(A free translation of the original in Portuguese)

Companhia Brasileira de Alumínio

Parent company and consolidated financial statements at December 31, 2016 and independent auditor's report

(A free translation of the original in Portuguese)

Independent auditor's report of the parent and consolidated financial statement

To the Board of Directors and Stockholders
Companhia Brasileira de Alumínio

Opinion

We have audited the accompanying parent company financial statements of Companhia Brasileira de Alumínio (the "Company"), which comprise the balance sheet as at December 31, 2016 and the statements of income, comprehensive income, changes in equity and cash flows for the year then ended, as well as the accompanying consolidated financial statements of Companhia Brasileira de Alumínio and its subsidiaries ("Consolidated"), which comprise the consolidated balance sheet as at December 31, 2016 and the consolidated statements of income, comprehensive income, changes in equity and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Companhia Brasileira de Alumínio and of Companhia Brasileira de Alumínio and its subsidiaries as at December 31, 2016, and the financial performance and the cash flows for the year then ended, as well as the consolidated financial performance and the cash flows for the year then ended, in accordance with accounting practices adopted in Brazil and with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

Basis for opinion

We conducted our audit in accordance with Brazilian and International Standards on Auditing. Our responsibilities under those standards are further described in the “Auditor’s Responsibilities for the Audit of the Parent Company and Consolidated Financial Statements” section of our report. We are independent of the Company and its subsidiaries in accordance with the ethical requirements established in the Code of Professional Ethics and Professional Standards issued by the Brazilian Federal Accounting Council, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Emphasis of matter

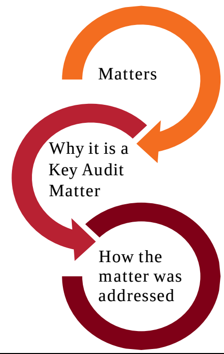
Related-party transactions

We draw attention to Note 14 to these financial statements, which states that the Company maintains balances and carries out transactions in significant amounts with related parties under the conditions described therein. Accordingly, these financial statements should be analyzed in this context. Our opinion is not qualified in respect of this matter.

Companhia Brasileira de Alumínio

Key audit matters

Key audit matters (KAM) are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the parent company and consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.



Why it is a Key Audit Matter	How the matter was addressed in the audit
Evaluation of impairment of property, plant and equipment and intangible assets of the Cash Generating Unit (CGU) - Nickel	
The test of impairment of property, plant and equipment and intangible assets of the CGU - Nickel is important for our audit, because this activity has been currently interrupted. The process of evaluation carried out by the management involves critical judgments and is mainly based on the future cash flows of the CGU - Nickel. The main management assumptions, which consider that operations may be resumed, include information on projections of nickel price, sales volumes, U.S. dollar quotation and discount rate, which are affected by expected future conditions of the economy or the market. Adverse economic scenarios may result in significant changes in these assumptions. The impairment value of R$ 845 million, equivalent to the total residual amount of the property, plant and equipment and intangible assets referring to the CGU - Nickel, was recorded in 2016. The main information on the calculation made by management is presented in Note 18 to the financial statements.	In response to that matter, we understood and tested the key controls existing in that area, evaluated the methodology used by management to identify the Cash Generating Units (CGU) and the existence of impairment indicators. With the support of our experts in evaluation of companies, we analyzed the methodology used by the Management to project the cash flows as part of the impairment test. We also discussed the reasonableness of the main assumptions used with the Management, including the discount rate used, the growth rate of the nickel prices and sales volumes, comparing them with the economy and sector forecasts available on the date of our test, if available, and also on projections with budgets approved by the governance bodies. We also tested the mathematical accuracy of the calculations and checked the main data included in the model to determine the value in use. Additionally, through sensitivity analyses of the main assumptions used, we evaluated whether the individual or cumulative changes would result in impairment losses significantly different from those recorded by the Company. The methodology used by management is consistent with the methodology adopted in prior years and the disclosures made are consistent with the data and information obtained from our procedures.

Why it is a Key Audit Matter	How the matter was addressed in the audit
Tax credits	
The Company and its subsidiaries keep recorded deferred taxes arising from temporary differences and income tax and social contribution losses, as well as credits of income tax, social contribution and Value-added Tax on Sales and Services (ICMS) recoverable. These tax credits were recorded because management considers that they will generate future taxable profit, as well as enough ICMS amounts payable for the use of these credits. We consider that this is a focus area of the audit, because the Company's management on the realization of these credits involves judgments with inherent complexities and subjectivities to determine the tax bases for offsetting these amounts. The main information on the tax credits are presented in Notes 13 and 20 to the financial statements.	In response to such matters, we understood and tested the key controls used by the Company in the calculation and record of the tax credits, as well as the model used for the projections of results. We involved our experts in tax issues, as well as those experts in evaluation of companies, to support us in tests of the calculation of credits and in relation to the models and critical assumptions used by the management. We compared these assumptions with macroeconomic information disclosed in the market, and compared the information on these projections with the budgets approved by the governance bodies. Additionally, we analyzed the realization terms considered in the studies and historical data of the Company and its subsidiaries to check the adequacy and consistency of these estimates of realization in relation to those used in prior years. Finally, we read the disclosures related to the recognition of these tax credits. We consider that the criteria and assumptions adopted by the Management to determine the tax credits, as well as the disclosures made, are reasonable, in all material respects, within the context of the financial statements.

Other matters

Statements of Value Added

The parent company and consolidated Statements of Value Added for the year ended December 31, 2016, prepared under the responsibility of the Company's management and presented as supplementary information for IFRS purposes, were submitted to audit procedures performed in conjunction with the audit of the Company’s financial statements. For the purposes of forming our opinion, we evaluated whether these statements are reconciled with the financial statements and accounting records, as applicable, and if their form and content are in accordance with the criteria defined in Technical Pronouncement CPC 09 - "Statement of Value Added". In our opinion, these Statements of Value Added have been properly prepared in all material respects, in accordance with the criteria established in the Technical Pronouncement, and are consistent with the parent company and consolidated financial statements taken as a whole.

Companhia Brasileira de Alumínio

Responsibilities of management and those charged with governance for the parent company and consolidated financial statements

Management is responsible for the preparation and fair presentation of the parent company and consolidated financial statements in accordance with accounting practices adopted in Brazil and with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB), and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the parent company and consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the financial reporting process of the Company and its subsidiaries.

Auditor's responsibilities for the audit of the parent company and consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the parent company and consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Brazilian and International Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Brazilian and International Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the parent company and consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control of the Company and its subsidiaries.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability of the Company to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the parent company and consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the parent company and consolidated financial statements, including the disclosures, and whether these financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Curitiba, 17 de February, 2017

PricewaterhouseCoopers
Auditores Independentes
CRC 2SP000160/O-5

Leandro Sidney Camilo da Costa
Contador CRC 1SP 236051/O-7

(A free translation of the original in Portuguese)

Contents

Companhia Brasileira de Alumínio

Condensed interim balance sheet

All amounts in thousands of Reais

(A free translation of the original in Portuguese)

Assets	Note	Parent company 2016	Parent company 2015	Consolidated 2016	Consolidated 2015
Current assets					
Cash and cash equivalents	9	76.605	69.560	77.040	70.213
Financial investments	10	766.312	814.715	933.800	900.311
Derivative financial instruments	6.1.1 (a)	62.141	47.889	62.141	47.889
Trade receivables	11	334.070	396.492	343.168	459.946
Inventory	12	574.915	509.422	604.494	532.502
Taxes recoverable	13	322.186	60.971	324.045	61.478
Dividends receivable	14	44.430	26.847	6.713	5.828
Financial instruments - firm commitment	14	161.020	144.721	161.020	144.721
Other assets	15	52.725	37.084	60.402	42.406
		2.394.404	2.107.701	2.572.823	2.265.294
Non-current assets					
Long-term receivables					
Financial investments	10	64		22.334	16.610
Derivative financial instruments	6.1.1 (a)	3.945		3.945	
Taxes recoverable	13	727.711	377.369	727.857	377.555
Financial instruments - firm commitment	14	291.216	439.082	291.216	439.082
Deferred income tax and social contribution	20 (b)	968.286	539.577	973.309	553.448
Related parties	14	361.321	1.603	361.176	1.595
Judicial deposits	22 (c)	127.216	93.039	138.680	100.696
Other assets	15	18.771	11.892	38.471	29.860
		2.498.530	1.462.562	2.556.988	1.518.846
Investments	16	1.091.795	825.092	257.176	221.215
Property, plant and equipment	17	4.420.354	4.524.464	5.069.811	5.078.337
Intangible assets	18	476.466	493.407	614.142	606.155
		8.487.145	7.305.525	8.498.117	7.424.553
Total assets		10.881.549	9.413.226	11.070.940	9.689.847

Liabilities and equity	Note	Parent company 2016	Parent company 2015	Consolidated 2016	Consolidated 2015
Current liabilities					
Borrowing	19	247.327	262.600	299.576	308.052
Derivative financial instruments	6.1.1	18.837	50.348	18.837	50.348
Trade payables		376.140	241.937	328.563	274.828
Confirming payable		1.115	48.067	1.115	48.067
Salaries and social charges		116.730	87.533	118.474	89.299
Taxes payable		17.110	12.263	30.313	28.628
Customer advances		7.059	73.768	7.390	73.896
Dividends payable	14	10.323	10.253	10.371	10.265
Use of public assets	23	28.230	25.103	31.141	27.547
Related parties	14	221.019	222.749	220.857	222.662
Other liabilities	21	46.068	60.496	72.126	81.834
		1.089.958	1.095.117	1.138.763	1.215.426
Non-current liabilities					
Borrowing	19	2.572.974	3.041.804	2.650.949	3.144.819
Derivative financial instruments	6.1.1	177	2.283	177	2.283
Related parties	14	2.096.983	1.020.287	2.096.983	1.020.287
Provision	22	613.981	229.676	614.069	229.925
Use of public assets	23	521.329	495.082	574.511	542.293
Other liabilities	21	65.182	47.873	74.523	53.710
		5.870.626	4.837.005	6.011.212	4.993.317
Total liabilities		6.960.584	5.932.122	7.149.975	6.208.743
Equity	24				
Share capital		4.399.676	3.772.290	4.399.676	3.772.290
Accumulated profit (deficit)		(513.509)	(296.709)	(513.509)	(296.709)
Carrying value adjustments		34.798	5.523	34.798	5.523
Total equity		3.920.965	3.481.104	3.920.965	3.481.104
Total liabilities and equity		10.881.549	9.413.226	11.070.940	9.689.847

The accompanying notes are an integral part of these parent company and consolidated financial statements.

Statement of income
Years ended December 31

All amounts in thousands of Reais unless otherwise stated (A free translation of the original in Portuguese)

		Parent company		Consolidated	
	Note	**2016**	**2015**	**2016**	**2015**
Net revenue from products sold and services rendered	25	4.078.486	4.266.374	4.345.452	4.562.140
Cost of products sold and services rendered	26	(3.627.853)	(3.378.519)	(3.685.151)	(3.525.415)
Gross profit		450.633	887.855	660.301	1.036.725
Operating expenses					
Selling	26	(95.247)	(77.189)	(98.024)	(80.343)
General and administrative	26	(173.374)	(173.702)	(179.816)	(180.484)
Other operating income, net	28	(1.177.470)	(173.966)	(1.178.370)	(174.861)
		(1.446.091)	(424.857)	(1.456.210)	(435.688)
Operating profit before equity interest and finance results		(995.458)	462.998	(795.909)	601.037
Results from equity interest					
Equity in the results	16	193.834	117.338	67.178	42.479
		193.834	117.338	67.178	42.479
Finance income and costs	29				
Finance income		147.038	189.008	166.257	196.230
Finance costs		(462.001)	(478.811)	(493.321)	(503.256)
Derivative financial instruments		2.844	(4.803)	2.844	(4.803)
Foreign exchange variations, net		465.977	(996.762)	469.892	(1.005.052)
		153.858	(1.291.368)	145.672	(1.316.881)
Loss before income tax and social contribution		(647.766)	(711.032)	(583.059)	(673.365)
Income tax and social contribution	20 (a)				
Current		(12.805)	(59.184)	(67.412)	(107.592)
Deferred		443.771	358.705	433.671	369.446
Loss for the year		(216.800)	(411.511)	(216.800)	(411.511)
Total number of shares - thousand		1.117.283	1.028.889	1.117.283	1.028.889
Basic and diluted loss per share (in Reais)		(0,19)	(0,40)	(0,19)	(0,40)

The accompanying notes are an integral part of these parent company and consolidated financial statements.

Statement of comprehensive income (loss)
Years ended december 31
All amounts in thousands of Reais (A free translation of the original in Portuguese)

		Parent company and consolidated	
	Note	2016	2015
Loss for the year		(216.800)	(411.511)
Other components of comprehensive income to be subsequently reclassified to the statement of income			
Operating hedge accounting, net of tax effects	24 (b)	29.231	2.792
Interest in other comprehensive income of investees	24 (b)	44	(376)
		29.275	2.416
Total comprehensive loss for the year		(187.525)	(409.095)

The accompanying notes are an integral part of these parent company and consolidated financial statements.

Statement of changes in equity
Years ended December
All amounts in thousands of Reais

(A free translation of the original in Portuguese)

			Profit reserves				
	Note	Share capital	Legal	Retention	Accumulated profit (deficit)	Carrying value adjustments	Total
At January 1, 2015		5.270.293	7.098	107.704		3.107	5.388.202
Total comprehensive income (loss) for the year							
Loss for the period					(411.511)		(411.511)
Other comprehensive income						2.416	2.416
					(411.511)	2.416	(409.095)
Total contributions by and distributions to stockholders							
Capital decrease	24 (a) e 1.1 (a)	(1.498.003)					(1.498.003)
Compensation of accumulated losses			(7.098)	(107.704)	114.802		
		(1.498.003)	(7.098)	(107.704)	114.802		(1.498.003)
At December 31, 2015		3.772.290			(296.709)	5.523	3.481.104
Total comprehensive income (loss) for the year							
Loss for the period					(216.800)		(216.800)
Other comprehensive income						29.275	29.275
					(216.800)	29.275	(187.525)
Total contributions by and distributions to stockholders							
Capital increase	24 (a) e 1.1 (c)	627.386					627.386
		627.386					627.386
At December 31, 2016		4.399.676			(513.509)	34.798	3.920.965

The accompanying notes are an integral part of these parent company and consolidated financial statements.

Companhia Brasileira de Alumínio

Statement of cash flow
Years ended December 31
All amounts in thousands of Reais (A free translation of the original in Portuguese)

		Parent company		Consolidated	
	Note	**2016**	**2015**	**2016**	**2015**
Cash flow from operating activities					
Loss before income tax and social contribution		(647.766)	(711.032)	(583.059)	(673.365)
Adjustments of items that do not represent changes in cash and cash equivalents					
Interest and monetary and foreign exchange variations		(195.012)	1.191.027	(190.687)	1.191.469
Equity in the results	16	(193.834)	(117.338)	(67.178)	(42.479)
Depreciation and amortization	17 e 18	339.803	313.999	374.481	344.822
Results from disposal of property, plant and equipment	28	3.383	13.377	3.383	13.430
Realization financial instruments – firm commitment	28	137.908	120.302	137.908	120.302
Recognition financial instruments – firm commitment	28	(6.341)	37.239	(6.341)	37.239
Loss on sales of investments	28	24.119		24.119	
Provision for asset impairment	28	845.509	1.566	845.509	1.566
Provision	11, 12 e 22	140.961	(53.560)	139.668	(52.324)
		448.730	795.580	677.803	940.660
Decrease (increase) in assets					
Financial investments		235.066	673.417	190.909	650.556
Trade receivables		70.158	(147.614)	137.111	(169.147)
Inventory		(30.719)	36.079	(37.218)	23.563
Taxes recoverable		89.934	129.395	88.622	134.180
Derivative financial instruments		(18.197)	(32.087)	(18.197)	(32.087)
Other receivables		(18.290)	2.629	(17.886)	(16.827)
Increase (decrease) in liabilities					
Trade payables		90.782	42.916	11.358	73.072
Confirming payable		(46.952)	(562)	(46.952)	(562)
Salaries and social charges		(920)	(7.387)	(1.021)	(7.440)
Taxes payable		2.386	(12.397)	(1.677)	(7.952)
Use of public assets		(9.082)	(12.116)	(12.239)	(12.116)
Derivative financial instruments		(33.617)	19.182	(33.617)	19.182
Other liabilities		(148.553)	37.969	(142.973)	52.539
Cash from operations		630.726	1.525.004	794.023	1.647.621
Interest paid		(191.617)	(206.976)	(206.341)	(223.751)
Income tax and social contribution			(30.908)	(56.999)	(60.255)
Net cash provided by operating activities		439.109	1.287.120	530.683	1.363.615
Cash flow from investment activities					
Purchases of property, plant and equipment	17 e 18	(140.286)	(216.545)	(144.718)	(220.215)
Investment acquisition	16 (c)	(2.599)			
Net cash provided by incorporated companies	1.1 (b)	64		64	
Related parties			(27.959)	(5.699)	(29.018)
Proceeds from sale of property, plant and equipment and intangible assets		1.701	2.486	2.290	2.534
Dividends received		69.693	34.807	27.698	3.045
Net cash used in investment activities		(71.427)	(207.211)	(120.365)	(243.654)
Cash flow from financing activities					
New borrowing	19 (c)	100.695	81.803	100.695	81.803
Repayment of borrowing	19 (c)	(253.971)	(143.354)	(302.630)	(187.396)
Capital decrease (increase)			(871.691)		(871.691)
Dividends paid			(3.241)	36	(161.969)
Related parties		(254.419)	(165.688)	(248.650)	(3.229)
Net cash used in financing activities		(407.695)	(1.102.171)	(450.549)	(1.142.482)
Increase (decrease) in cash and cash equivalents		(40.013)	(22.262)	(40.231)	(22.521)
Net cash obtained from incorporation of companies	1.1 (c)	47.058		47.058	
Cash and cash equivalents at the beginning of the period		69.560	91.822	70.213	92.734
Cash and cash equivalents at the end of the period		76.605	69.560	77.040	70.213
Main non-cash transactions					
Capital increase in Nazca Participações Ltda.	1.1 (b)	24.321		24.321	
Capital increase - Merger of Votorantim Metais S.A.	1.1 (c)	627.386		627.386	
Capital decrease	1.1 (a)				
Investment in Votorantim Metais S.A.			439.223		439.223
Related parties			171.054		171.054
Property			14.727		14.727
Other non-current assets			1.308		1.308
Reviews of estimates in cash flows related to asset retirement	22	23.174	7.661	23.174	7.661

The accompanying notes are an integral part of these parent company and consolidated financial statements.

