

Vale S.A.  
Form 6-K  
February 25, 2016  
[Table of Contents](#)

**United States**  
**Securities and Exchange Commission**

Washington, D.C. 20549

**FORM 6-K**

**Report of Foreign Private Issuer**

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

**of the**

**Securities Exchange Act of 1934**

**For the month of**

**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.)

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

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

(Check One) Yes  No

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(Check One) Yes  No

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

(Check One) Yes  No

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Table of Contents

Table of Contents:

Press Release

Signature Page

Table of Contents

VALE S PERFORMANCE IN 2015



Table of Contents

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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: Compañía 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.



Table of Contents

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.

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(1) Provision for mine and other assets closures



Table of Contents

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<sup>(2)</sup> 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<sup>(3)</sup> 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

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

(3) Of associates and joint ventures.

Table of Contents

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).

Table of Contents

(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.

Table of Contents

- 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.

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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.

Table of Contents**Selected financial indicators**

<b>US\$ million</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>
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

<b>US\$ million</b>	<b>4Q15</b>	<b>3Q15</b>	<b>4Q14</b>
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



Table of Contents

## 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 (US\$ 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	%
<b>North America</b>	<b>450</b>	<b>409</b>	<b>642</b>	<b>2,008</b>	<b>7.7</b>	<b>2,771</b>	<b>7.2</b>
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	
<b>South America</b>	<b>964</b>	<b>1,289</b>	<b>1,769</b>	<b>4,807</b>	<b>18.5</b>	<b>7,308</b>	<b>19.1</b>
Brazil	871	1,191	1,645	4,396	16.9	6,624	17.3
Others	93	98	124	411	1.6	684	1.8
<b>Asia</b>	<b>3,189</b>	<b>3,550</b>	<b>4,798</b>	<b>13,371</b>	<b>51.3</b>	<b>19,590</b>	<b>51.2</b>
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
<b>Europe</b>	<b>1,144</b>	<b>1,114</b>	<b>1,556</b>	<b>4,663</b>	<b>17.9</b>	<b>6,697</b>	<b>17.5</b>
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

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

Table of Contents**Gross operating revenue by business segments**

US\$ million	4Q15	3Q15	4Q14	2015	%	2014	%
<b>Ferrous minerals</b>	<b>3,883</b>	<b>4,367</b>	<b>6,213</b>	<b>16,821</b>	<b>64.6</b>	<b>26,140</b>	<b>68.4</b>
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
<b>Coal</b>	<b>108</b>	<b>127</b>	<b>201</b>	<b>526</b>	<b>2.0</b>	<b>739</b>	<b>1.9</b>
Metallurgical coal	98	115	181	480	1.8	661	1.7
Thermal coal	10	12	20	47	0.2	78	0.2
<b>Base metals</b>	<b>1,458</b>	<b>1,355</b>	<b>1,948</b>	<b>6,171</b>	<b>23.7</b>	<b>7,694</b>	<b>20.1</b>
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
<b>Fertilizer nutrients</b>	<b>513</b>	<b>747</b>	<b>607</b>	<b>2,386</b>	<b>9.2</b>	<b>2,585</b>	<b>6.8</b>
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
<b>Others</b>	<b>24</b>	<b>22</b>	<b>257</b>	<b>143</b>	<b>0.5</b>	<b>1,078</b>	<b>2.8</b>
<b>Total</b>	<b>5,986</b>	<b>6,618</b>	<b>9,226</b>	<b>26,047</b>	<b>100.0</b>	<b>38,236</b>	<b>100.0</b>

Table of Contents

## 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%.

## QUARTERLY PERFORMANCE

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

(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.



Table of Contents**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
<b>Total COGS</b>	<b>5,119</b>	<b>5,040</b>	<b>6,892</b>	<b>20,513</b>	<b>100.0</b>	<b>25,064</b>	<b>100.0</b>

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

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(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.

Table of Contents

**Expenses**

ANNUAL PERFORMANCE

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)



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(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.

