

Vale S.A.  
Form 6-K  
December 07, 2017  
[Table of Contents](#)

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

Washington, D.C. 20549

**FORM 6-K**

**Report of Foreign Private Issuer**

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

**of the**

**Securities Exchange Act of 1934**

**For the month of**

**December 2017**

**Vale S.A.**

**Avenida das Américas, No. 700 Bloco 8, Sala 218  
22640-100 Rio de Janeiro, RJ, Brazil**

(Address of principal executive office)

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

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

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

(Check One) Yes  No

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

(Check One) Yes  No

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

(Check One) Yes  No

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

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Table of Contents

Table of Contents:

Press Release  
Signature Page

3  
6

Table of Contents**Vale informs on estimates update**

Rio de Janeiro, December 06th, 2017 – Vale S.A. (Vale), pursuant to the provisions set forth in Art. 157, paragraph 4 of the Law 6,404 of December 15, 1976, as amended, and the Instruction of *Comissão de Valores Mobiliários* (CVM) number 358 of January 3, 2002, as amended, informs that it announced today on the Vale Day event in New York the estimates below. The presentation made during the event, containing the estimates, is available at Vale's website [www.vale.com](http://www.vale.com) under the Investors section.

Production volumes

	2017E	2018E	2019E	2020E	2021E	2022E
Iron ore (Mt)	~365	~390	~400	~400	~400	~400
Iron ore S11D (Mt)	~22	50 55	70 80	90		
Pellets (Mt)	~50	~55	~60	~60	65	65
Nickel (Kt)	287	263	262	268	266	280
Copper (Kt)	438	422	424	433	438	
Coal (Mt)	12	16	18	18	20	20

Costs

Nickel: Unit cash cost per operation

US\$/t	2017E	2018E	2019E	
Sudbury	3,287	3,098	1,621	
Thompson	10,488	8,094		
Voisey's Bay	3,206	4,680		
VNC	10,153	9,717		
PTVI	6,463	6,329		
Onça Puma	8,622	7,704		

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Coal: Proforma production cash cost at the Nacala port

US\$/t	2017E	2018E	2019E	2020E	2021E	2022E
Production cost(1)	78	70	67	65	59	56
Net Nacala tariff(2)	15	26	20	20	19	21
Non-recurring costs		4				

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(1) Production cost includes mine, plant, railway, port and royalties of coal shipped through Nacala, excluding inventory movement.

(2) Net Nacala tariff is composed of investments, working capital, debt service, amortization, taxes and others, net of interest received by Vale related to shareholder loans.

### Price realization

- Realized average price premium of the iron ore sales of about US\$ 3.5/t in 2017 and a range from US\$ 3.5/t to US\$ 4.5/t in 2018

### EBITDA

- Adjusted EBITDA per ton of the Ferrous Minerals business (excluding manganese and ferroalloys)(1) of US\$ 38/t in 2017 and ranging from US\$ 41/t to US\$ 43/t in 2020, equivalent to an estimated increase of US\$ 1.2 billion to US\$ 2.0 billion in 2020 compared to 2017.

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(1) Adjusted EBITDA of Ferrous Minerals (excluding manganese and ferroalloys) normalized by the 3Q17 Platts IODEX 62% of US\$ 70.9/t, exchange rate of 3.35 BRL/USD and bunker oil of US\$ 308/t

Table of Contents

- Adjusted EBITDA of the Coal business of US\$ 353 million in 2017 and US\$ 481 million in 2018, assuming average prices of metallurgical coal of US\$ 170/t and thermal coal of US\$ 70/t in 2018
- Adjusted EBITDA of the Base Metals business ranging from US\$ 1.8 billion to US\$ 5.4 billion in 2020, depending on prices of nickel and copper ranging from US\$ 10,000/t to US\$ 20,000/t and US\$ 5,500/t to US\$ 7,500/t respectively
- EBITDA of Vale in 2020 ranging from US\$ 13.0 billion to US\$ 19.0 billion and EBITDA less sustaining of Vale in 2020 ranging from US\$ 10.4 billion to US\$ 16.4 billion, as a result of the following EBITDA less sustaining estimates: (i) iron ore ranging from US\$ 9.3 billion to US\$ 13.0 billion, assuming iron ore prices from US\$ 55/t to US\$ 65/t, (ii) nickel operations ranging from US\$ 0.6 billion to US\$ 1.8 billion, assuming nickel prices from US\$ 10,000/t to US\$ 14,000/t, (iii) copper operations ranging from US\$ 0.7 billion to US\$ 1.3 billion, assuming copper prices from US\$ 6,000/t to US\$ 8,000/t, (iv) coal ranging from US\$ 0.1 billion to US\$ 0.6 billion, assuming coal prices from US\$ 130/t to US\$ 170/t, and (v) others of negative US\$ 0.3 billion

Capital expenditures

US\$ billion	2017E	2018E	2019E	2020E	2021E	2022E
Total Vale	4.1	3.8	4.0	4.2	3.7	3.2
Nickel business	0.9	0.9				

Cash Flow

## Cash disbursements

US\$ million	2017E	2018E	2019E	2020E
Samarco	470	393	215	144
Refis	490	490		
Pre-operating expenses	250	110	35	25
Financial expenses	1,600	1,700	1,000	1,100
			600	700
				550
				650

- Free cash flow accumulated from 2018 to 2020 ranging from about US\$ 13 billion to about US\$ 25 billion, depending on the following assumptions: (i) iron prices ranging from US\$ 55/t to US\$ 65/t, (ii) nickel prices ranging from US\$ 10,000/t to US\$ 14,000/t, (iii) copper price at US\$ 6,000/t, (iv) divestment proceeds of US\$ 1.5 billion, and (v) BRL/USD exchange rate of 3.35 BRL/USD

Shareholder return

- Total shareholder return per year in 2020, measured as the gain between the market cap as of November 24<sup>th</sup>, 2017 and the market cap plus dividends scenarios in 2020, ranging from 9% to 34% depending on (i) total EBITDA ranging from US\$ 13 billion to US\$ 19 billion, (ii) enterprise value ranging from US\$ 78 billion to US\$ 133 billion, (iii) net debt of US\$ 10 billion, and (iv) accumulated dividends ranging from US\$ 8 billion to US\$ 20 billion
- EV to EBITDA multiple of 5.5x in 2018
- Return on assets of Vale in 2020 ranging from 16% to 26%, assuming total assets of Vale of US\$ 63.4 billion and EBITDA less sustaining of Vale ranging from US\$ 10.4 billion to US\$ 16.4 billion

Table of Contents

Vale informs that will file again in due course the item 11 of its Reference Form, in the period required by the Instruction CVM number 480 of December 7, 2009, as amended.

Vale clarifies that the information provided in this document represent only an expectation, hypothetical data that by no means constitute a promise of performance by Vale and/or its management. The estimates presented involve market factors which are not controlled by Vale and, therefore, can be subject to new changes.

**For further information, please contact:**

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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, 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) and the French Autorité des Marchés Financiers (AMF), and in particular the factors discussed under "Forward-Looking Statements" and "Risk Factors" in Vale's annual report on Form 20-F.





Table of Contents

**Signatures**

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

Vale S.A.  
(Registrant)

By: /s/ André Figueiredo  
Director of Investor Relations

Date: December 06, 2017