of the waste removal brought forward during the plant shutdown held in the third quarter and higher maintenance costs, which were partly offset by lower logistics costs.

Quarterly performance

Adjusted EBITDA for the Coal business segment was negative US$ 149 million in 4Q15, compared to negative US$ 129 million in 3Q15. The decrease of US$ 20 million was mainly driven by lower prices and higher costs in Australia.

Gross sales revenues of metallurgical coal decreased to US$ 98 million in 4Q15, compared to US$ 115 million in 3Q15. The decrease of US$ 17 million was driven by lower prices (US$ 11 million) and by lower sales volumes (US$ 6 million) in 4Q15 as a result of a longwall move at Carborough Downs. Gross sales revenues of thermal coal decreased to US$ 10 million in 4Q15 from US$ 12 million in 3Q15, as a result of lower prices (US$ 1 million) and lower sales volumes (US$ 1 million).

Sales volumes of metallurgical coal reached 1.329 Mt in 4Q15 decreasing by 90 kt vs. 3Q15, mainly due to the above-mentioned longwall move at Carborough Downs. The decrease was partly offset by higher sales volumes from Mozambique. Sales volumes of thermal coal reached 226 kt in 4Q15, 17 kt lower than in 3Q15 as a result of the priority given to haul metallurgical coal.

Coal costs totaled US$ 260 million (or US$ 296 million with depreciation charges) in 4Q15, increasing US$ 53 million in comparison with the US$ 207 million recorded in 3Q15. After adjusting for the effects of lower volumes in Australia (-US$ 23 million) and of higher volumes in Mozambique (US$ 28 million), costs increased by US$ 48 million, mainly due to the one-off effect of the write-down of mine development expenses in Australia.

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Coal expenses, excluding depreciation charges, decreased by US$ 24 million from US$ 49 million in 3Q15 to US$ 25 million in 4Q15. The decrease was mainly due to the positive impact of the final settlement of an insurance claim in Australia.

Quarterly performance by operation

Highlights by operation are:

Australia

- Adjusted EBITDA for the Australian operations was negative US$ 33 million in 4Q15 compared to the negative US$ 4 million in 3Q15. The decrease of US$ 29 million vs. 3Q15 was mainly driven by the above-mentioned write-down of mine development expenses at Carborough Downs.

- Costs net of depreciation for the Australian operations totaled US$ 84 million in 4Q15, increasing by US$ 25 million vs. 3Q15. After adjusting for the effects of lower volumes (-US$ 23 million), costs increased by US$ 48 million as a result of the above-mentioned write-down at Carborough Downs.

- Free Cash Flow for the Australian operations totaled US$ 8 million in 4Q15.

Mozambique

- Adjusted EBITDA for the Mozambique operations was negative US$ 144 million in 4Q15 compared to the negative US$ 125 million in 3Q15. The decrease of US$ 19 million vs. 3Q15 was mainly driven by lower prices.

- Mozambique costs net of depreciation amounted to US$ 176 million in 4Q15, increasing by US$ 28 million vs. 3Q15, driven by higher volumes.

Market outlook - metallurgical coal

Prices for the low volatility premium hard coking coal benchmark FOB Australia fell 8.9% from US$ 89/t in 3Q15 to US$81/t in 4Q15, while prices for PCI dropped 2.8%, from US$ 71/t in 3Q15 to US$ 69/t in 4Q15.

Chinese seaborne demand decreased by 22% to 48Mt in 2015 compared to 62Mt in 2014. This decrease was partially offset by a 14% increase in Indian demand which increased from 40Mt in 2014 to roughly 46Mt in 2015. Global metallurgical imports declined 4% on a worldwide basis in 2015 further pressuring coal prices.

Australian producers benefited from low freight rates and increased sales into the Atlantic market. Preliminary data shows that Australian exports of metallurgical coal totaled 186Mt in

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2015 (slightly less than in 2014), while US exports totaled 38Mt, (28% lower than in 2014). Further supply cuts are expected with the consolidation of US producers, whereas currency depreciation in other exporting countries slowed down supply reductions outside the US.

Demand will most likely remain subdued with additional supply curtailments being the focus of 2016.

