AMERON INTERNATIONAL CORP Form 4 February 02, 2006 OMB APPROVAL FORM 4 UNITED STATES SECURITIES AND EXCHANGE COMMISSION OMB 3235-0287 Washington, D.C. 20549 Number: Check this box January 31, Expires: if no longer 2005 STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF subject to Estimated average **SECURITIES** Section 16. burden hours per Form 4 or response... 0.5 Form 5 Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, obligations Section 17(a) of the Public Utility Holding Company Act of 1935 or Section may continue. 30(h) of the Investment Company Act of 1940 See Instruction 1(b). (Print or Type Responses) 1. Name and Address of Reporting Person \* 5. Relationship of Reporting Person(s) to 2. Issuer Name and Ticker or Trading **GIESE THOMAS P** Issuer Symbol AMERON INTERNATIONAL (Check all applicable) CORP [AMN] (Last) (First) (Middle) 3. Date of Earliest Transaction Director 10% Owner X\_Officer (give title Other (specify (Month/Day/Year) below) below) 245 SO. LOS ROBLES AVE 02/01/2006 VP & Grp Pres, Water Trans Grp (Street) 4. If Amendment, Date Original 6. Individual or Joint/Group Filing(Check Filed(Month/Day/Year) Applicable Line) \_X\_ Form filed by One Reporting Person Form filed by More than One Reporting PASADENA, CA 91101 Person (City) (State) (Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned 1.Title of 2. Transaction Date 2A. Deemed 3. 4. Securities Acquired 5. Amount of 6. Ownership 7. Nature of Security (Month/Day/Year) Execution Date, if Transaction(A) or Disposed of Securities Form: Direct Indirect (Instr. 3) any Code (D) Beneficially (D) or Beneficial Indirect (I) Ownership (Month/Day/Year) (Instr. 8) (Instr. 3, 4 and 5) Owned Following (Instr. 4) (Instr. 4) Reported (A) Transaction(s) or (Instr. 3 and 4) Code V Amount (D) Price Common S 02/01/2006 F 596<sup>(1)</sup> D 26,890 D 53.7 Stock 401(k) Common Ι Savings 456 Stock Plan

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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 Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned

 (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transacti Code (Instr. 8)	5. orNumber of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)		ate	Amou Unde Secur	le and unt of rlying tities . 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Nu Deriv Secur Bene Owne Follo Repo Trans (Instr
				Code V	(A) (D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares		

# **Reporting Owners**

<b>Reporting Owner Name / Address</b>	Relationships						
	Director	10% Owner	Officer	Other			
GIESE THOMAS P			VP & Grp				
245 SO. LOS ROBLES AVE			Pres, Water				
PASADENA, CA 91101			Trans Grp				
Signatures							
Cynthia A. Iwasaki, Power of Attorney	02/0	2/2006					

<u>\*\*</u>Signature of Reporting Person

Date

# **Explanation of Responses:**

\* If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) Represents shares surrendered to pay taxes applicable to vesting of restricted shares.

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Total

Amortized cost

At fair value through profit or loss

Total

**Financial assets** 

Current

Cash and cash equivalents

6,369

6,369

4,328

4,328

Financial investments

18

Derivative financial instruments

Accounts receivable

	2,511
	(163
)	
	2,348
	2,418
	182
	2,600
Related parties	
	337
	337
	1,898

1,898	
9,235	
(36	
9,199	
8,662	
288	
8,950	

### Non-current

)

Derivative financial instruments

354

354

453

453

Investments in equity securities

Loans

Related parties

esponses.		

Explanation of Responses:

1,576

1,576

2,628

2,628

1,731

957

354

3,042

453	
3,232	
10,966	
957	
318	
12,241	
11,441	
741	
12,182	

Total of financial assets

**Financial liabilities** 

# Current

Suppliers and contractors

3,587

3,587

4,041

Derivative financial instruments

250

250

104

104

1,822

Loans and borrowings

1,822

Related parties

1,703

545

545

882

882

5,954

250

6,626

104

6,730

#### Non-current

Derivative financial instruments

Loans and borrowings

619

619

686

686

16,084

16,084

20,786

Related parties

963

975

975

Participative stockholders debentures

1,412

1,233

17,047

2,031

19,078

21,761

1,919

23,680

Total of financial liabilities

23,001

25,282

28,387

2,023

30,410

## **19.** Fair value estimate

#### a) Assets and liabilities measured and recognized at fair value:

	June 30, 2018				December 31, 2017		
	Level 1	Level 2	Level 3	Total	Level 2	Level 3	Total
Financial assets							
Derivative financial instruments		246	235	481	289	270	559
Investments in equity securities	957			957			
Total	957	246	235	1,438	289	270	559
Financial liabilities							
Derivative financial instruments		694	175	869	581	209	790
Participative stockholders debentures		1,412		1,412	1,233		1,233
Total		2,106	175	2,281	1,814	209	2,023

The Company changed its accounting estimate on the calculation of the participative stockholders debentures from January 1, 2018. The Company has replaced on the calculation the assumption of spot price at the reporting date used to the weighted average price traded on the market within the last month of the quarter.

There were no transfers between Level 1 and Level 2, or between Level 2 and Level 3 for the six-month period ended in June 30, 2018.

The following table presents the changes in Level 3 assets and liabilities for the six-month period ended in June 30, 2018:

	Derivative financia	al instruments
	Financial assets Financia	
Balance at December 31, 2017	270	209
Gain and losses recognized in income statement	(35)	(34)
Balance at June 30, 2018	235	175

Methods and techniques of evaluation

#### **Derivative financial instruments**

Financial instruments are evaluated by calculating their present value through the use of instrument yield curves at the closing dates. The curves and prices used in the calculation for each group of instruments are detailed in the market curves .

The pricing method used for European options is the Black & Scholes model. In this model, the fair value of the derivative is a function of the volatility in the price of the underlying asset, the exercise price of the option, the interest rate and period to maturity. In the case of options which income is a function of the average price of the underlying asset over the period of the option, the Company uses Turnbull & Wakeman model. In this model, in addition to the factors that influence the option price in the Black-Scholes model, the formation period of the average price is also considered.

In the case of swaps, both the present value of the assets and liability are estimated by discounting the cash flow by the interest rate of the currency in which the swap is denominated. The difference between the present value of assets and liability of the swap generates its fair value.

For the TJLP swaps, the calculation of the fair value assumes that TJLP is constant, that is the projections of future cash flow in Brazilian Reais are made on the basis of the last TJLP disclosed.

Contracts for the purchase or sale of products, inputs and costs of selling with future settlement are priced using the forward yield curves for each product. Typically, these curves are obtained on the stock exchanges where the products are traded, such as the London Metals Exchange (LME), the Commodity Exchange (COMEX) or other providers of market prices. When there is no price for the desired maturity, Vale uses an interpolation between the available maturities.

The fair value for derivatives are within level 3 are measured using discounted cash flows and option model valuation techniques with main unobservable inputs discount rates, stock prices and commodities prices.