Table of Contents

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	%
<b>SG&amp;A ex-depreciation</b>	<b>129</b>	<b>100</b>	<b>247</b>	<b>519</b>		<b>876</b>	
<b>SG&amp;A</b>	<b>167</b>	<b>131</b>	<b>306</b>	<b>652</b>	<b>27.6</b>	<b>1,099</b>	<b>27.6</b>
<b>Administrative</b>	<b>150</b>	<b>132</b>	<b>292</b>	<b>603</b>	<b>25.5</b>	<b>1,019</b>	<b>25.6</b>
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
<b>Selling</b>	<b>17</b>	<b>(1)</b>	<b>14</b>	<b>49</b>	<b>2.1</b>	<b>80</b>	<b>2.0</b>
<b>R&amp;D</b>	<b>119</b>	<b>121</b>	<b>235</b>	<b>477</b>	<b>20.2</b>	<b>734</b>	<b>18.5</b>
<b>Pre-operating and stoppage expenses(1)</b>	<b>238</b>	<b>266</b>	<b>292</b>	<b>1,027</b>	<b>43.5</b>	<b>1,088</b>	<b>27.4</b>
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
<b>Other operating expenses(2)</b>	<b>(64)</b>	<b>113</b>	<b>491</b>	<b>206</b>	<b>8.7</b>	<b>1,057</b>	<b>26.6</b>
<b>Total Expenses</b>	<b>460</b>	<b>631</b>	<b>1,324</b>	<b>2,362</b>	<b>100.0</b>	<b>3,978</b>	<b>100.0</b>
Depreciation	110	161	120	501		431	
<b>Expenses ex-depreciation</b>	<b>350</b>	<b>470</b>	<b>1,204</b>	<b>1,861</b>		<b>3,547</b>	

(1) Includes US\$ 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.

Table of Contents

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.

Table of Contents**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)
<b>Adjusted EBIT</b>	<b>320</b>	<b>834</b>	<b>856</b>	<b>2,734</b>	<b>8,497</b>
Depreciation, amortization & depletion	984	1,022	1,242	4,029	4,288
Dividends received	87	19	89	318	568
<b>Adjusted EBITDA</b>	<b>1,391</b>	<b>1,875</b>	<b>2,187</b>	<b>7,081</b>	<b>13,353</b>

**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)
<b>Total</b>	<b>1,391</b>	<b>1,875</b>	<b>2,187</b>	<b>7,081</b>	<b>13,353</b>

Table of Contents

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).

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(15) Of associates and joint ventures.

(16) Composed mainly of bunker oil and commodities.

(17) Of associates and joint ventures.

Table of Contents

<b>Impairment US\$ million</b>	<b>Impairments on assets in 2015</b>	<b>Recognition on onerous contracts in 2015</b>	<b>Book Value after impairments Dec 31, 2015</b>
<b>Ferrous minerals</b>			
Iron ore in the Midwestern system(1)	522	357	
Pellets plants	55		
Others	58		
<b>Coal</b>			
Coal assets in Mozambique	2,403		1,729
Coal assets in Australia(1)	635		74
<b>Base metals</b>			
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		
<b>Fertilizers</b>			
Phosphate assets	(391)		3,842
Rio Colorado Project (PRC)	548		20
<b>Others</b>	<b>7</b>		
<b>Total</b>	<b>8,569</b>	<b>357</b>	<b>14,000</b>

(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.

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

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.





Table of Contents

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

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(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).



Table of Contents

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
<b>Underlying earnings</b>	<b>(1,032)</b>	<b>(961)</b>	<b>(251)</b>	<b>(1,698)</b>	<b>4,419</b>
<b>Items excluded from basic earnings</b>					
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
<b>Net Income (loss)</b>	<b>(8,569)</b>	<b>(2,117)</b>	<b>(1,849)</b>	<b>(12,129)</b>	<b>657</b>

## Financial results

US\$ million	4Q15	3Q15	4Q14	2015	2014
<b>Financial expenses</b>	<b>(326)</b>	<b>(352)</b>	<b>(502)</b>	<b>(1,112)</b>	<b>(2,936)</b>
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)
<b>Financial income</b>	<b>80</b>	<b>92</b>	<b>55</b>	<b>268</b>	<b>401</b>
<b>Derivatives</b>	<b>426</b>	<b>(1,799)</b>	<b>(1,087)</b>	<b>(2,477)</b>	<b>(1,334)</b>
Currency and interest rate swaps	715	(1,196)	(524)	(1,502)	(683)
Others (bunker oil, commodities, etc)	(289)	(603)	(563)	(975)	(651)
<b>Foreign Exchange</b>	<b>255</b>	<b>(5,025)</b>	<b>(1,186)</b>	<b>(7,164)</b>	<b>(2,119)</b>

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

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(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.