Coal business performance

Gross operating revenue by product

US$ million	4Q15	3Q15	4Q14	2015	2014
Metallurgical coal	98	115	181	480	661
Thermal coal	10	12	20	46	78
Total	**108**	**127**	**201**	**526**	**739**

Average sale price

US$/ metric ton	4Q15	3Q15	4Q14	2015	2014
Metallurgical coal	73.75	81.22	99.72	85.55	104.37
Thermal coal	44.19	48.24	64.52	52.42	67.65

Volume sold

000 metric tons	4Q15	3Q15	4Q14	2015	2014
Metallurgical coal	1,329	1,419	1,815	5,614	6,330
Thermal coal	226	243	310	891	1,152
Total	**1,555**	**1,662**	**2,125**	**6,505**	**7,482**

Selected financial indicators - Coal

US$ million	4Q15	3Q15	4Q14	2015	2014
Net Revenues	108	127	201	526	739
Costs (1)	(260)	(207)	(249)	(839)	(1.071)
Expenses (1)	(9)	(17)	(164)	(140)	(309)
Pre-operating and stoppage expenses (1)	(12)	(25)	(10)	(61)	(38)
R&D expenses	(4)	(7)	(10)	(22)	(18)
Dividends received	28		28	28	28

Adjusted EBITDA	(149)	(129)	(204)	(508)	(669)
Depreciation and amortization	(41)	(80)	(36)	(192)	(120)
Adjusted EBIT	(218.0)	(209.0)	(268.0)	(728.0)	(817.0)
Adjusted EBIT margin (%)	(202)	(165)	(133)	(138)	(111)

(1) Net of depreciation and amortization.

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Fertilizer nutrients

Annual performance

Adjusted EBITDA for the Fertilizer business segment increased to US$ 567 million in 2015 from US$ 278 million in 2014. The increase of US$ 289 million from 2014 was driven by: (i) exchange rate (US$ 248 million); (ii) cost saving initiatives (US$ 83 million); (iii) gains on realized price due to commercial initiatives (US$ 74 million); and (iv) expense reductions(28) (US$ 45 million). The increase was partly offset by: (i) inflation (US$ 79 million)(29); (ii) lower volumes (US$ 37 million); (iii) higher R&D expenses(30) (US$ 23 million) and (iv) lower market prices (US$ 22 million).

Potash gross sales revenues totaled US$ 147 million in 2015, decreasing by US$ 22 million in 2015 vs. 2014. Sales volumes decreased from 475 kt in 2014 to 463 kt in 2015, due to lower grades at the mine, which impacted production. Realized prices decreased from US$ 356/t in 2014 to US$ 318/t in 2015, alongside the reduction of the international potash prices.

Phosphate products gross sales revenues totaled US$ 1.818 billion in 2015, US$ 86 million lower than in 2014 as a result of lower sales volumes (US$ 39 million) and of lower realized prices (US$ 47 million), which were impacted by the reduction of international prices.

Nitrogen fertilizers gross sales revenues totaled US$ 355 million in 2015 vs. US$ 411 million in 2014, as a result of lower sales volumes (US$ 28 million) and lower sales prices (US$ 28 million).

Despite the reduction in sales volumes in 2015, the Fertilizer business segment increased its market share in Brazil.

Fertilizer costs, net of depreciation, totaled US$ 1.469 billion in 2015 (or US$ 1.763 billion with depreciation charges), decreasing by US$ 416 million vs. 2014. After excluding the effects of lower volumes (-US$ 60 million) and exchange rate variations (-US$ 343 million), costs decreased US$ 13 million, as cost saving initiatives (US$ 83 million) were partly offset by inflation (US$ 70 million).

SG&A and Other expenses, net of depreciation, decreased to US$ 37 million in 2015 from US$ 95 million in 2014, due to the BRL depreciation (US$ 19 million) and downsizing initiatives (US$ 30 million), which were partly offset by inflation (US$ 9 million). R&D expenses totaled US$ 82 million in 2015, increasing 14% from the US$ 72 million recorded in 2014, mainly due to higher expenditures with the Kronau project study. Pre-operating and

(28) SG&A and Other expenses, pre operational and stoppage expenses, after adjusting for the effect of exchange rates.