### b) Fair value of financial instruments not measured at fair value

The fair values and carrying amounts of loans and borrowings (net of interest) are as follows:

Financial liabilities June 30, 2018	Balance	Fair value	Level 1	Level 2
Debt principal	17,470	17,677	11,006	6,671
December 31, 2017 Debt principal	21,955	23,088	14,935	8,153

Due to the short-term cycle, the fair value of cash and cash equivalents balances, financial investments, accounts receivable and accounts payable approximate their book values.

# 20. Derivative financial instruments

# a) Derivatives effects on statement of financial position

	Assets				
	June 30, 2018		December	31, 2017	
	Current	Non-current	Current	Non-current	
Derivatives not designated as hedge					
accounting					
Foreign exchange and interest rate risk					
CDI & TJLP vs. US\$ fixed and floating rate					
swap	11		38		
IPCA swap	5	69	9	82	
Eurobonds swap		24		27	
Pré-dolar swap	18	2	22	32	
	34	95	69	141	
Commodities price risk					
Nickel	19		22	3	
Bunker oil	74		15		
	93		37	3	
Others		259		309	
		259		309	
Total	127	354	106	453	



Liabilities				
June 3	0, 2018	December	31, 2017	
Current	Non-current	Current	Non-current	
192	357	95	410	
37	49		41	
5		4		
9	36	5	24	
243	442	104	475	
6				
1				
7				
	177		211	
	177		211	
250	619	104	686	
	Current 192 37 5 9 243 6 1 7	June 30, 2018 Current Non-current 192 357 37 49 5 9 36 243 442 6 1 7 177 177	Current         Non-current         Current           192         357         95           37         49         9           5         4         9           9         36         5           243         442         104           6         1         7           177         177         177	

# b) Effects of derivatives on the income statement and cash flow

	Gain (loss) recognized in the income statement				
	Three-month period e		Six-month period en	nded June 30,	
	2018	2017	2018	2017	
Derivatives not designated as hedge accounting					
Foreign exchange and interest rate risk					
CDI & TJLP vs. US\$ fixed and floating rate swap	(232)	(94)	(197)	87	
IPCA swap	(64)	(18)	(45)	6	
Eurobonds swap	(39)	29	(8)	2	
Euro forward				46	
Pré-dolar swap	(52)	(13)	(33)	10	
	(387)	(96)	(283)	151	
Commodities price risk					
Nickel	6	(4)	10	(4)	
Bunker oil	66	(18)	66	(90)	
	72	(22)	76	(94)	
Others	9	27	(9)	61	
Total	(306)	(91)	(216)	118	

Financial settlement inflows (outflows)
Three-month period ended June 30, Six-month period ended June 30,

	2018	2017	2018	2017
Derivatives not designated as hedge accounting				
Foreign exchange and interest rate risk				
CDI & TJLP vs. US\$ fixed and floating rate swap	(16)	3	(62)	(41)
IPCA swap	7		7	
Eurobonds swap	(4)		(4)	(39)
Pré-dolar swap	16	(1)	16	(1)
	3	2	(43)	(81)
Commodities price risk				
Nickel	10	(5)	22	(6)
Bunker oil	(1)		8	(23)
	9	(5)	30	(29)
Others				
Total	12	(3)	(13)	(110)

The maturity dates of the derivative financial instruments are as follows:

	Last maturity dates
Currencies and interest rates	January 2024
Bunker oil	September 2018
Nickel	December 2019
Others	December 2027

#### c) Hedge in foreign operations

As at June 30, 2018 the carrying value of the debts designated as instrument hedge of the Company s investment in foreign operations (Vale International S.A. and Vale International Holding GmbH; hedging objects) are US\$4,124 and EUR750, respectively. The foreign exchange loss of US\$856 (US\$565, net of taxes), was recognized in the Cumulative translation adjustments in stockholders equity for the six-month period ended June 30, 2018. This hedge was highly effective throughout the period ended June 30, 2018.

#### Additional information about derivatives financial instruments

#### In millions of United States dollars, except as otherwise stated

The risk of the derivatives portfolio is measured using the delta-Normal parametric approach, and considers that the future distribution of the risk factors and its correlations tends to present the same statistic properties verified in the historical data. The value at risk estimate considers a 95% confidence level for a one-business day time horizon.

The following tables detail the derivatives positions for Vale and its controlled companies as of June 30, 2018, with the following information: notional amount, fair value including credit risk, gains or losses in the period, value at risk and the fair value breakdown by year of maturity.

# a) Foreign exchange and interest rates derivative positions

### (i) Protection programs for the R\$ denominated debt instruments

In order to reduce cash flow volatility, swap transactions were implemented to convert into US\$ the cash flows from certain debt instruments denominated in R\$ with interest rates linked mainly to CDI, TJLP and IPCA. In those swaps, Vale pays fixed or floating rates in US\$ and receives payments in R\$ linked to the interest rates of the protected debt instruments.

The swap transactions were negotiated over-the-counter and the protected items are the cash flows from debt instruments linked to R\$. These programs transform into US\$ the obligations linked to R\$ to achieve a currency offset in the company s cash flows, by matching its receivables - mainly linked to US\$ - with its payables.

	Tuu	No 1e 30,	tional				June 30,	Fair value	Financial Settlement Inflows (Outflows)	Value at Risk	Fair	value b	y year
Flow			ecember	31, 20	17dex	Average rate	30, 2018	December 31, 2017	June 30, 2018	June 30, 2018	2018	2019	2020+
CDI vs. US\$ fixed rate													
swap							(54)	(33)	(18)	7	(13)	(9)	(32)
Receivable	R\$	1,690		3,540	CDI	101.33%							
Payable	US\$	509	US\$	1,104	Fix	3.35%							
TJLP vs. US\$ fixed rate							(426)	(380)	(42)	26	(50)	(304)	(63)
swap Receivable					TJLP		(420)	(300)	(42)	20	(59)	(304)	(03)
Receivable	R\$	2,623	R\$	2,982	IJLP +	1.23%							
Payable			US\$	1,323	Fix	1.51%							
TJLP vs. US\$ floating							(=0)						
rate swap							(58)	(54)	(2)	2	(3)	(55)	
Receivable	Ъ¢	105	D¢	216	TJLP	0.069							
Descripto	R\$	195	R\$	216	+	0.86%							
Payable	US\$	115	US\$	123	Libor	-1.23%							
	039	115	035	125	+	-1.25%							
R\$ fixed rate vs. US\$ fixed							(25)	25	16	10		(1)	(20)
rate swap Receivable	R\$	1,118	D¢	1,158	Fix	7.31%	(25)	25	10	19	(4)	(1)	(20)
Payable	US\$	,	US\$	385	Fix	-0.72%							
IPCA vs. US\$ fixed rate							(0.1					(	
swap					IDC		(84)	(35)	7	7		(34)	(50)
Receivable	R\$	1,000	R\$	1,000	IPCA +	6.55%							
Payable	US\$		US\$	434	Fix	3.98%							
IPCA vs. CDI swap							72	85		0.2	2	0	70
Receivable					IPCA		12	05		0.2	4	0	70
Receivable	R\$	1,350	R\$	1,350	пс <del>л</del> +	6.62%							
Payable	R\$	1,350		1,350	CDI	98.58%							
- 1,000	<b></b> ψ	1,000		1,000	201	20.0070							

## (ii) Protection program for EUR denominated debt instruments

In order to reduce the cash flow volatility, swap transactions were implemented to convert into US\$ the cash flows from certain debt instruments issued in Euros by Vale. In those swaps, Vale receives fixed rates in EUR and pays fixed rates in US\$.