Statement of value added
Years ended December 31
All amounts in thousands of Reais (A free translation of the original in Portuguese)

		Parent Company		Consolidated	
	Nota	2016	2015	2016	2015
Revenue					
Products sold and services performed		4.705.492	5.009.858	5.021.043	5.358.713
Other operating income, net		6.341	7.370	6.341	7.370
Provision for impairment of trade receivables	11 (c)	(21.238)	(1.630)	(20.137)	(2.731)
		4.690.595	5.015.598	5.007.247	5.363.352
Inputs acquired from third parties					
Raw materials and other production inputs		(2.987.869)	(2.639.403)	(2.995.398)	(2.739.632)
Materials, electric power, outsourced services and other		(233.978)	(207.906)	(246.233)	(219.127)
		(3.221.847)	(2.847.309)	(3.241.631)	(2.958.759)
Gross value added		1.468.748	2.168.289	1.765.616	2.404.593
Depreciation and amortization	17 e 18	(339.803)	(313.999)	(374.481)	(344.822)
Impairment of property, plant and equipment	28	(845.509)	(1.566)	(845.509)	(1.566)
Net value added generated		283.436	1.852.724	545.626	2.058.205
Value added received through transfer					
Equity in the results	16	193.834	117.338	67.178	42.479
Financial income and exchange gains		1.251.154	848.946	1.277.406	861.682
		1.444.988	966.284	1.344.584	904.161
Total value added to be distributed		1.728.424	2.819.008	1.890.210	2.962.366
Distribution of value added					
Personnel and charges	27				
Direct remuneration		320.625	345.394	328.015	352.820
Charges		188.486	180.375	191.923	184.261
Benefits		75.645	68.007	77.326	69.702
		584.756	593.776	597.264	606.783
Taxes and contributions					
Federal		453.330	567.229	551.785	658.562
State		219.039	252.610	223.952	262.965
Deferred taxes	20	(443.771)	(358.705)	(433.671)	(369.446)
		228.598	461.134	342.066	552.081
Third-party capital remuneration					
Financial expenses and exchange losses		1.097.296	2.140.314	1.131.734	2.178.563
Rentals		34.574	35.295	35.946	36.450
		1.131.870	2.175.609	1.167.680	2.215.013
Third-party capital remuneration					
Loss for the year		(216.800)	(411.511)	(216.800)	(411.511)
		(216.800)	(411.511)	(216.800)	(411.511)
Value added distributed		1.728.424	2.819.008	1.890.210	2.962.366

The accompanying notes are an integral part of these parent company and consolidated financial statements.

1 General information

Companhia Brasileira de Alumínio (the "Company" or "CBA") is a subsidiary of Votorantim S.A. ("VSA"), with its head office in São Paulo, State of São Paulo. It mainly extracts and processes bauxite ore in Brazil and produces and sells primary and processed aluminum in the Brazilian and foreign markets, through a wide range of products, such as ingots, billets, rods, plates, coils, tiles, sheets and extruded products. The Company also sells its power surplus in Brazil. Due to the merger of Votorantim Metais S.A. ("VMSA"), from July 2016 the Company began to have control of nickel and electrolytic cobalt operations.

The Company is self-sufficient in the production of bauxite, which it extracts from its own reserves located in Poços de Caldas, Itamarati de Minas and Mirai in Minas Gerais. The Company also has an interest in Mineração Rio do Norte S.A. (bauxite), in Trombetas, Pará, in Alunorte - Alumina do Norte S.A. (alumina), in Barcarena, Pará, in Metalex Ltda. (transformed), in Araçariguama, São Paulo, in Campos Novos Energia S.A. (generation of electric power) in Campos Novos, Santa Catarina and in Energética Barra Grande S.A (generation of electric power) in Anita Garibaldi, Santa Catarina.

The Company owns its own hydroelectric power plants and participates in consortia, enabling it to reduce the electrical power consumed during the primary alumina production process.

1.1 Main events that occurred in 2015 and 2016

(a) Capital decrease

On February 25, 2015, according to the minutes of the Extraordinary General Meeting, and pursuant to the re-ratification on May 10, 2015, the reduction in the Company's capital by R$ 1,208,003 was approved, and was completed in April 2015, 60 days after the date of publication of the minutes.

The consideration for this reduction will be paid to the parent company Votorantim S.A. as follows: (a) investment in Votorantim Metais S.A., at the carrying amount of R$ 439,223; (b) payment in legal tender amounting to R$ 585,408; (c) transfer of the balance of related parties' receivables amounting to R$ 171,054; (d) transfer of other non-current assets amounting to R$ 1,308; (e) properties amounting to R$ 11.006. The Company paid to the other individual shareholders the total amount of R$ 4.

On June 8, 2015, in accordance with the minutes of the Extraordinary General Meeting, the share capital was reduced by the amount of R$ 290,000. This reduction will be effective 60 days after the publication date of the meeting's minutes. The consideration for this reduction will be paid to the parent company Votorantim S.A. as follows: (a) payment in local currency, amounting to R$ 286,279; (b) transfer of property amounting to R$ 3,721.

(b) Nazca Participações Ltda. ("Nazca")

On March 31, 2016, the Company increased the capital of its investee, Nazca, amounting to R$ 24,321, by issuing 24,321,485 shares. The amount was paid on September 2016. The other partners of the investee waived the preemptive right to subscribe new shares.

With the Company's contribution, the previous participation of other investors was diluted, causing a loss due to the increase in the percentage share of R$ 24,119 recorded under "Other operating expenses, net" (Note 28) because the equity of the investee had been negative by R$ 24,119 prior to the capital increase.

On March 31, 2016, the Company acquired the residual interest of other investors amounting to R$ 640.01 Reais, represented by 76,994 shares of the investee. With the acquisition of the minority interest, the Company holds all the total shares.

All amounts in thousands of Reais unless otherwise stated

On September 1, 2016, the Company incorporated Nazca, aiming at simplifying the corporate structures of the Votorantim conglomerate, providing better management, reducing operating costs and focusing on the management of the business portfolio.

The following is the summary balance sheet of Nazca used for the merger:

	8/31/2016		8/31/2016
Assets		**Liabilities and equity**	
Current assets		Current liabilities	
Cash and cash equivalents	64	Trade payables	424
Other assets	24		
	88	Non-current liabilities	
		Provisions	5.532
Non-current assets		Related parties - CBA	5.699
Property, plant and equipment	381	Other liabilities	14.300
			25.531
		Total equity	(25.486)
Total assets	**469**	Total liabilities and equity	**469**

(c) Incorporation of Votorantim Metais S.A. ("VMSA")

In July 1st, 2016, the Company merged the net carrying amount, amounting to R$ 627,386, related to the equity of Votorantim Metais S.A. ("VMSA"), which was controlled by VSA. This corporate restructuring is part of a strategy defined by the industrial conglomerate, in which both the Company and VMSA take part, aiming to reduce administrative and finance costs as well as optimize the business Management. As a result of the merger, the Company had its capital increased in the same amount as the carrying amount.

The following is the summary balance sheet of VMSA used for the merger:

	6/30/2016		6/30/2016
Assets		**Liabilities and equity**	
Current assets		Current liabilities	
Cash and cash equivalents	47.058	Borrowing	20.444
Financial investments	82.395	Trade payables	42.997
Trade receivables	28.974	Salaries and social charges	30.117
Inventory	36.889	Taxes payable	2.461
Taxes recoverable	203.202	Dividends payable	79
Dividends receivable	3.203	Other liabilities	11.615
Other assets	7.158		107.713
	408.879		
Non-current assets		Non-current liabilities	
Long-term receivables		Borrowing	61.828
Related parties	359.726	Related parties	1.323.686
Judicial deposits	25.538	Provision	206.036
Taxes recoverable	498.289	Other liabilities	29.220
Other assets	5.679		1.620.770
	889.232		
		Total liabilities	1.728.483
Investments (i)	151.511		
Property, plant and equipment	725.987		
Intangible assets	180.260		
	1.057.758	Total equity	627.386
Total assets	**2.355.869**	Total liabilities and equity	**2.355.869**

(i) Investment in Campos Novos Energia S.A. ("Enercan") including goodwill in the amount of R$ 23,580.

(d) Investment acquisition MSDC Participações S.A.

On September 13, 2016, the Company acquired from VSA all of the preferred shares (666,668) and common shares (333,334) of the company MSDC Participações S.A. at the price of R$ 999 calculated based on the stockholders' equity on September 12, 2016.

MSDC's corporate purpose is to participate in other companies, as a partner and shareholder in consortiums, associations and the wholesale electricity trade.

(e) Investment acquisition Pollarix S.A.

On December 22, 2016, the Company acquired the totality of preferred shares (400) and ordinary shares from Pollarix S.A. by the amount of R$1,600.00.

MSDC's corporate purpose is to participate in other companies, as a partner and shareholder in consortiums, associations and the wholesale electricity trade.

(f) Provision for impairment of assets

In 2016, the Company registered a provision for impairment of fixed and intangible assets at the Nickel cash generating unit “CGU”, in the amounts of R$ 671,824 (Note 17(a)) and R$ 173,685 (Note 18 (a)), respectively, totaling an impairment of R$ 845,509 (Note 18 (c)), registered in “Other operating expenses, net” (Note 28).

2 Presentation of the parent company and consolidated financial statements

2.1 Basis of presentation

(a) Financial statements

The financial statements have been prepared in accordance with accounting practices adopted in Brazil effective up to December 31, 2016 , including the pronouncements issued by the Brazilian Accounting Pronouncements Committee (“CPC”), as well as according to the International Financial Reporting Standards (“IFRS”) issued by the International Accounting Standards Board (“IASB”) and their interpretations (“IFRIC”), and show all relevant information pertinent to interim financial statements, which is consistent with that used by the Management in carrying out its duties.

The Company voluntarily discloses its consolidated statement of value added, according to the accounting practices adopted in Brazil, applicable to public companies and presented as an integral part of these financial statements. To international practice, this statement is presented as additional information.

The preparation of consolidated financial statements considered the historical cost basis, which in the case of certain financial assets and liabilities, including derivative instruments, is adjusted to reflect the fair value measurement.

The financial statements require the use of certain critical accounting estimates. It also requires Management to exercise judgment in the process of applying the Company’s accounting policies. The areas involving a higher degree of judgment or complexity or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 4.

All amounts in thousands of Reais unless otherwise stated

(a) Confirming payable

The transactions that were originally presented in the balance sheet in the "Trade payables" account were reclassified to the specific item of current liabilities "Confirming payable" in accordance with Ofício Circular CVM (IN 01/2016) disclosed on February 18, 2016.

The comparative balance on December 31, 2015 was reclassified for the purpose of an improved presentation and comparison with the period ended December 31, 2016.

						12/31/2015
			Parent company			Consolidated
Type	As prior presented	Restatement	Restated	As prior presented	Restatement	Restated
Trade payables	290.004	(48.067)	241.937	322.895	(48.067)	274.828
Confirming payable		48.067	48.067		48.067	48.067
	290.004		290.004	322.895		322.895

(b) Approval of the financial statements

The Board of Directors approved these consolidated financial statements for issue on February 16, 2017.

2.2 Consolidation

The Company consolidates all the entities in which it holds control, that is, when it is exposed or it is entitled to variable returns from its engagement with the investees and also to direct the meaningful activities of the investees. The controlled companies included in the consolidation are described on Note 2.2 (c).

(a) Subsidiaries

Subsidiaries are fully consolidated from the date on which control is transferred to the Company.

Transactions, balances and unrealized gains on transactions between Group companies are eliminated. Unrealized losses are also eliminated, unless the transaction provides evidence of impairment of the asset transferred. Accounting policies of acquired subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Company.

(b) Associates and joint arrangements

Joint operations are accounted for in the financial statements in order to represent the Company's contractual rights and obligations. Therefore, the assets, liabilities, revenues and expenses related to its interests in joint operations are individually accounted for in its financial statements.

Investments in associates and joint ventures are accounted for using the equity method and are initially recognized at cost. The Company's investment in associates and joint ventures includes goodwill identified on acquisition, net of any accumulated impairment loss.

Dilution gains and losses on investments in associates and joint ventures are recognized in the statement of income.

All amounts in thousands of Reais unless otherwise stated

(c) Main companies included in the consolidated financial statements

	Ownership interest %			
	2016	2015	Headquarters	Main activities
Campos Novos Energia S.A.	44,76	33,14	Santa Catarina - Brazil	Electricity generation
Energética Barra Grande S.A.	15,00	15,00	Rio Grande do Sul - Brazil	Electricity generation
Metalex Ltda.	100,00	100,00	São Paulo - Brazil	Production of aluminum and its alloys in primary forms
MSDC Participações S.A.	100,00		São Paulo - Brazil	Participation in energy generation companies
Pollarix S.A.	100,00		São Paulo - Brazil	Participation in energy generation companies
Exclusive financial investment funds				
Investments fund Pentágono CBA Multimercado - Crédito Privado	100,00		Brazil	Management of financial resources

2.3 Foreign currency translation

(a) Functional and presentation currency of the financial statements

The functional currency and presentation of the Company is the Brazilian Real (“R$”, “Real” or “Reais”).

(b) Transactions and balances

Foreign currency transactions are translated into Reais using the exchange rates prevailing at the dates of the transactions or the dates of valuation when items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognized in the statement of income, except when deferred in equity as operational hedges.

2.4 Cash and cash equivalents

Cash and cash equivalents include cash on hand, deposits with banks and other short-term highly liquid investments with original maturities of three months or less, which are readily convertible into a known amount of cash and subject to immaterial risk of change in value.

2.5 Financial assets

2.5.1 Classification, recognition and measurement

The Company and its subsidiaries classify their financial assets depending on the purpose for which the financial assets were acquired. Management determines the classification of financial assets upon initial recognition, in the following categories:

(a) Financial instruments at fair value through profit or loss

These are financial assets held for active and frequent trading. These assets are measured at their fair value, and the changes are recognized in the statement of income for the year.

(b) Financial instrument – firm commitment

The Company is authorized to commercialize energy in both free and regulatory markets.

Part of these transactions is carried out under contracts that have been entered into and continue to be performed for the purpose of receiving or delivering energy for own use, according to the production demands of the Company and, therefore, do not meet the definition of a financial instrument.

Another portion of these transactions refers to the purchase and sale of surplus energy, not used in the Group’s production process and which is, therefore, sold in an active market and meets the definition of a financial instrument because such instruments are settled in energy readily convertible into cash. These contracts are accounted for as derivatives pursuant to IAS 39/CPC 38 and are recognized in the Company's balance sheet at fair value on the date the derivative is entered into and re-measured at fair value at the end of the reporting period.

The fair value of such derivative is estimated partly based on price quotations published in an active market, to the extent that observable market inputs exist, and partly by using valuation techniques, the inputs of which include data that is not based on or derived from |observable market inputs: (i) prices set in purchase and sale transactions, (ii) risk margin in the supply and (iii) market price projected in the availability period|. Whenever the fair value at the initial recognition of these contracts differs from the transaction price a fair value gain or a fair value loss arises.

(c) Held to maturity

Investments in non-derivative marketable securities, made by the Company with the ability and intention of being held to maturity, are classified as held to maturity investments and recorded at amortized cost. The Company assesses, at the balance sheet date, whether there is objective evidence that a financial asset or group of financial assets is impaired. If there is such evidence, a provision for the impairment of the asset is recorded.

(d) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are initially measured at fair value and subsequently at amortized cost using the effective interest method.

2.5.2 Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount presented in the balance sheet when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the Company or the counterparty.

2.5.3 Impairment of financial assets carried at amortized cost

The Company assesses at each balance sheet date whether there is objective evidence that a financial asset or group of financial assets is impaired.

An asset or a group of financial assets is deteriorated when its losses for impairment are incurred only if there is objective evidence of impairment as a result of one or more events that occurred after the initial asset recognition (a "loss event") and that event (or events) has an impact on the future cash flows estimated of the financial assets or group of financial assets that may be estimated reliably.

The amount of any impairment loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced and the amount of the loss is recognized in the statement of income.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized (such as an improvement in the debtor's credit rating), the reversal of the previously recorded loss is recognized in the statement of income.

2.6 Derivative financial instruments and hedging activities

Derivatives are initially recognized at fair value on the date a derivative contract is entered into and are subsequently re-measured at their fair value. The method of recognizing the resulting gain or loss depends on whether the derivative is designated as a hedging instrument, in the case of adoption of hedge accounting, and if so, the nature of the item being hedged. The Company adopts the hedge accounting procedure and designates certain derivatives as either:

(a) Cash flow hedge

With a view to ensuring a fixed operating margin in Reais for a portion of the production of the metal businesses, the subsidiaries enter into commodity forward contracts on sales of certain commodities combined with the sale of U.S. Dollar forward contracts. There is also a hedge of a period of interest, in which the equalization of the periods between purchase of concentrate and sale of the final product of non-integrated plants is sought, in order to mitigate the exposure. The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in equity within “Carrying value adjustments”. The gain or loss relating to the ineffective portion is recognized as other operating income (expenses). The amounts recognized in equity are recorded in the statement of income (in the same line item affected by the transaction originally hedged) upon the realization of the hedged exports and/or sales referenced to the London Metal Exchange (“LME”) prices.

(b) Fair value hedges

With the objective of maintaining the flow of operating revenue pegged to LME prices, the Company enters into hedging transactions that convert sales at fixed prices to floating prices in commercial transactions with customers interested in purchasing products at a fixed price. The Company adopts hedge accounting for the derivative instruments entered into for this purpose. Changes in the fair values of derivatives that are designated and qualify as fair value hedges are recorded in “Operating income (expenses)”. The change in the fair value of the hedged item, in this case, is the firm commitment to make a fixed-price sale to the customer.

2.7 Trade receivables

Trade receivables are amounts due from customers for merchandise sold or services performed in the ordinary course of the Company's business.