(29) Includes US$ 96 million of inflation on costs, -US$26 million of ammonia and sulphur price decreases and US$ 9 million of inflation in expenses.

(30) After adjusting for the effect of exchange rates.

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stoppage expenses totaled US$ 70 million in 2015, decreasing US$ 15 million vs. 2014, mainly as a result of a reduction in stoppage expenses (US$ 17.5 million).

Quarterly performance

Adjusted EBITDA for the Fertilizer business segment decreased to US$ 117 million in 4Q15 from US$ 197 million in 3Q15. The decrease of US$ 80 million from 3Q15 was mainly driven by lower volumes (US$ 86 million), following the usual seasonality.

Potash gross sales revenues totaled US$ 33 million in 4Q15, decreasing by US$ 14 million in 4Q15 vs. 3Q15. Sales volumes decreased from 155 kt in 3Q15 to 114 kt in 4Q15, due to typical market seasonality. Realized prices decreased from US$ 302/t in 3Q15 to US$ 293/t in 4Q15, alongside the reduction of international potash prices.

Phosphate products gross sales revenues totaled US$ 387 million in 4Q15, US$ 201 million lower than in 3Q15 as a result of lower sales volumes. Sales volumes decreased due to usual market seasonality.

Nitrogen fertilizers gross sales revenues totaled US$ 76 million in 4Q15 vs. US$ 92 million in 3Q15, mainly as a result of lower sales volumes.

Fertilizer costs, net of depreciation, totaled US$ 319 million in 4Q15 (or US$ 386 million with depreciation charges), decreasing US$ 125 million vs. 3Q15. After excluding the effects of lower volumes (-US$ 130 million) and exchange rate variations (-US$ 19 million), costs increased by US$ 24 million, mainly as a result of idle capacity (US$ 10 million), inventory adjustments (US$ 6 million) and higher taxes on freight (US$ 3 million).

SG&A and Other expenses, net of depreciation, increased to US$ 14 million in 4Q15 from US$ 5 million in 3Q15. R&D expenses totaled US$ 22 million in 4Q15, in line with US$ 23 million recorded in 3Q15. Pre-operating and stoppage expenses totaled US$ 9 million in 4Q15, decreasing US$ 20 million vs. 3Q15, mainly as a result of a reduction in stoppage expenses.

Market outlook - fertilizer nutrients

Fertilizers posted another quarter of lackluster demand as a result of lower than expected agricultural commodities prices. Demand in Brazil was further undermined by the depreciation of the BRL against the USD and the shortage of credit to farmers. Demand in India was negatively impacted by the consumption of inventories.

The phosphate and nitrogen market remained weak with supply reductions not matching demand slowdowns. Lower phosphate demand also reduced demand for sulphur and ammonia, the most relevant raw materials for the production of nitrogen and phosphate

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products. Altogether the conditions in these segments will establish a lower pricing level for the nitrogen and phosphate markets.

The potash market remained oversupplied with still sluggish demand. However, supported by the annual contracts agreed with Chinese purchasers in the beginning of each year, prices of potash fertilizers remained relatively high for the current market conditions, prompting buyers to wait for the new, upcoming price negotiations.

Looking forward, consumption may remain weak, especially in Brazil, as fertilizer buyers continue to postpone purchases with the hope of credit recovery and higher agricultural commodities prices. The potash market may come to balance in the short term with production cuts and no additional capacity installed in 2015. The phosphate market may also improve with production cuts.

Fertilizers COGS 3Q15 x 4Q15

		Variance drivers				
US$ million	**3Q15**	**Volume**	**Exchange Rate**	**Others**	**Total Variation 3Q15 x 4Q15**	**4Q15**
Personnel	73	(18)	(6)	1	(23)	50
Outsourced services and Materials	269	(69)	(8)	(9)	(86)	183
Energy (Electricity, fuel & gas)	56	(16)	(3)		(19)	37
Maintenance	23	(4)	(1)		(5)	18
Others	23	(23)	(1)	32	8	31
Total costs before depreciation and amortization	**444**	**(130)**	**(19)**	**24**	**(125)**	**319**
Depreciation	93	(25)	(6)	5	(26)	67
Total	**537**	**(155)**	**(25)**	**29**	**(151)**	**386**