The swap transactions were negotiated over-the-counter and the protected items are the cash flows from debt instruments linked to EUR. The financial settlement inflows/outflows are offset by the protected items losses/gains due to EUR/US\$ exchange rate.

			<b>Financial Settlement</b>	
Flow	Notional December 31, 2016/dex Average rate	Fair value December 31, 2017	· · · · · · · · · · · · · · · · · · ·	Value at Risk Fair value by year June 30, 2018 2018 2019 2020+
		, ,	0	0

	June 30, 2018					ne 30, 018					
EUR fixed rate vs. US\$ fixed rate swap						19	23	(4)	8	(5)	24
Receivable	500		500	Fix	3.75%						
Payable	US\$ 613	US\$	613	Fix	4.29%						

# b) Commodities derivative positions

### (i) Bunker Oil purchase cash flows protection program

In order to reduce the impact of bunker oil price fluctuation on maritime freight hiring/supply and, consequently, reducing the company s cash flow volatility, bunker oil hedging transactions were implemented, through options contracts.

## 29

The derivative transactions were negotiated over-the-counter and the protected item is part of the Vale s costs linked to bunker oil prices. The financial settlement inflows/outflows are offset by the protected items losses/gains due to bunker oil prices changes.

	No	otional (ton)			Fai June	r value	Financial settlement Inflows (Outflows)	Value at Risk	Fair value by year	
Flow	June 30, 2018	December 31, 2017	Bought / Sold	Average strike (US\$/ton)	30, 2018	December 31, 2017	June 30, 2018	June 30, 2018	2018	
Call options	2,025,000		В	442	66		1	14	66	
Put options	2,025,000		S	321	(1)			0	(1)	
Total					65		1	14	65	

As at June 30, 2018 and December 31, 2017, includes US\$8 and US\$15, respectively, of transactions in which the financial settlement occurs subsequently of the closing month.

## (ii) Protection programs for base metals raw materials and products

In the operational protection program for nickel sales at fixed prices, derivatives transactions were implemented to convert into floating prices the contracts with clients that required a fixed price, in order to keep nickel revenues exposed to nickel price fluctuations. Those operations are usually implemented through the purchase of nickel forwards.

In the operational protection program for the purchase of raw materials and products, derivatives transactions were implemented, usually through the sale of nickel and copper forward or futures, in order to reduce the mismatch between the pricing period of purchases (concentrate, cathode, sinter, scrap and others) and the pricing period of the final product sales to the clients.

The derivative transactions are negotiated at London Metal Exchange or over-the-counter and the protected item is part of Vale s revenues and costs linked to nickel and copper prices. The financial settlement inflows/outflows are offset by the protected items losses/gains due to nickel and copper prices changes.

			Financial settlement		
Notional (ton)		Fair value	Inflows (Outflows)	Value at RiskFair value b	oy year
June	June				
30,	Bought / Average strike 30,				
Flow 2018 December 31, 2017	Sold (US\$/ton) 2018	December 31, 2017	June 30, 2018	June 30, 2018 2018 2	2019

Fixed price sales protection										
Nickel forwards	11,374	9,621	В	13,385	17	24	22	5	11	6
ioi wards	11,571	,,021	D	15,505	1,	21	22	5		Ū
Raw material purchase protection										
Nickel										
forwards	155	292	S	14,182	(0.1)	(0.3)	(0.7)	0.1	(0.1)	
Copper										
forwards	54	79	S	6,894	0.0	(0.0)	(0.0)	0.0	0.0	
Total					(0.1)	(0.4)	(0.7)	0.1	(0.1)	

### c) Freight derivative positions

In order to reduce the impact of maritime freight price volatility on the company s cash flow, freight hedging transactions were implemented, through Forward Freight Agreements (FFAs). The protected item is part of Vale s costs linked to maritime freight spot prices. The financial settlement inflows/outflows of the FFAs are offset by the protected items losses/gains due to freight prices changes.

The Forward Freight Agreements (FFAs) are contracts traded over the counter and can be cleared through a Clearing House, in this case subject to margin requirements.

							Financial Settlement	ţ.	Fair value
	Ν	otional (days)				Fair value	Inflows (Outflows)	Value at Risk	by year
Flow	June 30, 2018	December 31, 2017	Bought / Sold	Average strike (US\$/day)	June 30, 2018	December 31, 2017	June 30, 2018	June 30, 2018	2018
Freight forwards	75	0	В	20,170	0.1		0	) 0.1	0.1

### d) Wheaton Precious Metals Corp. warrants

The company owns warrants of Wheaton Precious Metals Corp. (WPM), a Canadian company with stocks negotiated in Toronto Stock Exchange and New York Stock Exchange. Such warrants configure American call options and were received as part of the payment regarding the sale of part of gold payable flows produced as a sub product from Salobo copper mine and some nickel mines in Sudbury.

	Notio	nal (quantity)				Fair value	Financial settlement Inflows (Outflows)	Value at Risk	Fair value by year
Flow	June 30, 2018	December 31, 2017	Bought / Sold	Average strike (US\$/share)	June 30, 2018	December 31, 2017	June 30, 2018	June 30, 2018	2023
Call options	10,000,000	10,000,000	В	44	24	39		3	24

### e) Debentures convertible into shares of Valor da Logística Integrada (VLI)

The company has debentures in which lenders have the option to convert the outstanding debt into a specified quantity of shares of VLI owned by the company.

							<b>Financial settlement</b>		Fair value
	Noti	onal (quantity)				Fair value	Inflows (Outflows)	Value at Risk	by year
Flow	June 30, 2018	December 31, 2017	Bought / Sold	Average strike (R\$/share)	June 30, 2018	December 31, 2017	June 30, 2018	June 30, 2018	2027
Conversion options	140,239	140,239	S	8,549	(56)	(57)		3	(56)

# f) Options related to Minerações Brasileiras Reunidas S.A. (MBR) shares

The Company entered into a stock sale and purchase agreement that has options related to MBR shares. Mainly, the Company has the right to buy back this non-controlling interest in the subsidiary. Moreover, under certain restrict and contingent conditions, which are beyond the buyer s control, such as illegality due to changes in the law, the contract has a clause that gives the buyer the right to sell back its stake to the Company. It this case, the Company could settle through cash or shares.

	Notional (	quantity, in millions)				Fair value	Financial settlement Inflows (Outflows)	Value at Risk	Fair value by year
	June 30,		Bought /	Average strike	June 30,				
Flow	2018	December 31, 2017	Sold	(R\$/share)	2018	December 31, 2017	June 30, 2018	June 30, 2018	2018+
Options	2,139	2,139	B/S	1.6	219	251		13	219

# g) Embedded derivatives in contracts

The Company has some nickel concentrate and raw materials purchase agreements in which there are provisions based on nickel and copper future prices behavior. These provisions are considered as embedded derivatives.