Trade receivables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest rate method, less provision for impairment of trade receivables. Receivables from customers abroad are presented based on the exchange rates prevailing at the balance sheet date.

2.8 Inventories

Are stated at the lower of cost and net realizable value. Cost is determined using the weighted average cost method. The cost of finished goods and work in progress comprises raw materials, direct labor, other direct costs and related production overheads.

Net realizable value is the estimated selling price in the ordinary course of business, less conclusion costs and selling expenses. Imports in transit are stated at the accumulated cost of each import.

The Company, at least once a year, carries out a physical inventory. Inventories adjustments are recorded under “Cost of goods sold and services rendered”.

2.9 Current and deferred income tax and social contribution

The income tax and social contribution expense for the period comprises current and deferred taxes. Taxes on profit are recognized in the statement of income, except to the extent that they relate to items recognized directly in equity. In such cases, the taxes are also recognized in comprehensive income or directly in equity.

The current and deferred income tax and social contribution is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the entities operate and generate taxable income. Management periodically evaluates positions taken by the Company in income tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provision where appropriate on the basis of amounts expected to be paid to the tax authorities.

The current income tax and social contribution are presented net, separated by taxpaying entity, in liabilities when there are amounts payable, or in assets when the amounts prepaid exceed the total amount due on the reporting date.

Deferred tax assets are recognized only to the extent it is probable that future taxable profit will be available against which the temporary differences and/or tax losses can be utilized.

Deferred income tax assets and liabilities are presented net in the balance sheet when there is a legal right and the intention to offset them upon the calculation of current taxes, generally related to the same legal entity and the same taxation authority.

2.10 Judicial deposits

Judicial deposits are monetarily restated and presented net in “Provision”, when there is a corresponding provision. The deposits without corresponding provision are presented in non-current assets.

2.11 Property, plant and equipment

Property, plant and equipment are stated at their historical cost of acquisition or construction, less accumulated depreciation. Historical cost also includes finance costs related to the acquisition or construction of qualifying assets.

Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with these costs will flow to the Company and they can be measured reliably. The carrying amount of the replaced items or parts is derecognized.

All other repairs and maintenance are charged to the statement of income during the financial period in which they are incurred. The cost of major refurbishments is included in the carrying value of the asset when future economic benefits exceed the performance initially expected for the existing asset. Refurbishment expenses are depreciated over the remaining useful life of the related asset.

Land is not depreciated. Depreciation of other assets is calculated using the straight-line method to reduce their cost to their residual values over their estimated useful lives, as mentioned in Note 17.

An asset's carrying amount is written down immediately to its recoverable amount when the asset's carrying amount is greater than its estimated recoverable amount, in accordance with the criteria adopted by the Company in order to determine the recoverable amount (Nota 2.13).

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognized within “Other operating income, net” in the statement of income.

2.12 Intangible assets

(a) Goodwill

Goodwill represents the excess of the cost of an acquisition over the net fair value of assets and liabilities of the acquired entity. Goodwill on acquisitions of subsidiaries is recorded as "Intangible assets" in the consolidated financial statements. Goodwill is tested annually for impairment and carried at cost less accumulated impairment losses. Impairment losses on goodwill are not reversed. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold.

Goodwill is allocated to CGUs for the purpose of impairment testing. The allocation is made to those CGUs or groups of CGUs that are expected to benefit from the business combination in which the goodwill arose.

(b) Rights over natural resources

Costs for the acquisition of rights to explore and develop mineral properties and to explore wind resources are capitalized and amortized using the straight-line method over their useful lives, or, when applicable, based on the depletion of the mines in question.

Once the mine or wind farm is operational, these costs are amortized and considered a cost of production.

Depletion of mineral resources and wind farms is calculated based on extraction and utilization, respectively, taking into consideration their estimated productive lives.

(c) Computer software

Computer software licenses and development costs directly attributable to software are recorded as intangible assets. These costs are amortized over the estimated useful life of the software (three to five years).

Costs associated with maintaining computer software programs are recognized as an expense as incurred.

(d) Use of public assets

This represents the amounts established in the concession contracts regarding the rights to hydroelectric power generation (onerous concession) under Use of Public Assets agreements.

These transactions are accounted for at the time when the operating permit is awarded, regardless of the disbursement schedule established in the contract. Upon inception, this liability (obligation) and intangible asset (concession right) correspond to the total amount of the future obligations discounted to their present value.

The amortization of the intangible asset is calculated on a straight-line basis over the period of the authorization to use the public asset. The financial liability is updated by the effective interest method and reduced by the payments contracted.

2.13 Impairment of non-financial assets

Assets that have an indefinite useful life, for example goodwill, are not subject to amortization and are tested annually for impairment.

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized when the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and its value-in-use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (CGUs). Non-financial assets other than goodwill that are adjusted due to impairment are subsequently reviewed for possible reversal of the impairment at the balance sheet date.

2.14 Costs with mineral research

Costs with mineral studies and research are considered as operating expenses until the economic viability of the mineral exploration of a specific mineral deposit is effectively proven. From this evidence, the expenses incurred begin to be capitalized as cost of mine development.

2.15 Trade payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business. Trade payables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest rate method.

2.16 Borrowings

Borrowings are initially recognized at fair value, net of transaction costs incurred, and subsequently carried at amortized cost. Any difference between the proceeds (net of transaction costs) and the total amount payable is recognized in the statement of income over the period of the borrowings using the effective interest rate method.

Borrowing costs directly related to the acquisition, construction or production of a qualifying asset that requires a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of that asset when it is probable that future economic benefits associated with the item will flow to the Company and costs can be measured reliably. The other borrowing costs are recognized as finance costs in the period in which they are incurred.

2.17 Provision

(a) Provision for tax, civil, labor, environmental and other legal claims

Provision for tax, civil, labor, environmental and other legal claims is recognized when: (i) the Company has a present legal or constructive obligation as a result of past events, (ii) it is probable that an outflow of resources will be required to settle the obligation, and (iii) the amount can be reliably estimated. Provision does not include future operating losses.

The provision is measured at the present value of the expenditure expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in provision due to time elapsing is recognized as interest expense.

(b) Asset retirement obligations

Expenditure relating to mine retirement is recorded as asset retirement obligations. These obligations consist mainly of costs associated with the termination of activities. The asset retirement cost, equivalent to the present value of the obligation (liability), is capitalized as part of the carrying amount of the asset, which is depreciated over its useful life. These liabilities are recorded as provision.

2.18 Adjustment of assets and liabilities to present value

When material, assets and liabilities are adjusted to present value. The present value is calculated based on the applicable effective interest rate. This rate is compatible with the nature, term and risks of similar transactions under market conditions.

2.19 Employee benefits

(a) Pension obligations

The Company participates in pension plans managed by a private pension entity, which provide post-employment benefits for its employees. The Company is a sponsor of a defined contribution benefit plan. A defined contribution plan is a pension plan under which a company pays fixed contributions into a separate entity. The Company has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods.

(b) Employee profit-sharing

Provision is recorded to recognize the expenses related to employee profit-sharing. This provision is calculated based on qualitative and quantitative targets established by Management and recorded in the statement of income as “Employee benefits”.

2.20 Share capital

Share capital is represented exclusively by common shares classified as equity.

2.21 Revenue recognition

The Company and its subsidiaries recognize revenue when: (i) the amount of revenue can be reliably measured; (ii) it is probable that future economic benefits will flow to the entity; and (iii) specific criteria have been met for each of the activities of the Company and its subsidiaries.

(a) Sales of products and services

Revenue is shown net of value added tax, returns, rebates and discounts, after eliminating sales between the consolidated companies.

Revenue will not be deemed as reliably measured if all sale conditions are not resolved. The Company and its subsidiaries base their estimates on historical results, taking into consideration the type of customer, the type of transaction and the specifics of each arrangement.

(b) Sale of surplus energy

The electric energy purchase and sale transactions entered into by the Company and its subsidiaries for the purpose of the purchase of energy for own consumption or the supply of own-generation energy do not meet the definition of a financial instrument. The other energy purchase and sale transactions are recognized in the Company’s financial statements at their fair value as “Other operational income (expenses), net”.

(c) Interest income

Interest income arising from financial assets is recognized on an accrual basis, using the effective interest rate method.

2.22 Loss per share

Loss per share is calculated by dividing the loss attributable to the controlling stockholders by the weighted average number of common shares outstanding during the year.

2.23 Statement of cash flows

The consolidated statement of cash flows presents the changes in cash and cash equivalents during the year in relation to operating, investing and financing activities. Cash and cash equivalents include highly liquid financial investments.

Cash flows from operating activities are presented using the indirect method. The consolidated profit is adjusted by the effects of non-cash transactions, any deferrals or appropriations of past or future operating cash receipts or payments, and the effects of revenue or expenses related to cash flow from investing or financing activities.

All revenue and expenses arising from non-monetary operations attributable to investment or financing are eliminated. Interest received or paid is classified as cash flows from operations.

3 Changes in accounting policies and disclosures

(a) New standards not yet adopted

The following standards have been published and are mandatory for subsequent accounting periods, starting from January 1, 2018. There was no early adoption of these standards by the Company.

(i) CPC 48/IFRS 9 – "Financial instruments: Recognition and measurement"

This new standard addresses the classification, measurement and recognition of financial assets and financial liabilities. IFRS 9 has the ultimate objective of superseding IAS 39 – "Financial instruments: recognition and measurement". This standard is effective from January 1, 2018. Management is assessing the impact of the adoption of this standard.

(ii) CPC 47/IFRS 15 – "Revenue from contracts with customers"

This new standard prescribes the principles that an entity should apply to measure contract revenue and determine when it should be recognized. It will become effective from January 1, 2018, and supersedes IAS 11 – "Construction contracts" and IAS 18 – (CPC 30) "Revenue and related interpretations". Management is assessing the impact of the adoption of this standard.

(iii) IFRS 16 - "Leases"

This standard replaces IAS 17 – (CPC 06 (R1)) - "Leases" and corresponding interpretations. This standard is effective for years beginning on or after January 1, 2019. Management is assessing the impact of the adoption of this standard.

4 Critical accounting estimates and judgments

Based on assumptions, the Company makes estimates concerning the future. The resulting accounting estimates and judgments are continually reviewed and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

Accounting estimates will seldom match the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below:

(a) Fair value of derivatives and other financial instruments

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The Company uses judgment to select among a variety of methods and make assumptions that are mainly based on market conditions existing at the end of each reporting period (Note 6.1.1).

(b) Asset retirement obligations

The Company recognizes an obligation based on the fair value of the asset retirement operations in the period in which they occur, against the respective intangible asset. The Company considers the accounting estimates related to the recovery of degraded areas and the costs to close a mine as a critical accounting practice since it involves significant provision amounts and these estimates involve various assumptions such as interest rates, inflation and the useful life of the asset, considering the current depletion stage, the costs involved and the dates established for the depletion of each mine. These estimates are reviewed annually by the Company (Note 17).

(c) Deferred income tax and social contribution

The Company is subject to income taxes in all countries in which it operates. Provision for income tax is calculated individually by each entity based on the tax rates and rules effective at the entity's location.
The Company also recognizes liabilities for anticipated tax audit issues based on estimates of whether additional taxes will be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will have an impact on the current and deferred tax assets and liabilities in the period in which the determination is made (Note 20).

(d) Non- current assets and review of the useful lives of property, plant and equipment and intangible assets

The Company and its subsidiaries review the assets used in their activities for possible impairment whenever events or changes in circumstances indicate that the carrying value of an asset or group of assets may not be recoverable on the basis of undiscounted future cash flow. If the carrying amount of these assets exceeds their recoverable amount, the net value and useful life are adjusted to reflect the new thresholds.

(e) Provision for tax, civil, labor and other legal claims

The Company is party to tax, civil, labor and other legal claims in progress at different court levels.
Provision against potentially unfavorable outcomes of litigation in progress is established and updated based on Management evaluation, as supported by external legal counsel, and requires a high level of judgment regarding the matters involved (Note 22).

(f) Impairment of goodwill and investments

The Company annually tests whether goodwill has suffered any impairment. The recoverable amounts of CGUs have been determined based on value-in-use calculations, based on the discounted cash flow method. The recoverable amount is sensitive to the discount rate used in the discounted cash flow as well as to expected future cash receipts and the growth rate used for extrapolation purposes.

For determining the recoverable amounts of its investments, the Company uses criteria similar to those used for impairment testing of goodwill (Note 18 (c)).

(g) Use of public assets

The amount is originally recognized as a financial liability (obligation) and as an intangible asset (the right to use a public asset) which corresponds to the amount of the total annual charges over the period of the agreement discounted to present value (the present value of the future payment cash flows) (Note 18 and 23).

(h) Recognition of estimated loss for doubtful accounts

The estimated loss for doubtful accounts is recognized in an amount considered sufficient to cover probable losses on its realization. The Company's accounting policy for establishing the estimated loss requires that all invoices be individually reviewed by the legal, collection and credit departments, in order to determine the amount of the probable expected losses.

5 Social and environmental risk Management

The Company and its subsidiaries operate in various segments and consequently, its activities are subject to several Brazilian and international environmental laws, regulations, treaties and conventions, including those that regulate the discharge of materials into the environment, which establish the removal and cleaning of the contaminated environment, and those relating to environmental protection. Violations of the environmental regulations in force expose the violator(s) to significant fines and monetary penalties, and may require technical measures or investments to ensure compliance with the mandatory emissions levels.

The Company and its subsidiaries carry out periodic studies to identify any potentially affected areas and records, based on the best estimates of costs, the amounts expected to be disbursed for the investigation, treatment and cleaning of the potentially affected areas.

The Company and its subsidiaries believe they are in compliance with all of the applicable environmental standards in the countries in which they operate.

6 Financial risk Management

6.1 Financial risk factors

The activities of the Company and its subsidiaries expose them to a variety of financial risks, namely: (a) market risk (including currency, commodity price and interest rate risk), (b) credit risk and (c) liquidity risk.
A significant portion of the products sold by the Company and its subsidiaries, such as aluminum, nickel and zinc are commodities, with prices pegged to international indexes and denominated in U S Dollars. Their costs, however, are mainly denominated in Reais, and therefore, there is a mismatch of currencies between revenues and costs. Additionally, the Company and its subsidiaries have debts linked to different indexes and currencies, which may have an impact on their cash flow.

In order to mitigate the various effects of each market risk factor, the Company and its subsidiaries follow a Market Risk Management Policy, approved by the Finance Committee, with the objective of establishing governance and the overall guidelines of the process of managing these risks, as well as the metrics for their measurement and monitoring.

All amounts in thousands of Reais unless otherwise stated

The proposals submitted to comply with the policies are discussed and approved by the Finance Committee, according to the governance structure described in the Financial Risks Management Policy.

The following financial instruments may be taken out in order to mitigate and manage risk: conventional swaps, call options, put options, collars, currency futures contracts and Non-Deliverable Forward contracts. Strategies that include simultaneous purchases and sales of options are authorized only when they do not result in a net short position in volatility of the underlying asset. The Company does not enter into transactions involving financial instruments for speculative purposes.

(a) Market risk

(i) Foreign exchange risk

The Foreign Exchange Exposure Management Policy highlights that the purpose of derivative transactions is to reduce cash flow volatility, hedge against foreign exchange exposure, and avoid the mismatch between Company currencies.

The proposals for contracting of hedges are prepared by the Management and are based on the projected exchange exposure up to the end of the year subsequent to the reporting date. Additionally, hedging programs may be entered into in order to hedge the Company's cash flow.

Since the Brazilian Real is the Company's functional currency, market risk Management is focused on protecting cash flow in this currency and ensuring the Company's ability to settle its financial obligations and maintain adequate liquidity and indebtedness levels, as defined by Management.

		Parent company		Consolidated	
	Note	2016	2015	2016	2015
Assets in foreign currency					
Cash and cash equivalents	9	43.727	68.560	43.727	68.560
Derivative financial instruments	6.1.1 (a)	64.706	47.889	64.706	47.889
Trade receivables	11 (b)	37.338	137.446	37.338	137.446
		145.771	253.895	145.771	253.895
Liabilities in foreign currency					
Borrowing	19	2.122.313	2.561.473	2.136.659	2.583.781
Derivative financial instruments	6.1.1 (a)	17.546	52.631	17.546	52.631
Trade payables		50.110	32.739	50.110	32.739
Related parties		1.552.692	338.312	1.552.692	338.312
		3.742.661	2.985.155	3.757.007	3.007.463
Net exposure (net assets (liabilities))		(3.596.890)	(2.731.260)	(3.611.236)	(2.753.568)

(ii) Cash flow and fair value interest rate risk

The Company's interest rate risk arises from long-term borrowing. Borrowing at variable rates exposes the Company to cash flow interest rate risk. Borrowing at fixed rates exposes the Company to fair value interest rate risk.

The Interest Rate Exposure Management Policy establishes guidelines and rules for mitigating risk of fluctuations in interest rates that have an impact on the cash flow of the Company and its business units. Based on the exposure to each interest rate index (mainly the Interbank Deposit Certificate ("CDI"), London Interbank Offered Rate ("LIBOR") and Long-Term Interest Rate ("TJLP")), the Finance Committee approves proposals for entering into hedge transactions.

(iii) Commodity price risk

The Commodity Price Exposure Management Policy establishes guidelines to mitigate the risk of fluctuations in commodity prices that have an impact on the cash flow of the Company's operating subsidiaries.

The exposure to each commodity price is based on monthly projections of production, purchases of inputs and the maturities of the related hedges. Hedge transactions are classified into the following categories:

(iii.1) Fixed-price commercial transactions - hedge transactions that switch, from fixed to floating, the price contracted in commercial transactions with customers interested in purchasing products at a fixed price;;

(iii.2) Hedges for quotation periods - hedges that set a price for the different quotation periods between the purchases of certain inputs (metal concentrate) and the sale of products arising from the processing of these inputs;

(iii.3) Hedges for operating margin hedges intended to set the operating margin for a portion of the production of certain operating subsidiaries.