Fertilizer nutrients business performance

Gross operating revenue by product

US$ million	**4Q15**	**3Q15**	**4Q14**	**2015**	**2014**
Potash	33	47	45	147	169
Phosphates	387	588	432	1,818	1,904
Nitrogen	76	92	108	355	411
Others	17	20	22	66	101
Total	**513**	**747**	**607**	**2,386**	**2,585**

Average sale price

US$/ metric ton	4Q15	3Q15	4Q14	2015	2014
Potash	293.08	302.42	371.90	318.32	355.79
Phosphates					
MAP	496.45	505.21	550.70	511.70	542.44
TSP	394.48	391.50	448.41	398.05	428.98
SSP	212.88	197.17	217.14	204.45	212.61
DCP	514.90	536.10	584.94	554.88	591.51
Phosphate rock	81.73	78.02	88.77	82.55	70.88
Nitrogen	490.89	497.96	627.91	554.11	604.41

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Volume sold

000 metric tons	4Q15	3Q15	4Q14	2015	2014
Potash	114	155	121	463	475
Phosphates					
MAP	266	348	249	1,081	1,040
TSP	113	317	112	744	749
SSP	317	740	367	1,847	2,091
DCP	119	118	118	459	493
Phosphate rock	811	769	935	3,193	3,259
Others phosphates	68	74	71	330	271
Nitrogen	154	185	172	641	680

Selected financial indicators - Fertilizers

US$ million	4Q15	3Q15	4Q14	2015	2014
Net Revenues	481	698	569	2.225	2.415
Costs(1)	(319)	(444)	(411)	(1,469)	(1,885)
Expenses(1)	(14)	(5)	(29)	(37)	(95)
Pre-operating and stoppage expenses(1)	(9)	(29)	(34)	(70)	(85)
R&D expenses	(22)	(23)	(20)	(82)	(72)
Adjusted EBITDA	117	197	75	567	278
Depreciation and amortization	(67)	(99)	(88)	(310)	(419)
Adjusted EBIT	50	98	(13)	257	(141)
Adjusted EBIT margin (%)	10.4	14.0	(2.3)	11.6	(5.8)

(1) Net of depreciation and amortization.

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FINANCIAL INDICATORS OF NON-CONSOLIDATED COMPANIES

For selected financial indicators of the main non-consolidated companies, see our quarterly financial statements on www.vale.com / Investors / Information for the market / Financial statements.

CONFERENCE CALL AND WEBCAST

Vale will host two conference calls and webcasts on Thursday, February 25th. The first, in Portuguese (without translation), will begin at 10:00 a.m. Rio de Janeiro time. The second, in English, at 12:00 p.m. Rio de Janeiro time, 10:00 a.m. US Eastern Daylight Time, 3:00 p.m. British Standard Time, and 11:00 p.m. Hong Kong time.

Dial in to conference calls/webcasts:

In Portuguese:

Participants from Brazil: (55 11) 3193-1001 or (55 11) 2820-4001

Participants from the US: (1 888) 700-0802

Participants from other countries: (1 786) 924-6977

Access code: VALE

In English:

Participants from Brazil: (55 11) 3193-1001 or (55 11) 2820-4001

Participants from the U.S.: (1 866) 262-4553

Participants from other countries: (1 412) 317-6029

Access code: VALE

Instructions for participation will be available on the website: www.vale.com/Investors. A recording will be available on Vale s website for 90 days as of February 25th, 2016.

This press release may include statements that present Vale s expectations about future events or results. All statements, when based upon expectations about the future and not on historical facts, involve various risks and uncertainties. Vale cannot guarantee that such statements will prove correct. These risks and uncertainties include factors related to the following: (a) the countries where we operate, especially Brazil and Canada; (b) the global economy; (c) the capital markets; (d) the mining and metals prices and their dependence on global industrial production, which is cyclical by nature; and (e) global competition in the markets in which Vale operates. To obtain further information on factors that may lead to results different from those forecast by Vale, please consult the reports Vale files with the U.S. Securities and Exchange Commission (SEC), the Brazilian Comissão de Valores Mobiliários (CVM), the French Autorité des Marchés Financiers (AMF), and The Stock Exchange of Hong Kong Limited, and in particular the factors discussed under Forward-Looking Statements and Risk Factors in Vale s annual report on Form 20-F.