							Financial settlement		Fair value
		lotional (ton)				Fair value	Inflows (Outflows)	Value at Risk	by year
	June 30,		Rought /	Average strike	June 30,				
Flow	2018	December 31, 2017	Sold	(US\$/ton)	2018	December 31, 2017	June 30, 2018	June 30, 2018	2018
Nickel forwards	4,584	2,627	S	14,281	(4)	1		2	(4)
Copper	2,043	2,718	S	6,866		0		0	
forwards					(0)				(0)
Total					(4)	1		2	(4)

The Company has also a natural gas purchase agreement in which there's a clause that defines that a premium can be charged if the Company s pellet sales prices trade above a pre-defined level. This clause is considered an embedded derivative.

	Notion	al (volume/month)				Fair value	Financial settlement Inflows (Outflows)	Value at Risk	`air valu	e by year
Flow	June 30, 2018	December 31, 2017	0	Average strike (US\$/ton)	June 30, 2018	December 31, 2017	June 30, 2018	June 30, 2018	2018	2019+
Call options	746,667	746,667	S	233	(2)	(2)		1	(0)	(2)

In August 2014 the Company sold part of its stake in Valor da Logística Integrada (VLI) to an investment fund managed by Brookfield Asset Management (Brookfield). The sales contract includes a clause that establishes, under certain conditions, a minimum return guarantee on Brookfield s investment. This clause is considered an embedded derivative, with payoff equivalent to that of a put option.

							<b>Financial Settlement</b>		Fair value
	Notion	al (quantity)				Fair value	Inflows (Outflows)	Value at Risk	by year
					June				
			Bought /	Average strike	30,				
Flow	June 30, 2018	December 31, 2017	Sold	(US\$/Share)	2018	December 31, 2017	June 30, 2018	June 30, 2018	2027
Put option	1,105,070,863	1,105,070,863	S	3.86	(103)	(133)		9	(103)

For sensitivity analysis of derivative financial instruments, financial counter parties ratings and market curves please see note 26.

# 21. **Provisions**

Current	liabilities	Non-current liabilities		
June 30, 2018	December 31, 2017	June 30, 2018	December 31, 2017	
694	1,101			
115	102	302	364	
23	30	84	79	
72	87	2,924	3,081	
		1,334	1,473	
101	74	1,923	2,030	
1,005	1,394	6,567	7,027	
	June 30, 2018 694 115 23 72 101	694       1,101         115       102         23       30         72       87         101       74	June 30, 2018         December 31, 2017         June 30, 2018           694         1,101           115         102         302           23         30         84           72         87         2,924           1,334         101         74         1,923	

(i) Change mainly due to payment of profit sharing program.

# 22. Litigation

# a) **Provision for litigation**

Vale is party to labor, civil, tax and other ongoing lawsuits, at administrative and court levels. Provisions for losses resulting from lawsuits are estimated and updated by the Company, based on analysis from the Company s legal consultants.

Changes in provision for litigation are as follows:

	Tax litigation	Civil litigation	Labor litigation	Environmental litigation	Total of litigation provision
Balance at December 31,					
2017	750	131	582	10	1,473
Additions (reversals)	5	17	53	(3)	72
Payments		(16)	(38)	(1)	(55)
Additions - discontinued					
operations	21	1	16		38
Indexation and interest	14	13	(3)		24
Translation adjustment	(108)	(24)	(85)	(1)	(218)

Balance at June 30, 2018	682	122	525	5	1,334
	Tax litigation	Civil litigation	Labor litigation	Environmental litigation	Total of litigation provision
Balance at December 31,	-	-	-		
2016	214	84	534	7	839
Additions (reversals)	(11)	(8)	45	3	29
Payments	(89)	(7)	(47)		(143)
Indexation and interest	(1)	10	13	(1)	21
Translation adjustment	6		(8)	(1)	(3)
Balance at June 30, 2017	119	79	537	8	743

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### b) Contingent liabilities

Contingent liabilities are administrative and judicial claims, with expectation of loss classified as possible, and for which the recognition of a provision is not considered necessary by the Company, based on legal advice. The contingent liabilities are as follows:

	June 30, 2018	December 31, 2017
Tax litigation	8,609	8,840
Civil litigation	1,716	1,623
Labor litigation	1,743	1,952
Environmental litigation	1,976	2,190
Total	14,044	14,605

**i** - Tax litigation - Our most significant tax-related contingent liabilities result from disputes related to (i) the deductibility of our payments of social security contributions on the net income (CSLL) from our taxable income, (ii) challenges of certain tax credits we deducted from our PIS and COFINS payments, (iii) assessments of CFEM (royalties), and (iv) charges of value-added tax on services and circulation of goods (ICMS), especially relating to certain tax credits we claimed from the sale and transmission of energy, ICMS charges to anticipate the payment in the entrance of goods to Pará State and ICMS/penalty charges on our own transportation. The changes reported in the period resulted, mainly, from new proceedings related to PIS, COFINS, CFEM, ICMS e ISS and the application interest and inflation adjustments to the disputed amounts.

**ii** - **Civil litigation** - Most of those claims have been filed by suppliers for indemnification under construction contracts, primarily relating to certain alleged damages, payments and contractual penalties. A number of other claims related to contractual disputes regarding inflation index. The changes reported in the period resulted, mainly from review the process related to commercial divergences of supply contracts.

**iii** - Labor litigation - Represents individual claims by employees and service providers, primarily involving demands for additional compensation for overtime work, time spent commuting or health and safety conditions; and the Brazilian federal social security administration (INSS) regarding contributions on compensation programs based on profits.

**iv** - Environmental litigation - The most significant claims concern alleged procedural deficiencies in licensing processes, non-compliance with existing environmental licenses or damage to the environment.

### c) Judicial deposits

In addition to the provisions and contingent liabilities, the Company is required by law to make judicial deposits to secure a potential adverse outcome of certain lawsuits. These court-ordered deposits are monetarily adjusted and reported as non-current assets until a judicial decision to draw the deposit occurs.

	June 30, 2018	December 31, 2017
Tax litigation	1,057	1,201
Civil litigation	40	60
Labor litigation	635	712
Environmental litigation	12	13
Total	1,744	1,986

### d) Contingencies related to Samarco accident

#### (i) Public civil claim filed by the Federal Government and others

The federal government, the two Brazilian states affected by the failure (Espirito Santo and Minas Gerais) and other governmental authorities have initiated a public civil lawsuit against Samarco and its shareholders, Vale S.A. and BHPB, with an estimated value indicated by the plaintiffs of US\$5.2 billion (R\$20.2 billion).

The Framework Agreement signed in March 2016, was ratified by the Regional Federal Court (TRF) in May 2016. This ratification was suspended by the Superior Court of Justice (STJ) in June 2016 and resulted in the restoration of the public civil action, and maintained other measures, such as: (a) the prohibition of the defendants from transferring or conveying any of their interest in its Brazilian iron ore concessions, without, however, limiting their production and commercial activities and; (b) the order of the deposit with the court of US\$311 (R\$1.2 billion) by January 2017, which was provisionally replaced by the guarantees provided for under the agreements with Federal Prosecution Office (MPF), as detailed in the item (ii) below. This public civil action is currently suspended by the abovementioned agreement with the MPF.