(b) Credit risk

Derivative financial instruments, time deposits, bank deposit certificates and repurchase agreements backed by debentures and federal government securities create exposure to counterparty and issuer credit risk. The Company adopts the policy of working with issuers that have, at a minimum, been assessed by two of the following three rating agencies: Fitch, Moody's or Standard & Poor's ("S&P"). The minimum rating required for the counterparties is "A+" (Brazilian scale) or "BBB-" (international scale), or equivalent. For financial assets where issuers do not meet the minimum credit risk ratings, criteria proposed by the Finance Committee are applied as an alternative.

The credit quality of financial assets is disclosed in Note 8. The ratings disclosed in this Note always represent the most conservative ratings of the agencies in question.

The pre-settlement risk methodology is used to assess counterparty risk on derivatives transactions, determining (via Monte Carlo simulations) the likelihood of a counterparty not honoring the financial commitments defined by the contract. The use of this methodology has been approved by the Finance Committee.

The Company performs initial analyses of customer credit and, when necessary, guarantees deemed or letters of credit are obtained to safeguard the Company's interests. Additionally, most of the export sales to the US, Europe and Asia are collateralized by letters of credit and credit insurance.

(c) Liquidity risk

Liquidity risk is managed in accordance with the Liquidity and Indebtedness Management Policy, aimed at ensuring that there are sufficient net funds to meet the Company's financial commitments within its maturity schedules, with no additional costs. The main method for the measurement and monitoring of liquidity is cash flow forecasting, with a minimum projection period of 12 months from the reference date.

Liquidity and financial indebtedness Management adopts comparable metrics provided by reputable global credit rating agencies for a stable BBB credit risk or equivalent.

All amounts in thousands of Reais unless otherwise stated

The table below separates the Company's non-derivative financial liabilities and the main derivative financial assets and liabilities to be settled by the Company by maturity (the remaining period from the balance sheet up to the contractual maturity date). Derivative financial liabilities are included if their contractual maturities are essential to understanding the timing of cash flows. The amounts disclosed in the table represent the undiscounted cash flows, which include interest to be incurred, and, accordingly, do not reconcile directly with the amounts in the balance sheet for borrowing and the Use of Public Assets.

						Consolidated
	Up to 1 year	1 to 3 years	3 to 5 years	5 to 10 years	Over 10 years	Total
At December 31, 2016						
Borrowing	452.328	602.215	1.152.770	1.603.100		3.810.413
Derivative financial instruments	18.837	177				19.014
Trade payables	328.563					328.563
Confirming payable	1.115					1.115
Related parties	346.436	1.444.137	58.945	634.461		2.483.979
Use of public assets	42.236	92.399	104.147	320.480	997.469	1.556.730
Dividends payable	10.371					10.371
	1.199.886	2.138.928	1.315.862	2.558.041	997.469	8.210.185
At December 31, 2015						
Borrowing	486.417	729.357	429.756	2.949.518	13.174	4.608.222
Derivative financial instruments	50.348	2.283				52.631
Trade payables	274.828					274.828
Confirming payable	48.067					48.067
Related parties	232.019	460.938	256.552	356.957		1.306.466
Use of public assets	39.296	86.200	97.162	299.470	1.059.025	1.581.154
Dividends payable	10.265					10.265
	1.141.240	1.278.778	783.470	3.605.945	1.072.199	7.881.633

6.1.1 Derivatives contracted

All derivative transactions were carried out in the over-the-counter market.

Hedging program for sales of aluminum at a fixed price - hedging transactions that convert sales at fixed prices to floating prices in commercial transactions with customers interested in purchasing products at fixed prices. The purpose of this strategy is to maintain the revenue flow of the business units linked to the LME prices. These operations usually relate to purchases of aluminum for future settlement in the over-the-counter market.

Hedging program for mismatches of quotation periods - hedges of the different quotation periods between the purchases of certain inputs (metal concentrate) and sales of products arising from the processing of these inputs. These operations usually relate to purchases and sales of aluminum for future trading in the over-the-counter market.

Hedging program for the operating margins of metals - derivatives contracted to reduce the volatility of the cash flows from zinc, nickel and aluminum operations. With a view to ensuring a fixed operating margin in Reais for a portion of the production of metals, the mitigation of risks is carried out through the sale of forward contracts for each commodity, combined with the sale of US Dollar forward contracts.

Hedging program for foreign exchange exposure - hedging instruments entered into to adjust the foreign exchange exposure according to the limits defined by the Finance Committee. The mitigation of these risks is carried out through the purchase of US Dollar and Euro forward contracts.

Instruments to hedge Real-denominated debts - derivative financial instruments contracted to transform the fixed rates of Real-denominated debts into CDI floating rates. Risk mitigation is carried out by means of swaps. Changes in fair value are recognized in the statement of income.

All amounts in thousands of Reais unless otherwise stated

(a) Effects of the derivative financial instruments in the balance sheet

The table below summarizes the derivative financial instruments and the underlying hedged items:

											Parent company and consolidated
	Principal amount								Fair value	2016	2015
Program	2016	2015	Unit	Purchase/ Sale	Average period (days)	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Total (net between assets and liabilities)	Total (net between assets and liabilities)
Hedging for mismatches of quotation periods											
Aluminum forward	1.497	2.850	metric ton	P/S	19	18		(8)		10	(24)
Hedging for the operating margin of metals											
Aluminum forward	230.165	47.950	metric ton	S	194	3.902	648	(16.930)	(128)	(12.508)	47.795
US Dollar forward	387.544	84.652	USD	S	196	58.221	1.916	(431)	(49)	59.657	(45.590)
						62.123	2.564	(17.361)	(177)	47.149	2.205
Hedging for debts											
Fixed rate in Reais vs. CDI floating rate swaps	128.000	230.000	BRL		252		1.381	(1.468)		(87)	(6.923)
						62.141	3.945	(18.837)	(177)	47.072	(4.742)
Hedge accounting - cash flow hedge											
Protection of Metal's operational result											
Aluminum forward	225.000	40.050	ton	S	199	3.902	648	(14.991)	(128)	(10.570)	37.160
US Dollar forward	379.200	70.124	USD	S	200	52.617	1.916	(431)	(49)	54.054	(37.975)
						56.519	2.564	(15.422)	(177)	43.484	(815)

All amounts in thousands of Reais unless otherwise stated

(b) Maturity profile

	Parent company and consolidated		
	Fair value per maturity		
Program	**2017**	**2018**	**Total**
Sale of aluminum at fixed rate			
Aluminum forward	10		10
Hedging for the operating margin of metals			
Aluminum forward	(1.939)		(1.939)
US Dollar forward	5.604		5.604
	3.665		3.665
Hedging for debts			
Fixed rate in Reais vs. CDI floating rate swaps	(1.468)	1.381	(87)
	2.207	1.381	3.588
Hedge accounting - cash flow hedge			
Aluminum forward	(11.090)	520	(10.570)
US Dollar forward	52.187	1.867	54.054
	41.097	2.387	43.484
	43.304	3.768	47.072

All amounts in thousands of Reais unless otherwise stated

(c) Effect of derivative financial instruments on financial results and cash flow

Parent company and consolidated

Program	Unit	Principal amount	Fair value adjustment	Realized gain (loss)	Total	Principal amount	Fair value adjustment	Realized gain (loss)	Total
					2016				2015
Sale of aluminum at fixed rate									
Aluminum forward	metric ton							(1.711)	(1.711)
Hedging for the operating margin of metals									
Aluminum forward	metric ton	1.497	10	(2.863)	(2.853)	2.850	(24)	3.623	3.599
Hedging for the operating margin of metals									
Aluminum forward	metric ton	230.165	(12.508)		(12.508)	47.950	47.795	57.234	105.029
US Dollar forward	USD	387.544	59.657		59.657	84.652	(45.590)	(70.275)	(115.865)
			47.149		47.149		2.205	(13.041)	(10.836)
Hedging for debts									
Fixed rate in Reais vs. CDI floating rate swaps	BRL	128.000	(87)	(3.363)	(3.450)	230.000	(6.923)	(4.574)	(11.497)
			47.072	(6.226)	40.846		(4.742)	(15.703)	(20.445)

All amounts in thousands of Reais unless otherwise stated

6.1.2 Fair value estimation

The main financial assets and liabilities are described below, as well as their valuation assumptions:

Financial assets - considering the nature and the terms, the amounts recorded approximate their realizable values.

Financial liabilities - these instruments are subject to the usual market interest rates. The market value was based on the present value of the expected future cash disbursements, at interest rates currently available for the issue of debts with similar maturities and terms.

The Company discloses fair value measurements according to their level in the following fair value measurement hierarchy:

- Prices quoted (unadjusted) in active markets for identical assets and liabilities (level 1).
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (level 2).
- Inputs for the assets or liabilities that are not based on observable market data (that is, unobservable inputs) (level 3).

As at December 31, 2016 and 2015, the financial assets and liabilities carried at fair value were classified as levels 1 and 2 in the fair value measurement hierarchy.

			Parent company
	Fair value measure basead on		2016
	Prices quoted in an active market	Valuation technique supported by prices	
	(Level 1)	(Level 2)	Fair value
Assets			
Cash and cash equivalents	44.076	32.529	76.605
Financial investments	698.130	68.246	766.376
Derivative financial instruments		66.086	66.086
Financial instruments - firm commitment		452.236	452.236
	742.206	619.097	1.361.303
Liabilities			
Borrowing	2.029.649	665.442	2.695.091
Derivative financial instruments		19.014	19.014
	2.029.649	684.456	2.714.105

All amounts in thousands of Reais unless otherwise stated

	Fair value measure based on		Parent company 2015
	Prices quoted in an active market (Level 1)	Valuation technique supported by prices (Level 2)	Fair value
Assets			
Cash and cash equivalents	69.560		69.560
Financial investments	523.321	291.394	814.715
Derivative financial instruments		47.889	47.889
Financial instruments - firm commitment		583.803	583.803
	592.881	923.086	1.515.967
Liabilities			
Borrowing	2.226.684	655.004	2.881.688
Derivative financial instruments		52.631	52.631
	2.226.684	707.635	2.934.319

	Fair value measure based on		Consolidated 2016
	Prices quoted in an active market (Level 1)	Valuation technique supported by prices (Level 2)	Fair value
Assets			
Cash and cash equivalents	44.511	32.529	77.040
Financial investments	721.130	235.004	956.134
Derivative financial instruments		66.086	66.086
Financial instruments - firm commitment		452.236	452.236
	765.641	785.855	1.551.496
Liabilities			
Borrowing	2.029.649	800.818	2.830.467
Derivative financial instruments		19.014	19.014
	2.029.649	819.832	2.849.481

	Fair value measure based on		Consolidated 2015
	Prices quoted in an active market (Level 1)	Valuation technique supported by prices (Level 2)	Fair value
Assets			
Cash and cash equivalents	70.213		70.213
Financial investments	537.474	379.447	916.921
Derivative financial instruments		47.889	47.889
Financial instruments - firm commitment		583.803	583.803
	607.687	1.011.139	1.618.826
Liabilities			
Borrowing	2.226.684	825.352	3.052.036
Derivative financial instruments		52.631	52.631
	2.226.684	877.983	3.104.667

All amounts in thousands of Reais unless otherwise stated

6.1.3 Sensitivity analysis

Presented below is a sensitivity analysis of the main risk factors that affect the pricing of the outstanding financial instruments relating to cash and cash equivalents, financial investments, borrowing, and derivative financial instruments. The main risk factors are exposure to the fluctuations of the US Dollar and Euro exchanges rates, LIBOR and CDI interest rates, US Dollar coupons and commodity prices. The scenarios for these factors were prepared using market and specialized sources, following the Company's systems of governance.

The scenarios at December 31, 2016, are described below:

Scenario I - is based on the market forward curves and quotations at December 31, 2016, and represents a probable scenario in Management's opinion as at March 31, 2017.

Scenario II - considers a stress factor of + / – 25% applied to the market forward curves and quotations as at December 31, 2016.

Scenario III - considers a stress factor of + / – 50% applied to the market forward curves and quotations as at December 31, 2016.

															Parent company and consolidated
					Impacts on profit (loss)						Impacts on comprehensive income (loss)				
					Scenario I		Scenarios II & III				Scenario I	Scenarios II & III			
Risk factors	Cash and cash equivalents	Borrowing	Derivative financial instruments	Unit	Impact on curves for 12/31/2016	Results of Scenario I	-25%	-50%	+25%	+50%	Results of Scenario I	-25%	-50%	+25%	+50%
Foreign exchange rate															
USD	43.727	2.136.659	387.544	USD	4,32%	(92.457)	557.740	1.115.481	(557.740)	(1.115.481)	(50.674)	292.554	585.109	(292.554)	(585.109)
Interest rate															
BRL - CDI	987.637	30.043	1.391.045	BRL	-99 bps	(9.418)	(29.287)	(58.532)	29.325	58.687	2.726	17.296	35.440	(16.508)	(32.284)
USD - LIBOR			396.953	USD	15 bps						(933)	1.683	3.373	(1.676)	(3.346)
US dollar coupon			387.544	USD	323 bps						(11.797)	(6.141)	(12.353)	6.073	12.078
Price - commodities															
Aluminum			231.662	ton	-6,62%	(1)	(4)	(7)	4	7	82.071	309.755	619.509	(309.755)	(619.509)
Firm commitment - Electric energy															
Purchase contract			(1.434.613)	BRL			17.825	34.946	(18.568)	(37.924)					
Sale contract			1.925.957	BRL			(15.957)	(31.295)	16.612	33.918					
Purchase and sale contract - fair value			452.237	BRL			(1.943)	(3.799)	2.034	4.164					

All amounts in thousands of Reais unless otherwise stated

6.1.4 Capital Management

The Company's objectives when managing capital are to safeguard its ability to continue as a going concern in order to consistently provide returns to stockholders and benefits for other stakeholders, as well as maintaining an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust its capital structure, the Company can make, or propose to the Board of Directors when their approval is required, adjustments to the amounts of dividends paid to stockholders, return capital to stockholders, issue new shares or sell assets.

7 Financial instruments by category

				Parent company
	Note	Loans and receivables	Assets held for trading	Total
December 31, 2016				
Assets as per balance sheet				
Cash and cash equivalents	9	76.605		76.605
Financial investments	10		766.376	766.376
Trade receivables	11	334.070		334.070
Financial instruments - firm commitment	14		452.236	452.236
Derivative financial instruments	6.1.1		66.086	66.086
Related parties	14	361.321		361.321
Dividends receivable	14	44.430		44.430
		816.426	1.284.698	2.101.124
December 31, 2015				
Assets as per balance sheet		494.502	1.446.407	1.940.909

				Parent company
	Note	Liabilities at fair value through profit or loss	Other financial liabilities	Total
December 31, 2016				
Liabilities as per balance sheet				
Borrowing	19		2.820.301	2.820.301
Trade payables			376.140	376.140
Confirming payable			1.115	1.115
Derivative financial instruments	6.1.1	19.014		19.014
Dividends payable	14		10.323	10.323
Related parties	14		2.318.002	2.318.002
		19.014	5.525.881	5.544.895
December 31, 2015				
Liabilities as per balance sheet		52.631	4.847.697	4.900.328

All amounts in thousands of Reais unless otherwise stated

				Consolidated
	Note	Loans and receivables	Assets held for trading	Total
December 31, 2016				
Assets as per balance sheet				
Cash and cash equivalents	9	77.040		77.040
Financial investments	10		956.134	956.134
Trade receivables	11	343.168		343.168
Financial instruments - firm commitment	14		452.236	452.236
Derivative financial instruments	6.1.1		66.086	66.086
Related parties	14	361.176		361.176
Dividends receivable	14	6.713		6.713
		788.097	1.474.456	2.262.553
December 31, 2015				
Assets as per balance sheet		537.582	1.548.613	2.086.195

				Consolidated
	Note	Liabilities at fair value through profit or loss	Other financial liabilities	Total
December 31, 2016				
Liabilities as per balance sheet				
Borrowing	19		2.950.525	2.950.525
Trade payables			328.563	328.563
Confirming payable			1.115	1.115
Derivative financial instruments	6.1.1	19.014		19.014
Dividends payable	14		10.371	10.371
Related parties	14		2.317.840	2.317.840
		19.014	5.608.414	5.627.428
December 31, 2015				
Liabilities as per balance sheet		52.631	5.028.980	5.081.611

All amounts in thousands of Reais unless otherwise stated

8 Credit quality of financial assets

The table below summarizes the credit quality of issuers and counterparties in transactions involving cash and cash equivalents, financial investments and derivatives:

	Parent company						Consolidated					
	2016			2015			2016			2015		
	Local rating	Global rating	Total	Local rating	Global rating	Total	Local rating	Global rating	Total	Local rating	Global rating	Total
Cash and cash equivalents												
AAA				113		113				114		114
AA+				868		868				1.520		1.520
AA				4		4				4		4
AA-	239		239	4		4	665		665	4		4
A+	32.554		32.554				32.554		32.554			
A-	6		6				6		6			
BB	7		7				15		15			
No rating (i)	72	43.727	43.799	11	68.560	68.571	73	43.727	43.800	11	68.560	68.571
	32.878	43.727	76.605	1.000	68.560	69.560	33.313	43.727	77.040	1.653	68.560	70.213
Financial investments												
AAA				557.044		557.044				596.681		596.681
AA+				117.123		117.123				172.429		172.429
AA				49.792		49.792				57.055		57.055
A+							47.822		47.822			
A-				33		33				33		33
AA-	756.181		756.181				875.848		875.848			
BB							22.270		22.270			
No rating (ii)	10.195		10.195	90.723		90.723	10.194		10.194	90.723		90.723
	766.376		766.376	814.715		814.715	956.134		956.134	916.921		916.921
Derivative financial instruments												
AA+				1.965		1.965				1.965		1.965
AA-	38.927		38.927				38.927		38.927			
A+	5.197	289	5.486		32.615	32.615	5.197	289	5.486		32.615	32.615
A		3.974	3.974		13.309	13.309		3.974	3.974		13.309	13.309
A-	1.380	16.319	17.699				1.380	16.319	17.699			
	45.504	20.582	66.086	1.965	45.924	47.889	45.504	20.582	66.086	1.965	45.924	47.889
	844.758	64.309	909.067	817.680	114.484	932.164	1.034.951	64.309	1.099.260	920.539	114.484	1.035.023

The local and global ratings were obtained from ratings agencies (Standard&Poor's, Moody's and Fitch). The Company considered the ratings of S&P and Fitch for presentation purposes.