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ANNEX 1 SIMPLIFIED FINANCIAL STATEMENTS

Income statement

US$ million	4Q15	3Q15	4Q14	2015	2014
Gross operating revenues	**5,986**	**6,618**	**9,226**	**26,047**	**38,236**
Net operating revenue	**5,899**	**6,505**	**9,072**	**25,609**	**37,539**
Cost of goods sold	(5,119)	(5,040)	(6,892)	(20,513)	(25,064)
Gross profit	**780**	**1,465**	**2,180**	**5,096**	**12,475**
Gross margin (%)	13.2	22.5	24.0	19.9	33.2
Selling, general and administrative expenses	(167)	(131)	(306)	(652)	(1,099)
Research and development expenses	(119)	(121)	(235)	(477)	(734)
Pre-operating and stoppage expenses	(238)	(266)	(292)	(1,027)	(1,088)
Other operational expenses	64	(113)	(491)	(206)	(1,057)
Gain (loss) from sale of assets	(29)	(48)	(167)	61	(167)
Impairment of non-current assets	(8,926)		(378)	(8,926)	(1,152)
Operating profit	**(8,635)**	**786**	**311**	**(6,131)**	**7,178**
Financial revenues	80	92	55	268	401
Financial expenses	(326)	(352)	(502)	(1,112)	(2,936)
Gains (losses) on derivatives, net	426	(1,799)	(1,087)	(2,477)	(1,334)
Monetary and exchange variation	173	(5,117)	(1,257)	(7,480)	(2,200)
Equity income	(37)	(349)	31	(439)	505
Results on sale or write-off of investments from associates and joint ventures			31	97	(30)
Impairment on investments from association and joint ventures	(446)		(31)	(446)	(31)
Income (loss) before taxes	**(8,765)**	**(6,739)**	**(2,449)**	**(17,720)**	**1,553**
Current tax	(152)	(100)	363	(389)	(1,051)
Deferred tax	74	4,603	106	5,489	(149)
Net Earnings (loss) from continuing operations	**(8,843)**	**(2,236)**	**(1,980)**	**(12,620)**	**353**
Loss attributable to noncontrolling interest	274	119	131	491	304
Net earnings (attributable to the Company s stockholders)	**(8,569)**	**(2,117)**	**(1,849)**	**(12,129)**	**657**
Earnings (loss) per share (attributable to the Company s stockholders - US$)	(1.66)	(0.41)	(0.36)	(2.35)	0.13
Diluted earnings (loss) per share (attributable to the Company s stockholders - US$)	(1.66)	(0.41)	(0.36)	(2.35)	0.13

Equity income (loss) by business segment

US$ million	4Q15	3Q15	4Q14	2015	%	2014	%
Ferrous minerals	44	(65.0)	86	26	(5.9)	652	129.1
Coal	3	(9.0)	5	(3)	0.7	32	6.3
Base metals	(99)	(10.0)	(10)	(132)	30.1	(36)	(7.1)
Logistics						13	2.6
Steel	(21)	(282.0)	(3)	(414)	94.3	(92)	(18.2)
Others	36	17.0	(47)	84	(19.1)	(64)	(12.7)
Total	**(37)**	**(349.0)**	**31**	**(439)**	**100.0**	**505**	**100.0**