On June 2018, the parties in the action jointly with the Minas Gerais State, Espírito Santo State and Federal Public Prosecution Offices along with the Federal and Minas Gerais and Espírito Santo States Public Defenders Offices, entered into a new agreement to settle the case, which was submitted to the 12th Federal Lower Court and if and when homologated by the judge, it will terminate the action.

### (ii) Public civil action filed by Federal Prosecution Office

On May 3, 2016, the Federal Prosecution Office (MPF) filed a public civil action against Samarco and its shareholders and presented several claims, including: (i) the adoption of measures for mitigating the social, economic and environmental impacts resulting from the dam failure and other emergency measures; (ii) the payment of compensation to the community; and (iii) payments for the collective moral damage. The action value indicated by the MPF is US\$40 billion (R\$155 billion).

In January 2017 Samarco, Vale S.A. and BHPB entered into two preliminary agreements with the MPF. The first agreement (First Agreement) aims to outline the process and timeline for negotiations of a Final Agreement (Final Agreement), initially expected to occur by June 30, 2017, which was, nevertheless, extended by the parties to late June 2018.

This First Agreement establishes a timeline and actions to set the ground for conciliation of two public civil actions in the amounts of US\$5.2 billion (R\$20.2 billion) and US\$40 billion (R\$155 billion), mentioned above, which are currently suspended.

In addition, the First Agreement provides for: (a) the appointment of experts to give support to the Federal Prosecutors and paid for by the companies to conduct a diagnosis and monitor the progress of the programs under the Framework Agreement, and (b) holding at public hearings and the engagement of technical assistance to the affected people, in order to allow the communities to take part in the definition of the content of the Final Agreement.

Samarco, Vale S.A. and BHPB has agreed to provide a guarantee for fulfillment of the obligations regarding the financing and payment of the socio-environmental and socio-economic remediation programs resulting from the Fundão dam failure, pursuant to the two public civil actions, until the signing of the Final Agreement, amounting to US\$571 (R\$2.2 billion), of which (i) US\$26 (R\$100 million) in financial investments; (ii) US\$337 (R\$1.3 billion) in insurance bonds; and (iii) US\$208 (R\$800 million) in assets of Samarco. If, by the deadline negotiated by the parties, the negotiations have not been completed, the Federal Prosecutor s Office may require that the Court re-institute the order for the deposit of US\$311 (R\$1.2 billion) in relation to the US\$5.2 billion (R\$20.2 billion) public civil action and US\$2.0 billion (R\$7.7 billion) related US\$40 billion (R\$155 billion), mentioned above, which are currently suspended.

On March 16, 2017, the 12th Judicial Federal Court of Belo Horizonte partially ratified the First Agreement, which decision includes: (i) ratification of the engagement of experts to perform a socio-environmental impact assessment and assessment of programs under the Framework Agreement and a period for the companies to engage an expert to perform the socio-economic impact assessment; (ii) the consolidation and suspension of related claims aiming to avoid contradictory or conflicting decisions and to establish a unified judicial procedure in order for the parties to be able to reach a final agreement; (iii) accepted the guarantees proposed by Samarco and its shareholders under the Preliminary Agreement on a temporary basis.

In addition, the Second Agreement (Second Agreement) was signed on January 19, 2017, which establishes a timetable to make funds available to remediate the social, economic and environmental damages caused by the Fundão dam failure in the municipalities of Barra Longa, Rio Doce, Santa Cruz do Escalvado and Ponte Nova, amounting to US\$52 (R\$200 million). The 12th Judicial Federal Court of Belo Horizonte ratified this Second Agreement.

Parties are still negotiating an agreement regarding the choice of the expert to perform the socio-economic impact assessment. In this regard, on November 16, 2017, they signed an addendum to the First Agreement, in which the parties defined matters related to the socio-economic impact assessment, its institutional structure and the respective experts, which, in the period of 90 days from the signing of the addendum, shall present their technical and commercial proposals. As the deadline already expired the proposals are being negotiated for service agreements.

As mentioned before, on June 2018, the agreement on the Public civil action in the amount of US\$5.2 billion (R\$20.2 billion) was ratified, in which was submitted to the 12th Federal Lower Court for confirmation. The claims of this public civil action which are contained in this new Agreement shall be dismissed with prejudice by the settlement, while the remaining claims will be suspended until the result of the technical analysis by the experts appointed out by the Prosecutors testing the satisfaction of the Programs or the proposal of the potential renegotiation of these programs.

(iii) U.S. Securities class action suits

### Related to the Vale's American Depositary Receipts

Vale S.A. and certain of its officers were named as defendants in securities class action suits in the Federal Court in New York brought by holders of Vale s American Depositary Receipts under U.S. federal securities laws. The lawsuits allege that Vale S.A. made false and misleading statements or did not make disclosures concerning the risks and dangers of the operations of Samarco s Fundão dam and the adequacy of related programs and procedures. The plaintiffs have not specified an amount of alleged damages or indemnities in these actions.

On March 23, 2017 the judge issued a decision rejecting a significant portion of the claims against Vale S.A. and the individual defendants, and determining the prosecution of the action with respect to more limited claims. The portion of plaintiffs case that remains is related to certain statements about procedures, policies and risk mitigation plans contained in Vale S.A. s sustainability reports in 2013 and 2014, and certain statements regarding to the responsibility of Vale S.A. for the Fundão dam failure made in a conference call in November 2015.

This lawsuit is currently ongoing under discovery with the gathering of documents to be provided to the plaintiffs. In addition, depositions of some custodians indicated by the parties should take place in the next few months.

Vale S.A. continues to contest the outstanding points related to this lawsuit.

Related to the Samarco bonds

In March 2017, holders of bonds issued by Samarco filed a class action suit in the Federal Court in New York against Samarco, Vale S.A. and BHPB under U.S. federal securities laws demanding for indemnification for alleged violation of U.S. federal securities laws. The plaintiffs allege that false and misleading statements were made or disclosures omitted concerning the risks and dangers of the operations of Samarco s Fundão dam and the adequacy of related programs and procedures. It is alleged that with the Fundão dam collapse, the securities have dramatically decreased, in order that the investors who have purchased such securities in a misleading way should be compensated, without, however, specifying an amount for the alleged damages or indemnities in this action.

In June 2017 the defendants presented a joint motion to dismiss the claims requested by the plaintiffs. In March 2018, the Judge issued an order dismissing defendant s motion to dismiss without prejudice and ordering leading plaintiff to submit a final amended complaint, which was

presented by the plaintiffs on March 21, 2018. As a result, a second joint motion to dismiss the claims was filed by the defendants A new decision regarding the merits of the motion to dismiss is expected to be issued by the Judge on the following months.

Vale S.A. continues to contest this lawsuit.

(iv) Criminal lawsuit

On October 20, 2016, the MPF brought a criminal lawsuit in the Brazilian Federal Justice Court against Vale S.A., BHPB, Samarco, VogBr Recursos Hídricos e Geotecnia Ltda. and 22 individuals for alleged crimes against the environment, urban planning and cultural heritage, flooding, landslide, as well as for alleged crimes against the victims of the Fundão dam failure.

In November 2016, the Federal Court of Ponte Nova received the complaint and began the criminal action, with the first of several witnesses filed in June, 2018.