(i) Refers mainly to amounts invested in an overseas bank that has no rating with rating agencies.

(ii) Refers mainly to the Credit Right Investments Fund ("FIDC") exclusive of the Votorantim Group that has no rating with rating agencies.

All amounts in thousands of Reais unless otherwise stated

9 Cash and cash equivalents

	Parent company		Consolidated	
	2016	2015	2016	2015
Local currency				
Cash and banks	349	1.000	784	1.653
Repurchase agreements	32.529		32.529	
	32.878	1.000	33.313	1.653
Foreign currency				
Cash and banks	43.727	68.560	43.727	68.560
	76.605	69.560	77.040	70.213

Cash and cash equivalents are highly liquid, readily convertible into a known amount of cash and have an insignificant risk of change in value if early redemption is requested. Investments in local currency comprise government and financial institution bonds, indexed to the interbank deposit rate. Investments in foreign currency are mainly composed of fixed income financial instruments (time deposits).

10 Financial investments

	Parent company		Consolidated	
	2016	2015	2016	2015
Held for trading				
Investment fund quotas (i)	731.308	763.463	157.351	800.561
Repurchase agreements - Federal securities			144.829	
Bank Deposit Certificate ("CDB")			132.168	48.498
Credit Rights Investment Fund ("FIDC")	24.982	34.897	24.982	34.897
Financial Treasury Bills ("LFT")	10.022	16.355	474.470	16.355
	766.312	814.715	933.800	900.311
Held to maturity				
Bank Deposit Certificate ("CDB")			22.270	16.610
Other	64		64	
	766.376	814.715	956.134	916.921
Current	766.312	814.715	933.800	900.311
Non-current	64		22.334	16.610
	766.376	814.715	956.134	916.921

The financial investments have, for the most part, immediate liquidity. Investments in local currency comprise government and financial institution bonds, indexed to the interbank deposit rate.

(i) The Company has investment fund quotas in an exclusive fund of Votorantim Group:

	Parent company		Consolidated	
	2016	2015	2016	2015
Financial investments				
Repurchase agreements - Federal securities	222.521	306.821	100.366	320.727
Financial Treasury Bills ("LFT")	465.587	200.145	1.465	200.392
Repurchase agreements	26.573	136.012	34.045	149.124
Credit Rights Investment Fund ("FIDC")	5	55.859	7	55.864
Bank Deposit Certificate ("CDB")	16.622	64.626	21.468	74.454
	731.308	763.463	157.351	800.561

(ii) In July, 2016, the fund “Fundo de Investimento Pentágono Multimercado – Crédito Privado – (“Pentágono”)” was split into two funds. The aim of this transaction was to split the assets between the shareholders Votorantim Cimentos S.A. (68.55%) and CBA (31.45%), respecting the percentage of ownership of each company in the total assets. As of that date, the fund was renamed “FI Pentágono CBA Multimercado – Crédito Privado” and the Company holds 100% of the quotas.

All amounts in thousands of Reais unless otherwise stated

11 Trade receivables

(a) Breakdown

	Parent company		Consolidated	
	2016	2015	2016	2015
Domestic	198.787	157.029	209.296	198.411
Foreign	37.226	135.126	37.226	135.126
Related parties (Note 14)	148.690	131.273	147.279	154.446
	384.703	423.428	393.801	487.983
Impairment of trade receivables	(50.633)	(26.936)	(50.633)	(28.037)
	334.070	396.492	343.168	459.946

(b) Breakdown by currency

	Parent company		Consolidated	
	2016	2015	2016	2015
Reais	296.732	259.046	305.830	322.500
US Dollar	37.338	137.446	37.338	137.446
	334.070	396.492	343.168	459.946

(c) Changes in estimated loss for doubtful accounts

	Parent company		Consolidated	
	2016	2015	2016	2015
At the beginning of the year	(26.936)	(27.869)	(28.037)	(27.869)
Additions net of reversals	(21.238)	(1.630)	(20.137)	(2.731)
VMSA incorporation	(2.459)		(2.459)	
Decrease in provision for impairment of trade receivables		2.563		2.563
At the end of the year	(50.633)	(26.936)	(50.633)	(28.037)

The constitution of the provision for the impairment of trade receivables was recorded in the income for the year. The values registered in the provision account are generally written off when deemed uncollectible.

(d) Aging of trade receivables

	Parent company		Consolidated	
	2016	2015	2016	2015
To fall due	323.828	387.106	332.360	449.601
Up to 3 months	1.433	6.978	2.293	7.066
From 3 to 6 months	3.437	2.305	3.437	2.216
Over 6 months	56.005	27.039	55.711	29.100
	384.703	423.428	393.801	487.983

All amounts in thousands of Reais unless otherwise stated

12 Inventory

(a) Breakdown

	Parent company		Consolidated	
	2016	2015	2016	2015
Finished products	190.534	176.093	192.003	177.835
Semi-finished products	292.422	249.576	293.221	250.759
Raw materials	38.337	25.207	65.284	44.920
Auxiliary and consumption materials	109.364	87.544	109.693	87.953
Imports in transit	5.485	6.499	5.485	6.499
Other	12	2.644	47	2.677
Provision for losses (i)	(61.239)	(38.141)	(61.239)	(38.141)
	574.915	509.422	604.494	532.502

The Company had no inventory pledged as collateral for any of its liabilities

(i) Mainly refers to the obsolescence of inventory the value of which has a limited expectation of realization.

(b) Changes in the provision for inventory losses

	Parent company and consolidated					
					2016	2015
	Finished products	Semi-finished products	Raw materials	Auxiliary materials	Total	Total
At the beginning of the year	(6.066)	(4.527)	(3.033)	(24.515)	(38.141)	(45.511)
Additions net of reversals	(5.073)	272	799	1.887	(2.115)	7.370
VMSA incorporation		(15.093)	(301)	(5.589)	(20.983)	
At the end of the year	(11.139)	(19.348)	(2.535)	(28.217)	(61.239)	(38.141)

13 Taxes recoverable

(a) Breakdown

	Parent company		Consolidated	
	2016	2015	2016	2015
Income tax and social contribution	412.780	26.222	413.354	26.236
Value-added Tax on Sales and Services (ICMS)	377.121	49.180	377.376	49.443
Social Contribution on Revenue (COFINS)	136.765	109.282	137.237	109.474
Corporate Income Tax (IRPJ)/Social Contribution on Net Income (CSLL) tax credit - Plano Verão	50.671	183.752	50.671	183.752
ICMS on property, plant and equipment	19.622	26.077	19.622	26.077
Social Integration Program (PIS)	26.480	24.911	26.583	24.953
Other	26.458	18.916	27.059	19.098
	1.049.897	438.340	1.051.902	439.033
Current	322.186	60.971	324.045	61.478
Non-current	727.711	377.369	727.857	377.555
	1.049.897	438.340	1.051.902	439.033

(i) On March 23, 2016, the Company obtained the approval of the tax credit habilitation application recognized by the court's final decision, concerning the recognition of the index applicable to the restatement of the financial statements of the base year 1989, for the purpose of calculating the basis of the calculation of Corporate Income Tax ("IRPJ") and CSLL – "Plano Verão". This credit is being compensated with tax debts of the company under the Management of the Internal Revenue Service of Brazil.

All amounts in thousands of Reais unless otherwise stated

(b) Changes in the taxes recoverable

	Consolidated			
	12/31/2016			
	At the beginning of the year	Compensation, net of additions	VMSA incorporation (Nota 1.1 (c))	At the end of the year
Income tax and social contribution	26.236	13.607	373.511	413.354
Value-added Tax on Sales and Services (ICMS)	49.443	52.625	275.308	377.376
Social Contribution on Revenue (COFINS)	109.474	(4.634)	32.397	137.237
Corporate Income Tax (IRPJ)/Social Contribution on Net Income (CSLL) tax credit - Plano Verão	183.752	(133.081)		50.671
ICMS on property, plant and equipment	26.077	(8.450)	1.995	19.622
Social Integration Program (PIS)	24.953	(4.292)	5.922	26.583
Other	19.098	(4.397)	12.358	27.059
	439.033	(88.622)	701.491	1.051.902
Current	61.478	59.365	203.202	324.045
Non-current	377.555	(147.987)	498.289	727.857
	439.033	(88.622)	701.491	1.051.902

All amounts in thousands of Reais unless otherwise stated

14 Related parties

(a) Parent company

	Trade receivables		Dividends receivable		Current and non-current assets		Trade payables		Current and non-current liabilities		Dividends payable		Statement of operations Purchase		Sales		Finance income and costs	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Parent company																				
Votorantim S.A. (i)	3.837				357.859		1.300	838	75.090		10.246	10.253						
Subsidiaries																		
BAESA - Energética Barra Grande S.A.			65				3.203		99	88			6.110					
ENERCAN - Campos Novos Energia S.A.			37.652	21.019			45.489						106.206					
Metalex Ltda.		1.601													90.086	140.569		
Associates																		
Mineração Rio do Norte S.A.			6.713	5.806														
Votener - Votorantim Comercializadora de Energia Ltda. (ii)	93.902	122.847			452.237	583.803	75.134	55.194	688.242	903.076			886.773	666.594	1.125.490	1.439.973	(90.625)	(61.534)
Votorantim Cimentos S.A.	214	777						257	3	3			1.082		1.388	2.701		
Votorantim Energia Ltda.	670				1.499	1.499							3.004	2.807				
Votorantim Finco GmbH (iii)									282.429								(3.486)	
Votorantim Geração de Energia													8.349					
Votorantim GmbH (v)	112	2.320							942.240	338.312			25.079	1.328			(15.447)	(7.303)
VM Holding S.A. (iv)									328.023								(4.288)	
Votorantim Metais S.A. (vi)		705						8.341		947						1.165		
Votorantim Metais Zinco S.A.	45.127	2.073			373		35.437		5				241	68	110.027	13.066		
Votorantim Siderurgia S.A.	2.749	261								226					2.488	4.288		
Others	2.079	689		22	1.589	104	46	129	1.871	384	77		1.274		1.390	2		2.731
	148.690	131.273	44.430	26.847	813.557	585.406	160.609	64.759	2.318.002	1.243.036	10.323	10.253	1.038.118	670.797	1.330.869	1.601.764	(113.846)	(66.106)
Current	148.690	131.273	44.430	26.847	161.020	144.721	160.609	64.759	221.019	222.749	10.323	10.253						
Non-current					652.537	440.685			2.096.983	1.020.287								
	148.690	131.273	44.430	26.847	813.557	585.406	160.609	64.759	2.318.002	1.243.036	10.323	10.253						

All amounts in thousands of Reais unless otherwise stated

(b) Consolidated

													Statement of operations					
	Trade receivables		Dividends receivable		Current and non-current assets		Trade payables		Current and non-current liabilities		Dividends payable		Purchase		Sales		Finance income and costs	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Parent company																		
Votorantim S.A. (i)	3.837				357.859		1.300	838	75.090		10.246	10.265			5			
Associates																		
Mineração Rio do Norte S.A.			6.713	5.806														
Votener - Votorantim Comercializadora de Energia Ltda. (ii)	93.902	133.847			452.237	583.803	75.134	55.194	688.242	903.076			886.773	687.589	1.125.490	1.493.659	(90.625)	(61.534)
Votorantim Cimentos S.A.	214	777						257	3	3			1.082		1.388	2.701		
Votorantim Energia Ltda.					1.499	1.499							3.004	2.807				
Votorantim Finco GmbH (iii)									282.429								(3.486)	
Votorantim Geração de Energia													8.349					
VM Holding S.A. (iv)									328.023								(4.288)	
Votorantim GmbH (v)	112	2.320							942.240	338.312			25.079	1.310			(15.447)	(7.303)
Votorantim Metais S.A. (vi)		6.043						8.439		947						15.882		
Votorantim Metais Zinco S.A.	45.127	10.441			373		35.437		5				241	68	110.027	36.434		
Votorantim Siderurgia S.A.	2.749	261								227					2.488	4.288		
Others	1.338	757		22	1.444	96	203	129	1.808	384	125		1.274		1.390	447		
	147.279	154.446	6.713	5.828	813.412	585.398	112.074	64.857	2.317.840	1.242.949	10.371	10.265	925.802	691.774	1.240.788	1.553.411	(113.846)	(68.837)
Current	147.279	154.446	6.713	5.828	161.020	144.721	112.074	64.857	220.857	222.662	10.371	10.265						
Non-current					652.392	440.677			2.096.983	1.020.287								
	147.279	154.446	6.713	5.828	813.412	585.398	112.074	64.857	2.317.840	1.242.949	10.371	10.265						

(i) Refers to the balance arising from the merger of VMSA, substantially related to the accounts receivable originating from the sale of deferred tax on tax losses. This tax was used by related parties to pay to Tax Recovery Programa ("REFIS").

(ii) Current and non-current assets relate to a financial instrument, consisting of a firm commitment for the sale of surplus energy. Current and non-current liabilities relate to the advance receipt, in 2014 and 2015, of the rights originating from the free ambient commercialization of electric energy contracts. The sales and purchases relate to sales of own and/or third parties' energy, where Votener acts as ultimate commercialization vehicle in the regulated market. Financial expenses relate to interest to appropriate the power supply sales credit assignment operation by December 2019, and interest is recognized *pro-rata* as income over the term of the contract.

(iii) Relates to prepayment transactions, split off from Votorantim GmbH to Votorantim Finco GmbH.

(iv) Relates to prepayment transactions where the Company receives prepayments of receivables for sales intermediated by VM Holding S.A.

(v) Relates to prepayment transactions where the Company receives prepayments of receivables for sales intermediated by Votorantim GmbH.

(vi) On July 1, 2016, Votorantim Metais S.A. was incorporated by the Company, as described in Note 1.1 (c).

All amounts in thousands of Reais unless otherwise stated

(c) Guarantees of the indebtedness of the Company and its consolidated entities granted by related parties

Instrument	Guarantor	2016	2015
BNDES	Hejoassu S.A./VSA	500.189	538.188
Development promotion agency BRL	VSA (100%)	48.701	
Eurobonds - USD (Voto 21)	VSA (100%) e VCSA (50%)	794.855	955.440
Eurobonds - USD (Voto 24)	VSA (100%)	1.305.876	1.564.599
		2.649.621	3.058.227

(d) Guarantees of the indebtedness of related parties granted by the Company and its subsidiaries

				2016		2015	
Instrument	Debtor	Guarantor	Percentage guaranteed by the Company	Debt	Amount guaranteed	Debt	Amount guaranteed
Eurobonds - USD (Voto 19)	VSA	VSA (100%), VCSA (50%) e CBA (50%)	50%	684.994	342.497	820.590	410.295

15 Other assets

	Parent company		Consolidated	
	2016	2015	2016	2015
Advances to suppliers	2.090	2.166	25.122	20.154
Insurance	24.003	11.247	24.415	11.247
Employee advances	16.834	6.244	16.879	6.319
Social security credits	13.990	9.335	13.990	9.335
Prepaid expenses	9.297	15.796	9.422	16.087
Tax credits	1.672	354	1.672	354
Other credits	3.610	3.834	7.373	8.770
	71.496	48.976	98.873	72.266
Current	52.725	37.084	60.402	42.406
Non-current	18.771	11.892	38.471	29.860
	71.496	48.976	98.873	72.266

All amounts in thousands of Reais unless otherwise stated

16 Investments

(a) Breakdown

Parent company

	Information on investees at December 31, 2016			Equity in the results		Investment balance	
	Equity	Profit for the year	Voting ownership interest and total (%)	2016	2015	2016	2015
Investments valued under the equity method							
Subsidiaries							
Metalex Ltda.	72.986	25.844	100	25.844	23.557	72.986	73.142
Nazca Participações Ltda.				(1.368)			
Pollarix S.A.	1		100			1	
MSDC Participações S.A.	1.008	15	100	15		1.008	
Associates							
Alunorte - Alumina do Norte S.A.	4.952.691	798.221	3	24.221	6.402	150.284	130.067
Mineração Rio do Norte S.A.	1.051.682	429.565	10	42.957	36.077	105.168	90.962
Others						1.669	145
Joint operations							
ENERCAN - Campos Novos Energia S.A.	1.251.808	238.162	45	96.517	50.060	535.025	335.896
BAESA - Energética Barra Grande S.A.	737.365	37.652	15	5.648	1.242	110.605	105.010
Goodwill							
Metalex Ltda.						49.430	49.430
ENERCAN - Campos Novos Energia S.A.						57.408	33.828
BAESA - Energética Barra Grande S.A.						6.612	6.612
Pollarix S.A.						1.599	
				193.834	117.338	1.091.795	825.092

All amounts in thousands of Reais unless otherwise stated

							Consolidated
	Information on investees at December 31, 2016			Equity in the results		Investment balance	
	Equity	Profit for the year	Voting ownership interest and total (%)	2.016	2.015	2.016	2.015
Investments valued under the equity method							
Subsidiaries							
Alunorte - Alumina do Norte S.A.	4.952.691	798.221	3,03	24.221	6.402	150.284	130.067
Mineração Rio do Norte S.A.	1.051.682	429.565	10,00	42.957	36.077	105.168	90.962
Others						1.724	186
				67.178	42.479	257.176	221.215

All amounts in thousands of Reais unless otherwise stated

(b) Information on investees

The Company's interest in the results of the direct and indirect subsidiaries, as well as the total of its assets, liabilities, equity, operating result and income for the year, is presented below:

2016

	Percentual total	Voting ownership interest and total (%)	Current Assets	Non-Current Assets	Current Liabilities	Non-current liabilities	Equity	Net revenue	Operating profit	Finance income (cost)	Profit for the year
Subsidiaries											
Metalex Ltda.	100.00	100,00	72.284	31.598	30.409	487	72.986	194.451	35.445	3.619	25.844
MSDC Participações S.A.	100.00	100,00	1.014		6		1.008		6	12	15
Pollarix S.A.	100.00	100,00	1				1				
Associates											
Alunorte - Alumina do Norte S.A.	3.03	3,03	1.325.262	6.776.994	1.814.134	1.335.431	4.952.691	5.699.539	787.203	373.590	798.221
Mineração Rio do Norte S.A.	10.00	10,00	276.957	1.980.396	567.637	638.034	1.051.682	1.352.463	471.989	36.797	429.565
Joint operations											
ENERCAN - Campos Novos Energia S.A.	44.76	44,76	405.874	1.182.199	196.760	196.069	1.251.808	511.404	332.859	(8.759)	238.162
BAESA - Energética Barra Grande S.A.	15.00	15,00	54.703	1.150.996	116.192	352.142	737.365	243.633	108.667	(51.516)	37.652