Table of Contents

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

Table of Contents

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.



Table of Contents

## 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 US\$ 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
<b>Total</b>	<b>2,193</b>	<b>1,879</b>	<b>3,749</b>	<b>8,401</b>	<b>100.0</b>	<b>11,979</b>	<b>100.0</b>

**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

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

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).

Table of Contents

**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 5<sup>th</sup> 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.

Table of Contents

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
<b>Ferrous Minerals projects</b>			
Carajás Serra Sul S11D	<ul style="list-style-type: none"> <li>Development of a mine and processing plant, located in the Southern range of Carajás, Pará, Brazil.</li> </ul>	90	<ul style="list-style-type: none"> <li>Delivery of electrocenters of the mine and plant ongoing</li> </ul>
CLN S11D	<ul style="list-style-type: none"> <li>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.</li> </ul>	(80)(a)	<ul style="list-style-type: none"> <li>Transmission line connecting Carajás to Canaã energized</li> <li>Foundation work on the PDM port expansion ongoing pile driving in the off-shore north berth reached 99% physical progress</li> <li>Duplication of the railway reached 41% physical progress</li> <li>Railway spur reached 81% physical progress</li> </ul>
CSP(b)	<ul style="list-style-type: none"> <li>Development of a steel slab plant in partnership with Dongkuk and Posco, located in Ceará, Brazil.</li> </ul>	1.5	<ul style="list-style-type: none"> <li>Assembly of the steel structure reached 97% physical progress</li> </ul>

**Coal Projects**

Moatize II

- New pit and duplication of the Moatize CHPP, as well as all related infrastructure, located in Tete, Mozambique.

- Civil works reached 99% physical progress

- 11
- Electromechanical assembly reached 99% physical progress

- Commissioning on the belt conveyors initiated

- Testing on one line of the CHPP initiated

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(a) Net additional capacity.

(b) Relative to Vale's stake in the project.

Table of Contents**Progress indicators(20)**

Project	Capacity (Mtpy)	Estimated start-up	Executed capex (US\$ million)		Estimated capex (US\$ million)		Physical progress
			2015	Total	2016	Total	
<b>Ferrous minerals projects</b>							
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%
<b>Coal projects</b>							
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.

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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

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(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.



Table of Contents

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	<b>601</b>
Waste dumps and tailing dams	17	3	21	7	<b>48</b>
Health and Safety	19	1	65	8	<b>92</b>
CSR - Corporate Social Responsibility	10		5	10	<b>25</b>
Administrative & Others	35	15	7	4	<b>61</b>
<b>Total</b>	<b>194</b>	<b>33</b>	<b>517</b>	<b>83</b>	<b>827</b>

**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
<b>Total</b>	<b>827</b>	<b>647</b>	<b>1,470</b>	<b>2,853</b>	<b>100.0</b>	<b>4,061</b>	<b>100.0</b>

**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.

Table of Contents

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.

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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.

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

(22) Last twelve months.

Table of Contents

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

Table of Contents

## 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**

US\$ million	Operating revenues		Expenses					Adjusted EBITDA(1)
	Gross	Net	Cost	SG&A and others	R&D	Pre operating & stoppage	Dividends	
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)
<b>Total</b>	<b>26,047</b>	<b>25,609</b>	<b>(16,984)</b>	<b>(673)</b>	<b>(477)</b>	<b>(712)</b>	<b>318</b>	<b>7,081</b>

(1) Excluding non-recurring effects.

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

(3) Including by products from our copper operations.

Table of Contents**Segment information 4Q15, as per footnote of financial statements**

US\$ million	Operating revenues		Expenses			Pre operating & stoppage	Dividends	Adjusted EBITDA(1)
	Gross	Net	Cost	SG&A and othes	R&D			
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)
<b>Total</b>	<b>5,986</b>	<b>5,899</b>	<b>(4,244)</b>	<b>(61)</b>	<b>(119)</b>	<b>(171)</b>	<b>87</b>	<b>1,391</b>

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(1) Excluding non-recurring effects.

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

(3) Including by products from our copper operations.

Table of Contents

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**





Table of Contents

**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<sup>(23)</sup> 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.