(v) Other lawsuits

In addition, Samarco and its shareholders were named and have been still named as defendants in several other lawsuits brought by individuals, corporations, governmental entities or public prosecutor seeking personal and property damages.

After the ratification by the judge of the 12th Federal Lower Court of the new Agreement with public authorities and public prosecutors, some public civil actions shall be extinguished.

Given the status of these lawsuits, it is not possible at this time to provide a range of possible outcomes or a reliable estimates of potential exposures for Vale S.A. Consequently, no contingent liability has been quantified and no provision was recognized for lawsuits related to Samarco's dam failure.

### e) Other

In 2015, the Company filed an enforceable action in the amount of US\$136 (R\$524 million) referring to the final court decision in favor of the Company of the accrued interest of compulsory deposits from 1987 to 1993. Currently it is not possible to estimate the economic benefit inflow as the counterparty can appeal on the calculation. Consequently, the asset was not recognized in the financial statements.

## 23. Employee postretirement obligations

### Reconciliation of net liabilities recognized in the statement of financial position

	Overfunded pension plans	June 30, 20 Underfunded pension plans	18 Other benefits	Total	Overfunded pension plans	December 31, Underfunded pension plans	2017 Other benefits	Total
Amount recognized in the statement of financial position	-	-			-	-		
Present value of actuarial liabilities	(2,900)	(4,237)	(1,337)	(8,474)	(3,397)	(4,470)	(1,410)	(9,277)
Fair value of assets	4,082	3,550	())	7,632	4,828	3,776		8,604
Effect of the asset ceiling	(1,182)			(1,182)	(1,431)			(1,431)
Liabilities		(687)	(1,337)	(2,024)		(694)	(1,410)	(2,104)
Current liabilities Non-current		(53)	(48)	(101)		(16)	(58)	(74)
liabilities		(634)	(1,289)	(1,923)		(678)	(1,352)	(2,030)
Liabilities		(687)	(1,337)	(2,024)		(694)	(1,410)	(2,104)

24. Stockholders equity

### a) Share capital

As at June 30, 2018, the share capital was US\$61,614 corresponding to 5,284,474,782 shares issued and fully paid without par value.

		June 30, 2018	
	ON	PNE	Total
Stockholders			
Litel Participações S.A. and Litela Participações S.A.	1,108,483,410		1,108,483,410
BNDES Participações S.A.	401,457,757		401,457,757
Bradespar S.A.	332,965,266		332,965,266
Mitsui & Co., Ltd	286,347,055		286,347,055
Foreign investors - ADRs	1,272,455,795		1,272,455,795
Foreign institutional investors in local market	1,177,545,592		1,177,545,592
FMP - FGTS	57,463,205		57,463,205
PIBB - Fund	2,762,968		2,762,968
Institutional investors	271,253,464		271,253,464
Retail investors in Brazil	286,697,569		286,697,569
Brazilian Government (Golden Share)		12	12
Outstanding shares	5,197,432,081	12	5,197,432,093
Shares in treasury	87,042,689		87,042,689
Total issued shares	5,284,474,770	12	5,284,474,782
Share capital per class of shares (in millions)	61,614		61,614
Total authorized shares	7,000,000,000		7,000,000,000

#### b) Share buyback program

On July 25, 2018 (subsequent event), the Board of Directors approved a share buyback program for Vale s common share which will be limited to a maximum of 80,000,000 common shares, and their respective ADSs, and up to US\$1 billion. The program will be carried out over a period of up to 12-month period and the repurchased shares will be cancelled after the expiration of the program and/or alienated through the executive compensation programs. The shares will be acquired in the stock market based on regular trading conditions.

#### c) Remuneration to the Company s stockholders

On July 25, 2018 (subsequent event), the Board of Directors approved the payment of the stockholders remuneration in the amount of US\$2,054 (R\$7,694 million) (US\$0.395195159 per share), US\$1,816 (R\$6,801 million) based on the interest on capital and US\$238 (R\$893 million) based on dividends. This payment is due to the new policy of stockholders remuneration of the Company, approved in March 2018, which provides for a semi-annual payment of 30% of Adjusted EBITDA from continuing operations less sustaining investments. This amount will be reduced from the minimum mandatory remuneration for the year ended 2018 and deducted from the profit reserve, if necessary.

### 25. Related parties

The Company s related parties are subsidiaries, joint ventures, associates, shareholders and its related entities and key management personnel of the Company. Transactions between the parent company and its subsidiaries are eliminated on consolidation and are not disclosed in this note.

Related party transactions were made by the Company on terms equivalent to those that prevail in arm's-length transactions, with respect to price and market conditions that are no less favorable to the Company than those arranged with third parties.

Purchases, accounts receivable and other assets, and accounts payable and other liabilities relates largely to amounts charged by joint ventures and associates related to the pelletizing plants operational lease and railway transportation services.

Information about related party transactions and effects on the interim financial statements is set out below:

# a) Transactions with related parties

	Three-month period ended June 30,								
		20			2017				
	Joint	A <b>!</b>	Major stockholders	Total	Joint	A <b>!</b>	Major ta alah al dama	041	T-4-1
Net operating	Ventures	Associates	stocknoiders	Total	Ventures	Associates	stockholders	Others	Total
revenue	72	77	53	202	60	80	35	8	183
Cost and operating	12	//	55	202	00	00	55	0	105
expenses	(504)	(4)		(508)	(496)	(7)	(6)	(1)	(510)
Financial result	62	(1)	(96)	(34)	26	(7)	(228)	(1)	(204)

	Six-month period ended June 30,								
		20	)18	_	2017				
	Joint		Major		Joint		Major		
	Ventures	Associates	stockholders	Total	Ventures	Associates	stockholders	Others	Total
Net operating									
revenue	176	155	101	432	189	163	65	13	430
Cost and operating									
expenses	(1,008)	(25)		(1,033)	(826)	(15)	(12)	(2)	(855)
Financial result	102		(149)	(47)	13		(313)	(9)	(309)

Net operating revenue relates to sale of iron ore to the steelmakers and right to use capacity on railroads. Cost and operating expenses mostly relates to the operational leases of the pelletizing plants.

# b) Outstanding balances with related parties

	Joint	J	une 30, 2018 Major			Joint	Dec	ember 31, 2017 Major		
	Ventures	Associates	stockholders	Others	Total	Ventures	Associates	stockholders	Others	Total
Assets										
Cash and cash equivalents			1,349		1,349			817		817
Accounts receivable	66	56	5	16	143	73	38	3	17	131
Dividends										
receivable	92	7			99	112	14			126
Loans	1,913				1,913	4,526				4,526
Derivatives										
financial										
instruments			240		240			284		284
Other assets	16				16	17				17
Liabilities										
Supplier and										
contractors	450	21		13	484	192	20	201	15	428
Loans	241	1,267	3,030		4,538	612	1,245	4,508		6,365
Derivatives										
financial										
instruments			107		107			109		109
Other liabilities		60			60			16		16

### Major stockholders

Refers to regular financial instruments with large financial institutions of which the stockholders are part of the controlling shareholders agreement .