2015

	Percentual total	Voting ownership interest and total (%)	Current Assets	Non-Current Assets	Current Liabilities	Non-current liabilities	Equity	Net revenue	Operating profit	Finance income (cost)	Profit for the year
Subsidiaries											
Metalex Ltda.	100.00	100,00	67.610	31.886	25.374	981	73.141	195.808	32.295	3.218	23.557
Associates											
Alunorte - Alumina do Norte S.A.	3.03	3,03	1.259.295	6.500.976	1.919.398	1.554.454	4.286.419	5.995.401	1.466.158	(1.189.574)	211.010
Mineração Rio do Norte S.A.	10.00	10,00	497.369	1.754.101	519.034	822.817	909.619	1.505.354	659.698	(229.089)	360.789
Joint operations											
ENERCAN - Campos Novos Energia S.A.	33.14	33,14	292.133	1.295.550	264.722	309.316	1.013.645	529.990	269.513	(42.783)	151.068
BAESA - Energética Barra Grande S.A.	15.00	15,00	105.198	1.210.233	188.077	427.284	700.070	432.699	109.566	(97.027)	8.276

All amounts in thousands of Reais unless otherwise stated

(c) Changes in investments

		Parent company		Consolidated	
	Note	**2016**	**2015**	**2016**	**2015**
At the beginning of the year		825.092	1.165.876	221.215	624.897
Equity in the results		193.834	117.338	67.178	42.479
Dividends paid		(52.041)		(32.754)	
Dividends received and receivable		(32.032)	(17.710)		(5.806)
Increase in capital	1.1 (b)	24.321			
Loss in capital increase in investee with negative equity	1.1 (b)	(24.119)			
Investment acquisition	1.1 (d) (e)	2.599			
Ownership interest increase - Enercan	1.1 (c)	151.511			
Nazca incorporation		1.165			
Transfer of investment in Votorantim Metais S.A.	1.1 (a)		(439.223)		(439.223)
Transfer of other investiments	1.1 (a)		(1.308)		(1.308)
Others		1.465	119	1.537	176
At the end of the year		1.091.795	825.092	257.176	221.215

All amounts in thousands of Reais unless otherwise stated

17 Property, plant and equipment

(a) Breakdown and changes

									Parent company	
									2016	2015
	Land and improvements	Buildings and constructions	Machinery, equipment and facilities	Vehicles	Furniture and fittings	Construction in progress	ARO (i)	Other	Total	Total
At the beginning of the year										
Cost	104.811	2.246.798	5.177.665	109.408	23.164	286.585		279.786	8.228.217	8.208.540
Accumulated depreciation	(1.781)	(654.734)	(2.706.953)	(94.463)	(10.716)			(235.106)	(3.703.753)	(3.569.663)
Net balance	103.030	1.592.064	2.470.712	14.945	12.448	286.585		44.680	4.524.464	4.638.877
Purchases			20.161		121	119.974			140.256	216.545
Disposals		(265)	(4.502)	(126)	(191)				(5.084)	(15.339)
Depreciation		(60.539)	(253.838)	(6.315)	(2.209)		(2.991)	(409)	(326.301)	(297.272)
VMSA incorporation (Note 1.1 (c))	6.168	266.119	388.222	1.838	1.773	14.104	40.036	7.616	725.876	
Provision for asset impairment (ii)	(6.168)	(270.414)	(351.328)	(61)	(253)	(4.139)	(33.325)	(6.136)	(671.824)	(1.566)
Split-off (Note 1.1 (a))										(14.727)
Nazca incorporation (Note 1.1 (b))	156	225							381	
Revision of cash flow							22.542		22.542	
Transfers		66.773	93.390	1.345		(161.834)	10.297	73	10.044	(2.054)
At the end of the year	103.186	1.593.963	2.362.817	11.626	11.689	254.690	36.559	45.824	4.420.354	4.524.464
Cost	104.967	2.425.991	5.831.035	114.424	26.730	254.690	103.135	327.105	9.188.077	8.228.217
Accumulated depreciation	(1.781)	(832.028)	(3.468.218)	(102.798)	(15.041)		(66.576)	(281.281)	(4.767.723)	(3.703.753)
Net balance	103.186	1.593.963	2.362.817	11.626	11.689	254.690	36.559	45.824	4.420.354	4.524.464
Annual average depreciation rate - %		2	4	15	10		17	1		

All amounts in thousands of Reais unless otherwise stated

									Consolidated	
									2.016	2.015
	Land and improvements	Buildings and constructions	Machinery, equipment and facilities	Vehicles	Furniture and fittings	Construction in progress	ARO (i)	Other	Total	Total
At the beginning of the year										
Cost	114.551	2.732.996	5.432.095	109.524	23.530	287.417		279.789	8.979.902	8.952.824
Accumulated depreciation	(2.472)	(775.370)	(2.783.132)	(94.525)	(10.960)			(235.106)	(3.901.565)	(3.734.693)
Net balance	112.079	1.957.626	2.648.963	14.999	12.570	287.417		44.683	5.078.337	5.218.131
Purchases		818	20.161		127	121.983			143.089	220.215
Disposals		(731)	(4.624)	(127)	(191)				(5.673)	(15.440)
Depreciation	(135)	(82.043)	(265.192)	(6.325)	(2.229)		(2.991)	(410)	(359.325)	(326.141)
VMSA incorporation (Note 1.1 (c))	6.168	266.119	388.222	1.838	1.773	14.104	40.036	7.616	725.876	
Provision for asset impairment (ii)	(6.168)	(270.414)	(351.328)	(61)	(253)	(4.139)	(33.325)	(6.136)	(671.824)	(1.566)
Split-off (Note 1.1 (a))										(14.727)
Nazca incorporation (Note 1.1 (b))	156	225							381	
Ownership interest increase - Enercan (i)	745	85.968	39.630		21	14			126.378	
Revision of cash flow							22.542		22.542	
Transfers		67.017	93.965	1.361	6	(162.690)	10.297	74	10.030	(2.135)
At the end of the year	112.845	2.024.585	2.569.797	11.685	11.824	256.689	36.559	45.827	5.069.811	5.078.337
Cost	115.710	3.028.435	6.142.328	114.495	27.165	256.689	103.135	327.108	10.115.065	8.979.902
Accumulated depreciation	(2.865)	(1.003.850)	(3.572.531)	(102.810)	(15.341)		(66.576)	(281.281)	(5.045.254)	(3.901.565)
Net balance	112.845	2.024.585	2.569.797	11.685	11.824	256.689	36.559	45.827	5.069.811	5.078.337
Annual average depreciation rate - %	1	2	4	15	10		17	1		

(i) Asset Retirement Obligation

(ii) The Company registered in 2016 provision for impairment of fixed assets in the amounting of R$ 671,824. This reduction was based on the estimated future cash flows of the Nickel CGU, whereas the carrying amount of these assets exceeded their recoverable amount

(iii) VMSA, a company incorporated by CBA on July 1, 2016 (Note 1.1 (c)), had an 11.62% interest in Enercan, an investee proportionally consolidated (33.14%) by the Company. Through this merger, the Company owns and consolidates 44.76% of Enercan.

All amounts in thousands of Reais unless otherwise stated

(b) Construction in progress

The balance of construction in progress consisted mainly of the expansion and optimization projects of the Company's industrial units, as follows:

			2016			2015
	Gross balance	Provision for asset impairment	Net balance	Gross balance	Provision for asset impairment	Net balance
Iron Nickel Project	568.550	(568.550)				
Alumina Rondon Project	107.366		107.366	100.221		100.221
Renovation of furnace	92.096	(86.759)	5.337	92.096	(86.759)	5.337
Tijuco Alto Project	52.066	(52.066)		52.066	(52.066)	
Plastic Transformation and Casting Projects	19.385		19.385	43.634		43.634
Alumina Factory Project	23.505	(12.141)	11.364	33.803	(12.141)	21.662
Renovation of furnace	44.066	(22.023)	22.043	33.565	(22.023)	11.542
Furnace room VIII	29.120	(26.246)	2.874	29.120	(26.246)	2.874
Revitalization and adaptation of plant	39.208		39.208	25.399		25.399
Modernization of Automation System	25.404		25.404	21.933		21.933
Furnace room Projects	15.114		15.114	19.659		19.659
Mining Projects	4.691		4.691	13.160		13.160
Safety, Health and Environment Projects	1.622		1.622	7.791		7.791
Other	19.288	(17.007)	2.281	14.206		14.205
	1.041.481	(784.792)	256.689	486.653	(199.235)	287.417

The balances above are presented net of provision for impairment. The Company assesses its assets whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Halted projects are continuously assessed, and if there is any indication of impairment, provision is recognized. As regards the remaining balance presented above, which was not provided for as an impairment loss, the Company believes that it will resume the project and/or use this asset in other production lines.

During the year, borrowing charges capitalized as part of construction in progress totaled R$ 8,702 (December 31, 2015 - R$ 12,862). The capitalization rate used was 0.52% per month (December 31, 2015 – 0.50% per month).

All amounts in thousands of Reais unless otherwise stated

18 Intangible assets

(a) Breakdown and changes

							Parent company	
							2016	2015
	Goodwill	Rights over natural resources	Software	Use of public assets	ARO (i)	Other	Total	Total
At the beginning of the year								
Cost	79.722	177.508	11.579	281.829	57.494	9.492	617.624	623.705
Accumulated amortization		(13.803)	(5.473)	(55.928)	(47.197)	(1.816)	(124.217)	(107.440)
Net balance	79.722	163.705	6.106	225.901	10.297	7.676	493.407	516.265
Addition			30				30	
Disposals								(524)
Amortization and depletion		(48)	(2.641)	(10.800)		(13)	(13.502)	(16.727)
VMSA incorporation (Note 1.1 (c))		173.582	6.584			94	180.260	
Provision for asset impairment (ii)		(173.582)	(14)			(89)	(173.685)	
Revision of cash flow								(7.661)
Transfers			267		(10.297)	(14)	(10.044)	2.054
At the end of the year	79.722	163.657	10.332	215.101		7.654	476.466	493.407
Cost	79.722	201.066	67.340	281.829		9.536	639.493	617.624
Accumulated amortization		(37.409)	(57.008)	(66.728)		(1.882)	(163.027)	(124.217)
Net balance	79.722	163.657	10.332	215.101		7.654	476.466	493.407
Annual average amortization rate - %		1	20	4		1		

All amounts in thousands of Reais unless otherwise stated

							Consolidated	
							2016	**2015**
	Goodwill	**Rights over natural resources**	**Software**	**Use of public assets**	**ARO (i)**	**Other**	**Total**	**Total**
At the beginning of the year								
Cost	169.592	177.508	11.845	305.026	57.494	39.723	761.188	767.135
Accumulated amortization		(13.803)	(5.676)	(60.379)	(47.197)	(27.978)	(155.033)	(136.249)
Net balance	169.592	163.705	6.169	244.647	10.297	11.745	606.155	630.886
Addition	1.599		30				1.629	
Disposals								(524)
Amortization and depletion		(48)	(2.676)	(11.768)		(664)	(15.156)	(18.681)
VMSA incorporation (Note 1.1 (c))	23.580	173.582	6.584			94	203.840	
Provision for asset impairment (ii)		(173.582)	(14)			(89)	(173.685)	
Revision of cash flow								(7.661)
Ownership interest increase - Enercan (iii)			19	1.261		109	1.389	
Transfers			274		(10.297)	(7)	(10.030)	2.135
At the end of the year	194.771	163.657	10.386	234.140		11.188	614.142	606.155
Cost	194.771	201.066	67.665	306.581		41.078	811.161	761.188
Accumulated amortization		(37.409)	(57.279)	(72.441)		(29.890)	(197.019)	(155.033)
Net balance	194.771	163.657	10.386	234.140		11.188	614.142	606.155
Annual average amortization rate - %		1	20	4		1		

(i) Asset retirement obligation.

(ii) The Company registered in 2016 provision for impairment of intangible assets in the amounting of R$ 173,685. This reduction was based on the estimated future cash flows of the Nickel CGU, whereas the carrying amount of these assets exceeded their recoverable amount

(iii) VMSA, a company incorporated by CBA on July 1, 2016 (Note 1.1 (c)), had an 11.62% interest in Enercan, an investee proportionally consolidated (33.14%) by the Company. Through this merger, the Company owns and consolidates 44.76% of Enercan.

All amounts in thousands of Reais unless otherwise stated

(b) Goodwill on acquisitions

	Parent company		Consolidated	
	2016	2015	2016	2015
Consórcio Empresarial Salto Pilão (i)	35.587	35.587	35.587	35.587
Rio Verdinho Energia S.A. (i)	28.990	28.990	28.990	28.990
Machadinho Energética S.A. (i)	15.145	15.145	15.145	15.145
ENERCAN - Campos Novos Energia S.A.			57.408	33.828
Metalex Ltda.			49.430	49.430
BAESA - Energética Barra Grande S.A.			6.612	6.612
Pollarix S.A.			1.599	
	79.722	79.722	194.771	169.592

(i) Goodwill arising from companies previously incorporated into the Company.

(c) Impairment testing for goodwill

The Company and its subsidiaries evaluate at least annually the recoverability of the carrying value of the operating segment of CGU. The process of estimating these values involves the use of assumptions, judgments and estimates of future cash flows that represent the best estimate of the Company.

The Company's Management determines the budgeted gross margin based on past performance and its expectations of market development. The discount rates used are pre-tax and reflect specific risks related to the operating segment or the CGU being tested.

Considering the decrease of nickel quotations in the international market that occurred in the year ended December 31 (2016), and highlighted in the last trimester of 2016 (subsequent to the incorporation of Note 1.1(c)) with the withdrawal of prohibition of nickel exportation in Indonesia, the Company revised the related projections to the Nickel CGU, as temporarily paralyzed and identified indicators of impairment. It should be noted that the resumption of operations of the nickel depends directly on the price of the metal in the global market. The value-in-use in this CGU had as premises the cash flow projections before the income tax and social contribution expenses had been calculated and as its foundation the financial budgets approved by the Management during the projected period for the next five years. The values that referred to the cash flow for the exceeding period were extrapolated without using growth taxes. The cash flows estimated were discounted at the tax rate of 12.43%, considering the specifications of the nickel CGU.

The losses caused by impairment of the fixed and intangible assets from the nickel CGU on December 31 2016, were in the amount of R$671,824 (Note 17 (a)) and R$173,685 (Note 18 (a)), respectively, totaling impairment of R$845,509 registered in the line item “Other operating income, net” (Note 28).

All amounts in thousands of Reais unless otherwise stated

19 Borrowing

(a) Breakdown

Parent company

Categories	Annual average charges (i)	Current 2016	Current 2015	Non-current 2016	Non-current 2015	Total 2016	Total 2015	Fair value 2016	Fair value 2015
Local currency									
BNDES	TJLP + 2.46% / 5.51% Fixed rate BRL / SELIC + 2.83%	101.891	93.648	406.124	389.352	508.015	483.000	452.769	360.484
FINAME	5.45% Fixed rate BRL	1.339	536	6.453	1.935	7.792	2.471	6.455	1.925
Export credit note	8.00% Fixed rate BRL	100.859	131.409		100.000	100.859	231.409	98.556	215.673
Development promotion	10.0% Fixed rate BRL / TJLP + 1.40%	13.063	84	67.662	25.967	80.725	26.051	73.599	18.501
Other				597		597		591	
		217.152	225.677	480.836	517.254	697.988	742.931	631.970	596.583
Foreign currency									
BNDES	UMBNDES + 2.44%	16.913	20.827	15.496	33.965	32.409	54.792	33.472	58.421
Eurobonds - USD	5.50% Fixed rate USD	13.262	16.096	2.076.642	2.490.585	2.089.904	2.506.681	2.029.649	2.226.684
		30.175	36.923	2.092.138	2.524.550	2.122.313	2.561.473	2.063.121	2.285.105
		247.327	262.600	2.572.974	3.041.804	2.820.301	3.304.404	2.695.091	2.881.688
Interest on borrowing		18.672	21.512						
Current portion of long-term borrowing		228.655	241.088						
		247.327	262.600						

All amounts in thousands of Reais unless otherwise stated

									Consolidated
			Current		Non-current		Total		Fair value
Categories	Annual average charges (i)	2016	2015	2016	2015	2016	2015	2016	2015
Local currency									
BNDES	5.51% Fixed rate BRL / TJLP + 2.70% / SELIC + 2.83%	143.698	126.147	450.111	455.620	593.809	581.767	544.796	469.705
FINAME	5.45% Fixed rate BRL	1.339	536	6.453	1.935	7.792	2.471	6.455	1.925
Debentures	CDI + 1.26%	3.507	5.258	26.577	22.134	30.084	27.392	29.450	33.147
Export credit note	8.00% Fixed rate BRL	100.859	131.409		100.000	100.859	231.409	98.556	215.673
Development promotion	10.0% Fixed rate BRL / TJLP + 1.40%	13.063	84	67.662	25.967	80.725	26.051	73.599	18.501
Other				597		597		591	
		262.466	263.434	551.400	605.656	813.866	869.090	753.447	738.951
Foreign currency									
BNDES	UMBNDES + 2.80%	23.848	28.522	22.907	48.578	46.755	77.100	47.371	86.401
Eurobonds - USD	5.50% Fixed rate USD	13.262	16.096	2.076.642	2.490.585	2.089.904	2.506.681	2.029.649	2.226.684
		37.110	44.618	2.099.549	2.539.163	2.136.659	2.583.781	2.077.020	2.313.085
		299.576	308.052	2.650.949	3.144.819	2.950.525	3.452.871	2.830.467	3.052.036
Interest on borrowing		20.782	22.378						
Current portion of long-term borrowing		278.794	285.674						
		299.576	308.052						

(i) The average annual charges are presented only for agreements that represent a large share of the total debt amount.