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Balance sheet

US$ million	12/31/2015	9/30/2015	12/31/2014
Assets			
Current assets	**15,473**	**17,701**	**20,234**
Cash and cash equivalents	3,591	4,397	3,974
Financial investments	28	65	148
Derivative financial instruments	121	158	166
Accounts receivable	1,476	2,028	3,275
Related parties	70	343	579
Inventories	3,528	3,808	4,501
Prepaid income taxes	900	904	1,581
Recoverable taxes	1,404	1,364	1,700
Others	311	746	670
Non-current assets held for sale and discontinued operation	4,044	3,888	3,640
Non-current assets	**10,653**	**10,857**	**7,180**
Related parties	**1**	**23**	**35**
Loans and financing agreements receivable	188	194	229
Judicial deposits	882	838	1,269
Recoverable income taxes	471	417	478
Deferred income taxes	7,904	7,982	3,976
Recoverable taxes	501	527	401
Derivative financial instruments	93	133	87
Others	613	743	705
Fixed assets	62,366	70,467	89,075
Total assets	**88,492**	**99,025**	**116,489**
Liabilities			
Current liabilities	**10,545**	**10,226**	**10,737**
Suppliers and contractors	3,365	3,482	4,354
Payroll and related charges	**375**	**455**	**1,163**
Derivative financial instruments	2,076	1,422	1,416
Loans and financing	2,506	3,030	1,419
Related parties	475	141	306
Income taxes settlement program	345	330	457
Taxes payable and royalties	250	261	550
Provision for income taxes	241	217	353
Employee postretirement obligations	68	69	67
Asset retirement obligations	89	81	136
Redeemable noncontrolling interest		135	
Others	648	323	405
Liabilities directly associated with non-current assets held for sale and discontinued operations	107	280	111
Non-current liabilities	**42,243**	**44,298**	**49,431**
Derivative financial instruments	**1,429**	**2,808**	**1,610**
Loans and financing	26,347	25,645	27,388
Related parties	213	76	109
Employee postretirement obligations	1,750	1,881	2,236
Provisions for litigation	822	858	1,282
Income taxes settlement program	4,085	3,992	5,863
Deferred income taxes	1,670	2,896	3,341
Asset retirement obligations	2,385	2,648	3,233
Participative stockholders debentures	342	603	1,726
Redeemable noncontrolling interest			243
Gold stream transaction	1,749	1,785	1,323

Others	1,451	1,106	1,077
Total liabilities	**52,788**	**54,524**	**60,168**
Stockholders equity	35,704	44,501	56,321
Total liabilities and stockholders equity	**88,492**	**99,025**	**116,489**

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Cash flow

US$ million	4Q15	3Q15	4Q14	2015	2014
Cash flows from operating activities:					
Net income (loss) from operations	(8,843)	(2,236)	(1,980)	(12,620)	353
Adjustments to reconcile net income with cash provided by operating activities:					
Depreciation, depletion and amortization	984	1,022	1,242	4,029	4,288
Impairment	9,372		409	9,372	1,183
Loss on measurement or sales of non-current assets	29	48	167	(158)	167
Items of the financial result	(2,007)	6,801		7,628	
Others	642	(4,365)	1,820	(5,013)	3,029
Variation of assets and liabilities					
Accounts receivable	985	343	107	1,671	2,546
Inventories	(73)	(331)	(63)	(304)	(535)
Suppliers and contractors	491	422	503	740	1,013
Payroll and related charges	(79)	53	53	(603)	(77)
Tax assets and liabilities, net		(37)	(701)	(357)	312
Goldstream transaction				532	
Others	(166)	(91)	(369)	(426)	705
Net cash provided by operating activities	**1,335**	**1,629**	**1,188**	**4,491**	**12,984**
Cash flows from investing activities:					
Additions to investments	(12)	(8)	(24)	(66)	(244)
Acquisition of subsidiary				(90)	
Additions to property, plant and equipment	(2,190)	(1,870)	(3,449)	(8,371)	(11,813)
Proceeds from disposal of assets and investments	423	472		1,456	1,246
Dividends and interest on capital received from joint ventures and associates	87	19	89	318	568
Proceeds from goldstream transaction				368	
Others	(36)	76	466	226	275
Net cash used in investing activities	**(1,728)**	**(1,311)**	**(2,918)**	**(6,159)**	**(9,968)**
Cash flows from financing activities:					
Loans and financing					
Additions	1,045	1,066	962	4,995	2,341
Repayments	(1,012)	(928)	(842)	(2,826)	(1,936)
Payments to shareholders:					
Dividends and interest on capital attributed to shareholders	(500)		(2,100)	(1,500)	(4,200)
Dividends and interest on capital attributed to noncontrolling interest	(3)		(55)	(15)	(66)
Other transactions with noncontrolling interest		**1,089**		**1,049**	
Net cash provided by (used in) financing activities	(470)	1,227	(2,035)	1,703	(3,861)
Increase (decrease) in cash and cash equivalents	(863)	1,545	(3,765)	35	(1,022)
Cash and cash equivalents in the beginning of the period	4,397	3,158	7,882	3,974	5,321
Effect of exchange rate changes on cash and cash equivalents	57	(306)	(143)	(418)	(325)
Cash and cash equivalents, end of period	**3,591**	**4,397**	**3,974**	**3,591**	**3,974**
Cash paid during the period for:					
Interest on loans and financing	(305)	(381)	(324)	(1,462)	(1,560)
Income taxes	(162)	(47)	(197)	(527)	(504)
Income taxes - settlement program	(86)	(89)	(111)	(384)	(494)
Derivatives received (paid), net	(275)	(167)	(319)	(1,202)	
Non-cash transactions:					