#### **Coal segment transactions**

In March 2018, Nacala BV, a joint venture between Vale and Mitsui on the Nacala s logistic corridor, closed the project financing and repaid a portion of the shareholders loans from Vale, in the amount of US\$2,572. The outstanding receivable of US\$1,913 carries interest at 7.44% p.a. The Company has issued a financial guarantee in connection with the Project Finance of Nacala, in the proportion equivalent to its share in the Concessionaires (50%), and the fair value of this instrument is US\$20 as at June 30, 2018.

The loan from related parties mainly relates to the loan from Pangea Emirates Ltd, part of the group of shareholders which owns 15% interest on Vale Moçambique, in the amount of US\$1,200 (US\$1,166 as at December 31, 2017), which carries interest at 6.54% p.a.

# 26. Additional information about derivatives financial instruments

### a) Sensitivity analysis of derivative financial instruments

The following tables present the potential value of the instruments given hypothetical stress scenarios for the main market risk factors that impact the derivatives positions. The scenarios were defined as follows:

• *Probable*: the probable scenario was based on the estimated risk variables that were used on pricing the derivative instruments as at June 30, 2018

- Scenario I: fair value estimated considering a 25% deterioration in the associated risk variables
- Scenario II: fair value estimated considering a 50% deterioration in the associated risk variables

Instrument	Instrument s main risk events	Probable	Scenario I	Scenario II
CDI vs. US\$ fixed rate swap	R\$depreciation	(54)	(184)	(312)
	US\$interest rate inside Brazil			
	decrease	(54)	(60)	(66)
	Brazilian interest rate increase	(54)	(55)	(55)
Protected item: R\$ denominated debt	R\$depreciation	n.a.		
		(120)	(70.5)	(0.0.2)
TJLP vs. US\$ fixed rate swap	R\$depreciation	(426)	(705)	(983)
	US\$interest rate inside Brazil			
	decrease	(426)	(440)	(455)
	Brazilian interest rate increase	(426)	(441)	(455)
	TJLP interest rate decrease	(426)	(438)	(451)
Protected item: R\$ denominated debt	R\$depreciation	n.a.		
TJLP vs. US\$ floating rate swap	R\$depreciation	(58)	(85)	(113)
1921 vs. Oby nouting face swap	US\$interest rate inside Brazil	(50)	(05)	(115)
	decrease	(58)	(59)	(61)
	Brazilian interest rate increase	(58)	(59)	(60)
	TJLP interest rate decrease	(58)	(59)	(60)
Protected item: R\$ denominated debt	R\$depreciation	n.a.		
R\$ fixed rate vs. US\$ fixed rate swap	R\$depreciation	(25)	(100)	(176)
-		(25)	(38)	(51)

	US\$interest rate inside Brazil decrease			
	Brazilian interest rate increase	(25)	(45)	(63)
Protected item: R\$ denominated debt	R\$depreciation	n.a.	()	(00)
IPCA vs. US\$ fixed rate swap	R\$depreciation	(84)	(195)	(306)
	US\$interest rate inside Brazil			
	decrease	(84)	(90)	(96)
	Brazilian interest rate increase	(84)	(95)	(106)
	IPCA index decrease	(84)	(90)	(96)
Protected item: R\$ denominated debt	R\$depreciation	n.a.		
IPCA vs. CDI swap	Brazilian interest rate increase	72	47	25
-	IPCA index decrease	72	59	46
Protected item: R\$ denominated debt linked to				
IPCA	IPCA index decrease	n.a.	(59)	(46)
EUR fixed rate vs. US\$ fixed rate swap	EUR depreciation	19	(151)	(322)
	Euribor increase	19	13	6
	US\$Libor decrease	19	0	(20)
Protected item: EUR denominated debt	EUR depreciation	n.a.	151	322

Instrument	Instrument s main risk events	Probable	Scenario I	Scenario II
Bunker Oil protection				
Options	Bunker Oil price decrease	65	(26)	(187)
Protected item: Part of costs linked to bunker oil				
prices	Bunker Oil price decrease	n.a.	26	187
Maritime Freight protection				
Forwards	Freight price decrease	0.1	(0.3)	(0.7)
Protected item: Part of costs linked to maritime				
freight prices	Freight price decrease	n.a.	0.3	0.7
Nickel sales fixed price protection				
Forwards	Nickel price decrease	17	(24)	(65)
Protected item: Part of nickel revenues with				
fixed prices	Nickel price fluctuation	n.a.	24	65
Purchase protection program				
Nickel forwards	Nickel price increase	(0)	(1)	(1)
Protected item: Part of costs linked to nickel				
prices	Nickel price increase	n.a.	1	1
Copper forwards	Copper price increase	0.0	(0.1)	(0.2)
Protected item: Part of costs linked to copper				
prices	Copper price increase	n.a.	0.1	0.2
WPM warrants	WPM stock price decrease	24	10	2
Conversion options - VLI	VLI stock value increase	(56)	(89)	(134)
Options - MBR	MBR stock value decrease	219	144	81

Instrument	Main risks	Probable	Scenario I	Scenario II
Embedded derivatives - Raw material purchase				
(nickel)	Nickel price increase	(4)	(21)	(38)
Embedded derivatives - Raw material purchase				
(copper)	Copper price increase	(0)	(4)	(7)
Embedded derivatives - Gas purchase	Pellet price increase	(2)	(4)	(7)
Embedded derivatives - Guaranteed minimum return (VLI)	VLI stock value decrease	(103)	(222)	(420)

### b) Financial counterparties rating

The transactions of derivative instruments, cash and cash equivalents as well as investment are held with financial institutions whose exposure limits are periodically reviewed and approved by the delegated authority. The financial institutions credit risk is performed through a methodology that considers, among other information, ratings provided by international rating agencies.

The table below presents the ratings published by agencies Moody s and S&P regarding the main financial institutions that we had outstanding positions as of June 30, 2018.

Long term ratings by counterparty	Moody s	S&P
ANZ Australia and New Zealand Banking	Aa3	AA-
Banco ABC	Ba3	BB-
Banco Bradesco	Ba3	BB-
Banco do Brasil	Ba3	BB-
Banco de Credito del Peru	Baa1	BBB+
Banco do Nordeste	Ba3	BB-
Banco Safra	Ba3	BB-
Banco Santander	A2	А
Banco Votorantim	Ba3	BB-
Bank of America	A3	A-
Bank of China	A1	А
Bank of Mandiri	Baa2	BB+
Bank of Nova Scotia	A1	A+
Bank Rakyat	Baa2	BB+
Bank of Tokyo Mitsubishi UFJ	A1	A-
Banpará		BB-
Barclays	Baa3	BBB
BBVA	A3	A-
BNP Paribas	Aa3	А
BTG Pactual	Ba3	BB-
Caixa Economica Federal	Ba3	BB-
Canadian Imperial Bank	A1	A+
China Construction Bank	A1	А
CIMB Bank	A3	A-
Citigroup	Baa1	BBB+
Credit Agricole	A1	А
Credit Suisse	Baa2	BBB+
Deutsche Bank	Baa2	BBB+
Goldman Sachs	A3	BBB+
HSBC	A2	А
Intesa Sanpaolo Spa	Baa1	BBB
Itaú Unibanco	Ba3	BB

JP Morgan Chase & Co	A3	A-
Macquarie Group Ltd	A3	BBB
Mega Int. Commercial Bank	A1	А
Mizuho Financial	A1	A-
Morgan Stanley	A3	BBB+
National Australia Bank NAB	Aa3	AA-
National Bank of Oman	Baa3	
Natixis	A1	А
Rabobank	Aa3	A+
Royal Bank of Canada	A1	AA-
Societe Generale	A1	А
Standard Bank Group	Ba1	
Standard Chartered	A2	BBB+
Sumitomo Mitsui Financial	A1	A-
UBS	Aa3	A-
Unicredit	Baa1	BBB

### c) Market curves

The curves used on the pricing of derivatives instruments were developed based on data from B3, Central Bank of Brazil, London Metals Exchange and Bloomberg.