BNDES	National Bank for Economic and Social Development.
BRL	Brazilian currency (Real).
CDI	Interbank Deposit Certificate.
FINAME	Government Agency for Machinery and Equipment Financing.
SELIC	Special System for Clearance and Custody.
TJLP	Long-term interest rate set by the National Monetary Council. The TJLP is the BNDES basic cost of financing.
UMBNDES	Monetary unit of the BNDES reflecting the weighted basket of currencies of foreign currency debt obligations. At December 31, 2016, 99, 48% of the basket comprised US Dollars.
USD	US Dollar.

All amounts in thousands of Reais unless otherwise stated

(b) Maturity

The maturity profile of borrowing as at December 31, 2016, was as follows:

Parent company

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Local currency											
BNDES	101.891	135.540	74.357	55.983	46.547	29.007	17.251	17.251	17.251	12.937	508.015
FINAME	1.339	1.297	1.277	1.248	992	781	781	77			7.792
Export credit note	100.859										100.859
Development promotion agency	13.063	12.583	12.583	12.583	12.583	6.826	6.303	4.201			80.725
Other		597									597
	217.152	150.017	88.217	69.814	60.122	36.614	24.335	21.529	17.251	12.937	697.988
	31,11%	21,49%	12,64%	10,00%	8,61%	5,25%	3,49%	3,08%	2,47%	1,86%	100,00%
Foreign currency											
BNDES	16.913	10.957	3.414	1.125	-	-					32.409
Eurobonds - USD (i)	13.262	(1.444)	(1.444)	(1.444)	780.942	(1.444)	(1.444)	1.302.920			2.089.904
	30.175	9.513	1.970	(319)	780.942	(1.444)	(1.444)	1.302.920			2.122.313
	1,42%	0,45%	0,09%	-0,02%	36,80%	-0,07%	-0,07%	61,40%			100,00%
	247.327	159.530	90.187	69.495	841.064	35.170	22.891	1.324.449	17.251	12.937	2.820.301
	8,77%	5,66%	3,20%	2,46%	29,82%	1,25%	0,81%	46,96%	0,61%	0,46%	100,00%

Consolidated

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
Local currency											
BNDES	143.698	172.001	81.883	55.983	46.547	29.007	17.251	17.251	17.251	12.937	593.809
FINAME	1.339	1.297	1.277	1.248	992	781	781	77			7.792
Debentures	3.507	3.322	3.322	3.322	3.322	3.322	3.322	3.322	3.323		30.084
Export credit note	100.859										100.859
Development promotion agency	13.063	12.583	12.583	12.583	12.583	6.826	6.303	4.201			80.725
Other		597									597
	262.466	189.800	99.065	73.136	63.444	39.936	27.657	24.851	20.574	12.937	813.866
	32,25%	23,32%	12,17%	8,99%	7,80%	4,91%	3,40%	3,05%	2,53%	1,58%	100,00%
Foreign currency											
BNDES	23.848	17.510	4.272	1.125							46.755
Eurobonds - USD (i)	13.262	(1.444)	(1.444)	(1.444)	780.942	(1.444)	(1.444)	1.302.920			2.089.904
	37.110	16.066	2.828	(319)	780.942	(1.444)	(1.444)	1.302.920			2.136.659
	1,74%	0,75%	0,13%	-0,01%	36,55%	-0,07%	-0,07%	61%			100,00%
	299.576	205.866	101.893	72.817	844.386	38.492	26.213	1.327.771	20.574	12.937	2.950.525
	10,15%	6,98%	3,45%	2,47%	28,62%	1,30%	0,89%	45,00%	0,70%	0,44%	100,00%

(i) The negative balances relate to borrowing costs amortized on a straight-line basis.

All amounts in thousands of Reais unless otherwise stated

(c) Changes

	Parent company		Consolidated	
	2016	2015	2016	2015
At the beginning of the year	3.304.404	2.531.226	3.452.871	2.715.189
New borrowing	100.695	81.803	100.695	81.803
Foreign exchange variation	(426.687)	839.110	(430.177)	847.496
Provision for interest	188.701	183.803	204.569	200.738
Interest paid	(175.113)	(188.184)	(189.837)	(204.959)
Repayment	(253.971)	(143.354)	(302.630)	(187.396)
VMSA incorporation (Note 1.1 (c))	82.272		82.272	
Ownership interest increase - Enercan (i)			32.762	
At the end of the year	2.820.301	3.304.404	2.950.525	3.452.871

(i) VMSA, a company incorporated by CBA on July 1, 2016 (Note 1.1 (c)), had an 11.62% interest in Enercan, an investee proportionally consolidated (33.14%) by the Company. Through this merger, the Company owns and consolidates 44.76% of Enercan.

(d) Breakdown by currency

Parent company

	Current		Non-current		Total	
	2016	2015	2016	2015	2016	2015
Real	217.152	225.677	480.836	517.254	697.988	742.931
US Dollar	28.860	36.923	2.091.875	2.524.550	2.120.735	2.561.473
Currency basket	1.315		263		1.578	
	247.327	262.600	2.572.974	3.041.804	2.820.301	3.304.404

Consolidated

	Current		Non-current		Total	
	2016	2015	2016	2015	2016	2015
Real	262.466	263.434	551.400	605.656	813.866	869.090
US Dollar	28.860	36.924	2.091.875	2.524.550	2.120.735	2.561.474
Currency basket	8.250	7.694	7.674	14.613	15.924	22.307
	299.576	308.052	2.650.949	3.144.819	2.950.525	3.452.871

All amounts in thousands of Reais unless otherwise stated

(e) Breakdown by index

Parent company

	Current		Non-current		Total	
	2016	2015	2016	2015	2016	2015
Local currency						
TJLP	92.186	81.612	363.701	382.414	455.887	464.026
Fixed rate	116.490	139.653	61.415	113.072	177.905	252.725
BNDES	8.476	4.412	55.720	21.768	64.196	26.180
	217.152	225.677	480.836	517.254	697.988	742.931
Foreign currency						
UMBNDES	16.913	20.827	15.496	33.965	32.409	54.792
Fixed rate	13.262	16.096	2.076.642	2.490.585	2.089.904	2.506.681
	30.175	36.923	2.092.138	2.524.550	2.122.313	2.561.473
	247.327	262.600	2.572.974	3.041.804	2.820.301	3.304.404

Consolidated

	Current		Non-current		Total	
	2016	2015	2016	2015	2016	2015
Local currency						
CDI	3.507	5.258	26.577	22.134	30.084	27.392
TJLP	133.993	114.112	407.689	448.681	541.682	562.793
Fixed rate	116.490	139.653	61.415	113.072	177.905	252.725
BNDES	8.476	4.411	55.719	21.769	64.195	26.180
	262.466	263.434	551.400	605.656	813.866	869.090
Foreign currency						
UMBNDES	23.848	28.522	22.907	48.578	46.755	77.100
Fixed rate	13.262	16.096	2.076.642	2.490.585	2.089.904	2.506.681
	37.110	44.618	2.099.549	2.539.163	2.136.659	2.583.781
	299.576	308.052	2.650.949	3.144.819	2.950.525	3.452.871

(f) Collateral

At December 31, 2016, R$ 2,649,621 (December 31, 2015 - R$ 3,058,227) of the borrowing was guaranteed by sureties (Note 14 (c)) and R$ 7,791 (December 31, 2015 - R$ 2,471) by fiduciary liens.

(g) Covenants / financial indexes

Certain borrowing agreements are subject to compliance with financial ratio rules (covenants) controlled by the parent VSA, such as: (i) the gearing ratio (net debt/adjusted EBITDA); (ii) the capitalization ratio (total debt/total debt + equity or equity/total assets); and (iii) interest coverage ratio (cash + adjusted EBITDA/interest + short-term debt). When applicable, these obligations are standardized for all borrowing agreements.

The Company was in compliance with all of these covenants, as applicable.

(h) New borrowing

During the year ended December 31, 2016, the Company received R$ 101,676 from BNDES and FINAME at the main average cost of TJLP + 3.14%/ Fixed 6.26% / SELIC Fixed + 3.05%.

All amounts in thousands of Reais unless otherwise stated

20 Current and deferred income tax and social contribution

The Company and its subsidiaries use the taxable income method, and calculate and record their income tax and social contribution based on the effective rates at the end of the reporting period.
Deferred income tax and social contribution tax assets arise from tax losses and temporary differences related substantially to (a) the effect of foreign exchange gains (losses) (tax calculated on a cash basis for loans); (b) the adjustment of derivatives to their fair values; (c) temporarily non-deductible provision; (d) investments in rural activities; (e) temporary differences arising from the adoption of pronouncements of CPCs.

(a) Reconciliation of income tax and social contribution expenses

The current amounts are calculated based on the current rates levied on taxable income, adjusted upwards or downwards by the respective additions and exclusions.

The income tax and social contribution amounts presented in the statements of income for the years ended December 31 are reconciled to their Brazilian standard rates as follows:

	Parent company		Consolidated	
	2016	2015	2016	2015
Profit (loss) before income tax and social contribution	(647.766)	(711.032)	(583.059)	(673.365)
Statutory rates	34%	34%	34%	34%
IRPJ and CSLL at the statutory rates	220.240	241.751	198.240	228.944
Adjustments for the calculation of the effective IRPJ and CSLL				
Equity in the results	65.904	39.895	22.841	14.443
Reversal of IRPJ/CSLL tax credit - Plano Verão	(12.892)		(12.892)	
Value not subject to additional income tax		6.543		6.543
Loss on investment (Note 1.1 (b)	(8.200)		(8.200)	
Recognition of deferred tax on tax losses from prior years		8.539		8.539
Recognition of deferred tax on foreign exchange variation of PPE from VMSA (i)	175.935		175.935	
Other permanent deductions, net	(10.021)	2.793	(9.665)	3.385
Calculated IRPJ and CSLL	430.966	299.521	366.259	261.854
Current	(12.805)	(59.184)	(67.412)	(107.592)
Deferred	443.771	358.705	433.671	369.446
IRPJ and CSLL in the statement of operations	430.966	299.521	366.259	261.854

(i) Export prepayment

All amounts in thousands of Reais unless otherwise stated

(b) Breakdown of deferred tax balances

Deferred income tax and social contribution arose as follows:

	Parent company		Consolidated	
	2016	2015	2016	2015
Assets (Liabilities)				
Tax credits on income tax and social contribution losses	147.085	261.333	147.085	261.333
Temporary differences				
Foreign exchange variation	672.397	655.812	672.397	655.812
Provisions (impairment and others)	717.607	148.447	717.607	148.447
Use of public assets	75.099	76.730	75.099	76.730
Tax, civil, labor and environmental provisions	138.714	52.781	143.737	66.653
Asset retirement obligation	46.930	26.615	46.930	26.615
Provision for inventory losses	20.902	12.968	20.902	12.968
Environmental liabilities	16.317	14.355	16.317	14.355
Provision for profit sharing	22.324	18.457	22.324	18.457
Provision for impairment of trade receivables	10.419	2.839	10.419	2.839
Capitalized interest	(27.361)	(7.694)	(27.361)	(7.694)
Adjustment to present value	(17.689)	(15.251)	(17.689)	(15.251)
Deferred gains (loss) on derivative agreements	(16.004)	14.274	(16.004)	14.274
Financial instruments - firm commitment	(153.769)	(211.154)	(153.769)	(211.154)
Adjusted useful lives of PP&E (depreciation)	(666.241)	(506.382)	(666.241)	(506.382)
Other	(18.444)	(4.553)	(18.444)	(4.554)
Net (assets - liabilities)	968.286	539.577	973.309	553.448

(i) The deferred tax credits arising from tax losses and negative basis of social contribution are recognized only to the extent that their realization is probable, based on the previous history of profitability and the projections of future results. At the end of 2016, the Company reassessed the recovery of the amount of tax losses registered in its tax calculation; the technical study carried out by the Management demonstrated that it is not possible to use the balance in full. Therefore, the Company no longer accounts for tax credits in the amount of R$ 194,731.

(c) Effects of deferred income tax and social contribution on profit for the year and comprehensive income

	Parent company		Consolidated	
	2016	2015	2016	2015
At the beginning of the year	539.577	182.790	553.448	185.920
Effects on the results	443.771	358.705	433.671	369.446
Effects of other components of comprehensive income - *Hedge accounting*	(15.058)	(1.438)	(15.058)	(1.438)
Other	(4)	(480)	1.248	(480)
At the end of the year	968.286	539.577	973.309	553.448

(d) Realization of deferred income tax and social contribution on tax losses

Credits related to tax losses are expected to be realized in accordance with the following schedule:

	2016	Percentual
In 2017		0,00%
In 2018		0,00%
In 2019	16.628	11,31%
In 2020	40.659	27,64%
After 2021	89.798	61,05%
	147.085	100,00%

All amounts in thousands of Reais unless otherwise stated

21 Other liabilities

	Controladora		Consolidado	
	2016	2015	2016	2015
Environmental liabilities	65.290	45.221	65.349	45.322
Processing for third parties	12.786	11.401	33.825	27.731
Provision for services	5.699	1.824	5.699	1.905
Provision for freight	1.915	2.161	1.915	2.161
Provision for utilities - water, electricity and gas	22.634	42.518	22.634	42.518
Provision for research and development (energy)			10.834	7.273
Other liabilities	2.926	5.244	6.393	8.634
	111.250	108.369	146.649	135.544
Current	46.068	60.496	72.126	81.834
Non-current	65.182	47.873	74.523	53.710
	111.250	108.369	146.649	135.544

22 Provision

(a) Breakdown and changes

	Parent company						
						2016	2015
		Legal process					
	ARO (i)	Tax	Labor	Civil	Environment	Total	Total
At the beginning of the year	85.577	84.923	55.737	3.410	29	229.676	274.911
Adjustment to present value	8.886					8.886	5.361
Additions		21.063	59.400	108.756		189.219	30.972
Reversals		(9.263)	(60.911)	(1.417)	(20)	(71.611)	(78.792)
Judicial deposits, net of write-offs		(4.157)	11.152	13		7.008	(1.559)
VMSA incorporation (Note 1.1 (c))	87.739	53.640	38.796	25.861		206.036	
Nazca incorporation (Note 1.1 (b))		10	684	4.080	758	5.532	
Settlement with cash	(461)	(9)	(23.573)	(12.325)	(9)	(36.377)	(7.565)
Settlement with compensation of judicial deposits		(32)	(189)			(221)	
Transfers							(3.000)
Monetary adjustments		19.934	1.946	30.755	24	52.659	17.009
Revision of cash flow	23.174					23.174	(7.661)
At the end of the year	204.915	166.109	83.042	159.133	782	613.981	229.676

	Consolidated						
						2016	2015
		Legal process					
	ARO (i)	Tax	Labor	Civil	Environment	Total	Total
At the beginning of the year	85.577	85.113	55.745	3.461	29	229.925	275.008
Adjustment to present value	8.886					8.886	5.361
Additions		21.063	59.400	108.793	1	189.257	31.175
Reversals		(9.263)	(60.911)	(1.417)	(21)	(71.612)	(78.860)
Judicial deposits, net of write-offs		(4.157)	11.152	13		7.008	(1.541)
VMSA incorporation (Note 1.1 (c))	87.739	53.640	38.796	25.861		206.036	
Nazca incorporation (Note 1.1 (b))		10	684	4.080	758	5.532	
Settlement with cash	(461)	(199)	(23.573)	(12.325)	(9)	(36.567)	(7.565)
Settlement with compensation of judicial deposits		(32)	(197)			(229)	
Transfers							(3.000)
Monetary adjustments		19.934	1.946	30.755	24	52.659	17.008
Revision of cash flow	23.174					23.174	(7.661)
At the end of the year	204.915	166.109	83.042	159.221	782	614.069	229.925

(i) Asset retirement obligation.

All amounts in thousands of Reais unless otherwise stated

(b) Asset retirement obligation

The calculation of asset retirement obligations involves judgment and certain assumptions. In environmental terms, they relate to the future obligation to restore ecological conditions similar to those existing before the beginning of the project or activity, or to carry out compensatory measures, agreed upon with the applicable bodies, as a result of the impossibility of returning the areas to pre-existing conditions. These obligations arise from the beginning of the environmental degradation of the area occupied by the operation or from formal commitments made to the environmental body, under which the degradation must be compensated. The dismantling and removal of an asset from an operation occurs when it is permanently retired, through the interruption of its activities, or by its sale or disposal.

Since these are long-term obligations, they are adjusted to the present value at the current interest rate and periodically restated based on the inflation rate. The interest rate used in 2016 was 7.506% p.a. (2015 – 6.685% p.a.). The liability recognized is periodically adjusted based on these discount rates plus inflation for the reference period. At December 31, 2016, the 2017 interest rate forecast was increased to 8.474% (2015 – 7.506% p.a.).

(c) Provision for tax, civil, labor, environmental contingencies and outstanding judicial deposits

The Company and its subsidiaries are parties to tax, labor, civil and environmental and other litigation in progress and are discussing these matters at both the administrative and judicial levels. These matters are backed by judicial deposits where applicable.

The provision for losses regarded as probable arising from contingent liabilities is recorded in the books. Contingent liabilities classified as possible losses are not recorded in the books and are only disclosed in the notes to the financial statements. Contingent liabilities classified as remotely likely losses are neither accrued nor disclosed, except when, due to the visibility of the lawsuit, the Company considers their disclosure justified.

The amounts of contingencies are periodically estimated and updated. The classification of losses as possible, probable or remotely likely is supported by the advice of the Company's legal counsel.

The provision and the corresponding judicial deposits are as follows:

Parent company

	2016				2015			
	Judicial deposits	Provision	Total, net	Outstanding judicial deposits(i)	Judicial deposits	Provision	Total, net	Outstanding judicial deposits(i)
Tax	(20.978)	187.087	166.109	12.938	(16.118)	101.041	84.923	9.043
Labor	(27.671)	110.713	83.042	18.442	(6.074)	61.811	55.737	3.472
Civil		159.133	159.133	95.836	(13)	3.423	3.410	80.524
Environmental		782	782			29	29	
	(48.649)	457.715	409.066	127.216	(22.205)	166.304	144.099	93.039

Consolidated

	2016				2015			
	Judicial deposits	Provision	Total, net	Outstanding judicial deposits(i)	Judicial deposits	Provision	Total, net	Outstanding judicial deposits(i)
Tax	(20.978)	187.087	166.109	24.358	(16.118)	101.231	85.113	16.664
Labor	(27.671)	110.713	83.042	18.486	(6.074)	61.819	55.745	3.508
Civil		159.221	159.221	95.836	(13)	3.474	3.461	80.524
Environmental		782	782			29	29	
	(48.649)	457.803	409.154	138.680	(22.205)	166.553	144.348	100.696

(i) The Company has outstanding judicial deposits with the courts in relation to proceedings classified by its legal advisors as having a possibility or remote possibility of loss, and which are, therefore, without the respective provision.