Additions to property, plant and equipment - interest capitalization	193	195	184	761	588

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ANNEX 2 VOLUMES SOLD, PRICES AND MARGINS

Volume sold - Minerals and metals

000 metric tons	4Q15	3Q15	4Q14	2015	2014
Iron ore fines	79,213	70,530	74,603	276,393	255,877
ROM	1,627	3,546	3,552	12,269	14,075
Pellets	10,837	11,961	12,686	46,284	43,682
Manganese ore	568	448	828	1,764	1,879
Ferroalloys	12	3	36	69	150
Thermal coal	226	243	310	891	1,152
Metallurgical coal	1,329	1,419	1,815	5,614	6,330
Nickel	84	72	69	292	272
Copper	108	94	95	397	353
Gold (000 oz)	114	105	97	425	351
Silver (000 oz)	761	528	757	2,303	1,889
PGMs (000 oz)	140	83	168	517	577
Cobalt (metric ton)	1,433	468	1,311	3,840	3,188
Potash	114	155	121	463	475
Phosphates					
MAP	266	348	249	1,081	1,040
TSP	113	317	112	744	749
SSP	317	740	367	1,847	2,091
DCP	119	118	118	459	493
Phosphate rock	811	769	935	3,193	3,259
Others phosphates	68	74	71	330	271
Nitrogen	154	185	172	641	680

Average sale prices

US$/ton	4Q15	3Q15	4Q14	2015	2014
Iron ore fines CFR reference price (dmt)	45.10	56.00	75.50	54.60	92.70
Iron ore fines CFR/FOB realized price	37.18	46.48	61.23	44.61	75.43
ROM	7.99	6.77	11.82	8.31	15.28
Pellets CFR/FOB (wmt)	71.98	73.82	100.11	77.78	120.48
Manganese ore	7.04	52.14	111.11	56.44	118.15
Ferroalloys	750.00	836.67	1083.33	904.16	1,125.83
Thermal coal	44.19	48.24	64.52	52.42	67.65
Metallurgical coal	73.75	81.22	99.72	85.55	104.37
Nickel	9,309.52	10,865.81	15,420.29	11,684.33	16,426.47
Copper	3,823.90	3,891.78	5,842.10	4,352.94	6,015.47
Platinum (US$/oz)	817.60	1,004.75	1,224.87	1,020.14	1,261.87
Gold (US$/oz)	1,064.48	1,094.81	1,189.96	1,064.48	1,192.51
Silver (US$/oz)	10.00	13.49	14.16	12.63	19.42
Cobalt (US$/lb)	8.55	14.54	9.34	9.95	10.67
Potash	293.08	302.42	371.90	318.32	355.79
Phosphates					
MAP	496.45	505.21	550.70	511.70	542.44

TSP	394.48	391.50	448.41	398.05	428.98
SSP	212.88	197.17	217.14	204.45	212.61
DCP	514.90	536.10	584.94	554.88	591.51
Phosphate rock	81.73	78.02	88.77	82.55	70.88

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Operating margin by segment (EBIT adjusted margin)

%	4Q15	3Q15	4Q14	2015	2014
Ferrous minerals	25.5	29.0	18.1	24.0	34.5
Coal	(201.9)	(164.6)	(133.3)	(138.4)	(110.6)
Base metals	(25.6)	(18.1)	1.0	(7.3)	9.5
Fertilizer nutrients	10.4	14.0	(2.3)	11.6	(5.8)
Total(1)	**5.4**	**12.8**	**9.4**	**10.7**	**22.6**