## (i) **Products**

### Nickel

Maturity	Price (US\$/ton)	Maturity	Price (US\$/ton)	Maturity	Price (US\$/ton)
SPOT	14,910	DEC18	14,970	JUN19	15,064
JUL18	14,851	JAN19	14,988	JUN20	15,217
AUG18	14,879	FEB19	15,005	JUN21	15,339
SEP18	14,903	MAR19	15,023	JUN22	15,444
OCT18	14,928	APR19	15,039		
NOV18	14,949	MAY19	15,053		

### Copper

Maturity	Price (US\$/lb)	Maturity	Price (US\$/lb)	Maturity	Price (US\$/lb)
SPOT	2.95	DEC18	3.01	JUN19	3.03
JUL18	3.01	JAN19	3.02	JUN20	3.04
AUG18	3.01	FEB19	3.02	JUN21	3.05
SEP18	3.01	MAR19	3.02	JUN22	3.05
OCT18	3.01	APR19	3.02		
NOV18	3.01	MAY19	3.03		

### **Bunker Oil**

Maturity	Price (US\$/ton)	Maturity	Price (US\$/ton)	Maturity	Price (US\$/ton)
SPOT	461	DEC18	444	JUN19	422
JUL18	466	JAN19	441	JUN20	315

AUG18	466	FEB19	438	JUN21	289
SEP18	458	MAR19	434	JUN22	248
OCT18	452	APR19	431		
NOV18	448	MAY19	427		

## Maritime Freight (Capesize 5TC)

Maturity	Price (US\$/day)	Maturity	Price (US\$/day)	Maturity	Price (US\$/day)
SPOT	18,110	DEC18	23,050	JUN19	16,130
JUL18	18,110	JAN19	14,570	Cal 2019	19,375
AUG18	18,710	FEB19	14,570	Cal 2020	19,120
SEP18	21,410	MAR19	14,570	Cal 2021	16,610
OCT18	23,190	APR19	16,130	Cal 2022	15,620
NOV18	24,290	MAY19	16,130		

## (ii) Foreign exchange and interest rates

## **US\$-Brazil Interest Rate**

Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)
08/01/18	4.25	06/03/19	4.33	10/01/21	4.88
09/03/18	3.66	07/01/19	4.38	01/03/22	4.90
10/01/18	3.63	10/01/19	4.57	04/01/22	4.95
11/01/18	3.70	01/02/20	4.67	07/01/22	4.97
12/03/18	3.66	04/01/20	4.70	10/03/22	5.03
01/02/19	3.81	07/01/20	4.73	01/02/23	5.03
02/01/19	3.92	10/01/20	4.76	04/03/23	5.08
03/01/19	4.08	01/04/21	4.80	07/03/23	5.12
04/01/19	4.08	04/01/21	4.84	01/02/24	5.22
05/02/19	4.20	07/01/21	4.87	07/01/24	5.33

### **US\$ Interest Rate**

Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)
1M	2.10	6M	2.52	11M	2.60
2M	2.18	7M	2.54	12M	2.61
3M	2.33	8M	2.56	2Y	2.85
4M	2.42	9M	2.58	3Y	2.97
5M	2.48	10M	2.59	4Y	3.04

### TJLP

Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)
08/01/18	6.60	06/03/19	6.60	10/01/21	6.60
09/03/18	6.60	07/01/19	6.60	01/03/22	6.60
10/01/18	6.60	10/01/19	6.60	04/01/22	6.60
11/01/18	6.60	01/02/20	6.60	07/01/22	6.60
12/03/18	6.60	04/01/20	6.60	10/03/22	6.60
01/02/19	6.60	07/01/20	6.60	01/02/23	6.60
02/01/19	6.60	10/01/20	6.60	04/03/23	6.60
03/01/19	6.60	01/04/21	6.60	07/03/23	6.60
04/01/19	6.60	04/01/21	6.60	01/02/24	6.60
05/02/19	6.60	07/01/21	6.60	07/01/24	6.60

### **BRL Interest Rate**

Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)
08/01/18	6.40	06/03/19	7.50	10/01/21	10.00
09/03/18	6.53	07/01/19	7.60	01/03/22	10.18
10/01/18	6.51	10/01/19	7.99	04/01/22	10.35
11/01/18	6.58	01/02/20	8.32	07/01/22	10.53
12/03/18	6.70	04/01/20	8.58	10/03/22	10.68
01/02/19	6.83	07/01/20	8.82	01/02/23	10.80
02/01/19	6.92	10/01/20	9.10	04/03/23	10.92
03/01/19	7.07	01/04/21	9.31	07/03/23	11.00
04/01/19	7.23	04/01/21	9.52	01/02/24	11.21
05/02/19	7.37	07/01/21	9.77	07/01/24	11.39

# Implicit Inflation (IPCA)

Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)
08/01/18	3.65	06/03/19	4.72	10/01/21	4.66
09/03/18	3.77	07/01/19	4.82	01/03/22	4.73
10/01/18	3.75	10/01/19	4.61	04/01/22	4.81
11/01/18	3.83	01/02/20	4.54	07/01/22	4.91
12/03/18	3.94	04/01/20	4.43	10/03/22	4.99
01/02/19	4.07	07/01/20	4.40	01/02/23	5.05
02/01/19	4.15	10/01/20	4.41	04/03/23	5.12
03/01/19	4.30	01/04/21	4.42	07/03/23	5.16
04/01/19	4.45	04/01/21	4.46	01/02/24	5.29
05/02/19	4.60	07/01/21	4.56	07/01/24	5.41

## **EUR Interest Rate**

Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)
1M	-0.39	6M	-0.29	11M	-0.25
2M	-0.37	7M	-0.28	12M	-0.25
3M	-0.36	8M	-0.27	2Y	-0.17
4M	-0.32	9M	-0.26	3Y	-0.04
5M	-0.30	10M	-0.26	4Y	0.13

## **CAD Interest Rate**

Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)	Maturity	Rate (% p.a.)
1M	1.67	6M	1.94	11M	1.10
2M	1.71	7M	1.67	12M	1.02
3M	1.77	8M	1.49	2Y	2.30
4M	1.86	9M	1.34	3Y	2.44
5M	1.91	10M	1.21	4Y	2.54

# **Currencies - Ending rates**

CAD/US\$	0.7610	US\$/BRL	3.8558	EUR/US\$	1.1583
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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)

Date: July 25, 2018

By:

/s/ André Figueiredo Director of Investor Relations