(1) Excluding non-recurring effects

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Annex 3 reconciliation of IFRS and NON-GAAP information

(a) Adjusted EBIT(1)

US$ million	4Q15	3Q15	4Q14	2015	2014
Net operating revenues	5,899	6,505	9,072	25,609	37,539
COGS	(5,119)	(5,040)	(6,892)	(20,513)	(25,064)
SG&A	(167)	(131)	(306)	(652)	(1,099)
Research and development	(119)	(121)	(235)	(477)	(734)
Pre-operating and stoppage expenses	(238)	(266)	(292)	(1,027)	(1,088)
Other operational expenses	64	(113)	(491)	(206)	(1,057)
Adjusted EBIT	**320**	**834**	**856**	**2,734**	**8,497**

(1) Excluding non-recurring effects.

(b) Adjusted EBITDA

EBITDA defines profit or loss before interest, tax, depreciation and amortization. Vale uses the term adjusted EBITDA to reflect exclusion of gains and/or losses on sale of assets, non-recurring expenses and the inclusion of dividends received from non-consolidated affiliates. However our adjusted EBITDA is not the measure defined as EBITDA under IFRS, and may possibly not be comparable with indicators with the same name reported by other companies. Adjusted EBITDA should not be considered as a substitute for operational profit or as a better measure of liquidity than operational cash flow, which are calculated in accordance with IFRS. Vale provides its adjusted EBITDA to give additional information about its capacity to pay debt, carry out investments and cover working capital needs. The following table shows the reconciliation between adjusted EBITDA and operational cash flow, in accordance with its statement of changes in financial position:

Reconciliation between adjusted EBITDA and operational cash flow

US$ million	4Q15	3Q15	4Q14	2015	2014
Adjusted EBITDA	**1,391**	**1,875**	**2,187**	**7,081**	**13,353**
Working capital:					
Accounts receivable	985	343	107	1,671	2,546
Inventories	(73)	(331)	(63)	(304)	(535)
Suppliers	491	422	503	740	1,013
Payroll and related charges	(79)	53	53	(603)	(77)
Gold stream transaction				532	
Others	(414)	(78)	(257)	(517)	(167)
Adjustment for non-recurring items and other effects	(112)	29	(332)	(470)	(477)
Cash provided from operations	**2,189**	**2,313**	**2,198**	**8,130**	**15,656**
Income taxes paid - current	(162)	(47)	(197)	(527)	(504)

Income taxes paid - settlement program	(86)	(89)	(111)	(384)	(494)
Interest paid for third parties	(305)	(381)	(324)	(1,462)	(1,560)
Participative stockholders debentures paid	(26)		(60)	(65)	(112)
Derivatives received (paid), net	(275)	(167)	(318)	(1,201)	(179)
Net cash provided by (used in) operating activities	**1,335**	**1,629**	**1,188**	**4,491**	**12,807**

(c) Net debt

Reconciliation between total debt and net debt

US$ million	**4Q15**	**3Q15**	**4Q14**	**2015**	**2014**
Total debt	28,853	28,675	28,807	28,853	28,807
Cash and cash equivalents(1)	3,619	4,462	4,122	3,619	4,122
Net debt	25,234	24,213	24,685	25,234	24,685

(1) Including financial investments.

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(d) Total debt / LTM Adjusted EBITDA

US$ million	4Q15	3Q15	4Q14	2015	2014
Total debt / LTM Adjusted EBITDA (x)	4.1	3.6	2.2	4.1	2.2
Total debt / LTM operational cash flow (x)	6.4	6.6	2.2	6.4	2.2

(e) LTM Adjusted EBITDA / LTM interest payments

US$ million	4Q15	3Q15	4Q14	2015	2014
LTM adjusted EBITDA / LTM interest payments (x)	4.8	5.3	8.6	4.8	8.6
LTM operational profit / LTM interest payments (x)	(4.3)	2.0	4.7	(4.3)	4.7

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Signatures

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

Vale S.A.
(Registrant)

By: /s/ Rogerio Nogueira
Director of Investor Relations

Date: February 25, 2016