All amounts in thousands of Reais unless otherwise stated

(d) Comments on provisions with likelihood of loss considered probable

(i) Provision for tax contingencies

Tax proceedings with probable likelihood of loss are represented by discussions related to federal, state and municipal taxes, being these in the judicial or administrative sphere, having as main cases provisioned discussions related to IRPJ, IPTU, and Financial Compensation for the Exploration of Mineral Resources ("CFEM"), among others.

(ii) Provision for labor contingencies

Labor claims the likelihood of loss of which is classified as probable are those filed by former employees, third parties and unions, most of which are claims for severance pay, health and safety premiums and overtime, in addition to indemnity claims filed by former employees or third parties based on alleged occupational illnesses, labor accidents and pain and suffering, arising from general jurisdictional courts pursuant to Constitutional Amendment 45. When it is certain than an outflow of resources from the Company will be necessary, these lawsuits are provided for in accordance with the Company's provision policy. Lawsuits of this type are pending in the Regional Labor Courts of the States of Minas Gerais, Goiás and São Paulo.

(iii) Provision for civil contingencies

Civil provision relates mainly to lawsuits filed by former employees and outsourced employees based on alleged occupational illnesses, work accidents and pain and suffering, in addition to those issued by service providers in relation to contractual terminations.

(iv) Provision for environmental contingencies

The Company has established environmental policies and procedures to comply with environmental and other laws. Management performs analyses on a regular basis to identify environmental risks and ensure that the systems in place are appropriate to manage these risks.

(e) Litigation with likelihood of loss considered possible

The Company has actions involving risks of loss classified by Management as possible, based on the assessment of their legal advisors, for which there is no provision made.

	Parent company		Consolidated	
	2016	2015	2016	2015
Tax	1.536.103	726.353	1.596.594	761.757
Labor	142.243	144.037	142.386	144.381
Civil	318.250	96.032	318.525	96.366
Environmental	16.400	15.644	16.400	15.644
	2.012.996	982.066	2.073.905	1.018.148

Of the amounts presented above, the table below shows the balances arising from the merger of VMSA:

	7/01/2016
Tax	647.372
Labor	54.563
Civil	195.645
	897.580

(e.1) Comments on contingent a liabilities with likelihood of loss considered possible

(i.a) ICMS – Transfer costs

The Company was notified based on alleged ICMS not paid on the transfer operations of nickel carbonate to its subsidiary located in the State of São Paulo, during the period from January 2003 to December 2003, April 2004 to March 2005, April 2005 to March 2006, April 2006 to March 2007 and April 2007 to March 2008. The amounts related to these assessment notices at December 31, 2016 totaled R$ 224,708. Currently, the cases are awaiting an administrative court decision.

In the opinion of Management and independent legal advisors, the criteria adopted by the Company for the formation of the calculation basis are in compliance with the pertinent legislation. The likelihood of loss in this matter is considered possible.

(i.b) ICMS - Credits

At December 31, 2016, the Company had two assessment notices relating to ICMS tax credits relating to items applied in the production process, which, in the opinion of the State of Goiás, would not give rise to a right to the tax credit. The amount at December 31, 2016 corresponded to R$ 79,634. Currently, all cases are awaiting administrative decisions.

In the opinion of Management and its independent legal advisors, the criteria adopted by the Company in the formation of the calculation basis are in compliance with the pertinent legislation. The likelihood of loss in this matter is considered possible.

(i.c) ICMS on TUSD – (Distribution System Usage Tariff)

The Company received an Infraction Notice issued by the State of Goiás for the alleged failure to pay or underpayment of ICMS related to the Distribution System Usage Tariff ("TUSD"), pertinent to the period from September 2005 to September 2010. At December 31, 2016, the amount under dispute of this assessment totaled R$ 23,457.

In the opinion of Management and its independent legal advisors, these notifications are not warranted, which is why the likelihood of loss of the process is considered possible.

(i.d) Tax Execution – Non-payment of ICMS tax on TUSD (Distribution System Usage Tariff)

In December 2012, the Company was notified of the tax foreclosure proceeding that seeks to collect amounts allegedly due to ICMS levied on the Distribution System Use Tariff. The amount of said enforcement process, as at December 31, 2016, was R$ 126,149.

The Company presented an insurance guarantee aimed at guaranteeing the tax execution, as well as filed a foreclosure proceeding, demonstrating that the amounts required by the Internal Revenue Service of Brazil are undue.

In addition, it is worth noting that the Superior Court of Justice has precedents in the sense that ICMS should not be levied on TUSD. After the Company obtained favorable decisions in the first and second instances, the process awaits the appraisal of the Special Appeal filed by the Internal Revenue Service of Brazil.

In the opinion of Management and in the opinion of its independent legal advisors, in view of precedents and favorable jurisprudence, the likelihood of loss of the process is considered possible.

(i.e) Tax Assessment – Non-inclusion of the Electric Energy tariff charges on the ICMS calculation basis

In April 2015, the Company received a tax assessment notice for the collection of ICMS due to the alleged non-inclusion of amounts paid as electric energy charges, based on the tax calculation. The amount under discussion amounted to R$ 57,526 in December 2016.

Currently, the alluded process awaits judgment of the Special Appeal presented by the Company in the administrative scope.

In the opinion of Management and in the opinion of its independent legal advisors, in view of precedents and favorable jurisprudence, the likelihood of loss of the process is considered possible.

(ii) Proceedings related to PIS and COFINS credits

At December 31, 2016, the Company had received 36 court orders and two assessment notices denying the request for PIS and COFINS credits, related to items used in the production process, which the Internal Revenue Service of Brazil understands would not entitle the Company to credits from such contributions. The updated amount of the litigation at December 31, 2016 totaled R$ 424,624.
Currently, all the proceedings are awaiting a decision at the administrative level.

In the opinion of Management and its independent legal advisors, the Company takes PIS and COFINS credits in compliance with the pertinent legislation and, for this reason, the likelihood of loss of the process is considered possible.

(iii) Financial Compensation for Mineral Resources Exploration – CFEM

The Company received three tax assessments issued by the National Mineral Production Department based on alleged CFEM tax not paid or underpaid, related to the period from January 1991 to December 2006. These assessments totaled R$ 78,093 at December 31, 2016. Currently, these assessments are either at the administrative or judicial levels.

The Company's Management and its independent legal advisors consider that these assessments are groundless and, for this reason, classified the likelihood of loss in this matter as possible.

(iv) Credits for federal compensation claims

Claims arising from: (i) one income tax lawsuit (ILL) (on December 31, 2016, the amount under dispute totaled R$ 7,195); (ii) two processes related to Tax on industrialized products (IPI) (on December 31, 2016, the amount under dispute totaled R$ 12,447);

(v) IRPJ negative balance claims

The Company received two decisions issued by the Internal Revenue Service of Brazil in which the amounts calculated as negative balance of IRPJ are questioned. The amount under discussion in the lawsuits totaled R $ 57,124 at December 2016.

Currently, both cases await administrative decision due to the filing of a challenge by the Company.

In the opinion of Management and its independent legal advisors, there is a misconception on the part of the Internal Revenue Service of Brazil when assessing the amounts presented by the Company, which is why the probability of loss of the lawsuits is considered possible.

All amounts in thousands of Reais unless otherwise stated

23 Use of public assets

The Company owns or invests in companies that have concession contracts in the electrical power industry. Most of these contracts provide for annual payments from the start-up of operations and are adjusted by the General Market Price Index for the Use of Public Assets.

The contracts have an average duration of 35 years, and the amounts to be paid annually are as follows:

									Parent company
						2016			2015
Plants/companies	Beginning of concession	End of concession	Initial payment date	Interest	Intangible asset	Liabilities	Interest	Intangible asset	Liabilities
Salto Pilão	nov-01	dec-36	jan-10	60%	203.965	515.807	60%	214.160	487.960
Salto do Rio Verdinho	aug-02	sep-37	oct-10	100%	8.170	20.509	100%	8.559	19.271
Itupararanga	nov-03	dec-23	jan-04	100%	591	2.250	100%	673	2.348
Piraju	dec-98	jan-34	feb-03	100%	1.079	6.146	100%	1.142	5.969
Ourinhos	jul-00	aug-35	sep-05	100%	1.296	4.847	100%	1.367	4.637
					215.101	549.559		225.901	520.185
Current						28.230			25.103
Non-current					215.101	521.329		225.901	495.082
					215.101	549.559		225.901	520.185

									Consolidated
						2016			2015
Plants/companies	Beginning of concession	End of concession	Initial payment date	Interest	Intangible asset	Liabilities	Interest	Intangible asset	Liabilities
Salto Pilão	nov-01	dec-36	jan-10	60%	203.965	515.807	60%	214.160	487.960
Salto do Rio Verdinho	aug-02	sep-37	oct-10	100%	8.170	20.509	100%	8.559	19.271
Itupararanga	nov-03	dec-23	jan-04	100%	591	2.250	100%	673	2.348
Piraju	dec-98	jan-34	feb-03	100%	1.079	6.146	100%	1.142	5.969
Ourinhos	jul-00	aug-35	sep-05	100%	1.296	4.847	100%	1.367	4.637
Baesa - Energética Barra Grande	jun-01	may-36	jun-07	15%	14.334	43.670	15%	15.072	41.007
Enercan - Campos Novos Energia	apr-00	may-35	jun-06	45%	4.705	12.423	33%	3.674	8.647
					234.140	605.652		244.647	569.839
Current						31.141			(27.547)
Non-current					234.140	574.511		244.647	542.293
					234.140	605.652		244.647	514.746

All amounts in thousands of Reais unless otherwise stated

24 Equity

(a) Share capital

On December 31, 2016, the Company's fully subscribed and paid-up capital amounted to R$ 4,399,676 (December 31, 2015 – R$ 3,772,290), consisting of 1,205,677,386 (December 31, 2015 – 1,028,889,312) registered common shares.

On June 8, 2015, according to the minutes of an Extraordinary General Meeting, a reduction in the Company's capital by R$ 290,000 was approved, as described in Note 1.1 (a).

On February 25, 2015, according to the minutes of an Extraordinary General Meeting, a reduction in the Company's capital by R$1,208,003 was approved, as described in Note 1.1 (a).

In the Extraordinary General Meeting on July 1, 2016, the increase in capital through the VMSA incorporation was approved in the amount of R$ 627,386, with the issue of 176,788,074 new registered common shares, as described in Note 1.1 (c).

(b) Carrying value adjustments

The Company recognizes under this caption the effects of exchange rate changes on investments in direct or indirect investees abroad. The cumulative effect will be transferred to the statement of operations for the year as a gain or loss only upon the sale or write-off of the investment.

This account also includes: foreign exchange gains (losses) on debts and derivatives designated to mitigate risks related to foreign exchange, commodities prices (hedge accounting), the amount relating to the fair value of available-for-sale financial assets and the remeasurement of retirement benefits.

In addition, for purchases from non-controlling interests, the difference between any consideration paid and the proportion acquired of the carrying value of the net assets of the subsidiary is recorded in equity as "Carrying value adjustments". Gains or losses on disposals of non-controlling interests are also recorded directly in equity.

	Foreign exchange variation on investments abroad	Remeasurements of retirement benefits	Operating hedge accounting	Interest in comprehensive income of investees	Total
At January 1, 2015	4.532	(7.248)	(880)	6.703	3.107
Operating hedge accounting			4.230		4.230
Interest in comprehensive income of investees				(376)	(376)
Deferred tax			(1.438)		(1.438)
At December 31, 2015	4.532	(7.248)	1.912	6.327	5.523
Operating hedge accounting			44.289		44.289
Interest in comprehensive income of investees				44	44
Deferred tax			(15.058)		(15.058)
At December 31, 2016	4.532	(7.248)	31.143	6.371	34.798

All amounts in thousands of Reais unless otherwise stated

25 Revenue

(a) Reconciliation of revenue

The reconciliation of gross and net sales revenue for the year ended was as follows:

	Parent company		Consolidated	
	2016	2015	2016	2015
Gross sales revenue				
Domestic sales	3.071.851	3.176.782	3.206.158	3.263.212
Foreign sales	442.407	287.654	442.588	287.654
Electricity sales	1.236.719	1.588.403	1.418.180	1.850.935
	4.750.977	5.052.839	5.066.926	5.401.801
Taxes on sales and other deductions	(672.491)	(786.465)	(721.474)	(839.661)
Net revenue	4.078.486	4.266.374	4.345.452	4.562.140

(b) Information on geographical areas

The analysis of net revenue by destination is based on the location of the customer. The Company's net revenue classified by destination and currency is as follows:

(i) Revenue by country of destination

	Parent company		Consolidated	
	2016	2015	2016	2015
Brazil	3.636.079	3.978.720	3.902.864	4.274.486
United States	183.863	106.452	183.863	106.452
China	57	67.433	57	67.433
Argentina	106.349	19.519	106.531	19.519
Switzerland	54.629	62.024	54.629	62.024
Mexico	12.778	5.393	12.778	5.393
Other	84.731	26.833	84.730	26.833
	4.078.486	4.266.374	4.345.452	4.562.140

(ii) Revenue by currency

	Parent company		Consolidated	
	2016	2015	2016	2015
Real	3.636.079	3.978.720	3.902.864	4.274.486
US Dollar	442.407	287.654	442.588	287.654
	4.078.486	4.266.374	4.345.452	4.562.140

All amounts in thousands of Reais unless otherwise stated

26 Expenses by nature

The Company's Management elected to disclose expenses by nature in the statement of operations and the nature of these expenses is presented below.

The cost of sales and selling and administrative expenses for the year ended are as follows:

	Parent company		Consolidated	
	2016	2015	2016	2015
Raw materials, inputs and consumables	2.664.939	2.431.036	2.671.676	2.532.464
Employee benefits	584.756	593.776	597.264	606.783
Depreciation, amortization and depletion	339.803	313.999	374.481	344.822
Outsourced services	172.450	166.732	181.081	173.216
Freight expenses	72.998	82.693	73.337	83.046
Other expenses, net	61.528	41.174	65.152	45.911
	3.896.474	3.629.410	3.962.991	3.786.242
Reconciliation				
Cost of products sold and services rendered (i)	3.627.853	3.378.519	3.685.151	3.525.415
Selling	95.247	77.189	98.024	80.343
General and administrative	173.374	173.702	179.816	180.484
	3.896.474	3.629.410	3.962.991	3.786.242

(i) In the Company's accumulated balance as at December 31, 2016, the Company recorded the amount of R$ 56,572 related to the idle production costs of Niquelândia and São Miguel Paulista plants located in Niquelândia State of Goiás and São Paulo State of São Paulo, respectively.

27 Employee benefit expenses

	Parent company		Consolidated	
	2016	2015	2016	2015
Salaries and bonuses	320.625	345.394	328.015	352.820
Social charges	188.486	180.375	191.923	184.261
Social benefits	75.645	68.007	77.326	69.702
	584.756	593.776	597.264	606.783

28 Other operating income, net

	Parent company		Consolidated	
	2016	2015	2016	2015
Realization of financial instrument - firm commitment (i)	(137.908)	(120.302)	(137.908)	(120.302)
Recognition of financial instrument - firm commitment (ii)	6.341	(37.239)	6.341	(37.239)
Provision for asset impairment (iii)	(845.509)	(1.566)	(845.509)	(1.566)
Loss with investment (Note 1.1 (b))	(24.119)		(24.119)	
Tax payment	(16.590)		(16.590)	
Provision for obsolete and slow-moving inventories	(2.115)	7.370	(2.115)	7.370
Net loss on sale of property, plant and equipment	(3.383)	(13.377)	(3.383)	(13.430)
Judicial provision	(117.608)	(2.779)	(117.608)	(2.914)
Expenditures with non-activatable projects	(36.161)	(12.566)	(36.161)	(12.566)
Other gains (expenses), net	(418)	6.493	(1.318)	5.786
	(1.177.470)	(173.966)	(1.178.370)	(174.861)

(i) The realization of the financial instrument is recognized against revenue from energy sales, according to the physical delivery of energy.

(ii) The Company purchased energy according to its consumption needs until December 2020, through firm commitments. These agreements resulted in gains due to the excess of energy, which was recognized by its fair value.

(iii) In 2016, the Company registered a provision for impairment of assets, totaling R$ 845,509 (Note 18 (c)).

All amounts in thousands of Reais unless otherwise stated

29 Finance resultsl, net

	Parent company		Consolidated	
	2016	2015	2016	2015
Finance income				
Gains on financial investments	104.332	107.074	121.267	116.499
Monetary adjustment to assets	22.863	16.811	22.866	16.811
Interest on financial assets	15.928	10.936	16.024	11.203
Interest on transactions with related parties (Note 14)		2.731		
Other finance income, net	3.915	51.456	6.100	51.717
	147.038	189.008	166.257	196.230
Finance cost				
Interest on borrowing	(179.987)	(167.234)	(195.243)	(184.171)
Monetary adjustment of IRPJ/CSLL tax credits - Plano verão		(75.647)		(75.647)
Interest and monetary adjustment - Use of public assets	(48.194)	(68.690)	(56.401)	(76.899)
Interest on prepayment of receivables with related parties (Note 14)	(90.625)	(61.534)	(90.625)	(61.534)
Monetary adjustment of provision	(23.174)	(18.683)	(23.174)	(18.683)
Interest on transactions with related parties (Note 14)	(23.221)	(7.303)	(23.221)	(7.303)
Income tax on remittances of interest abroad	(18.695)	(20.758)	(18.695)	(20.758)
Borrowing costs	(5.539)	(7.446)	(5.539)	(7.446)
Adjustment to present value CPC 12	(25.853)	(22.058)	(25.853)	(22.058)
PIS and COFINS on financial results	(6.547)	(4.252)	(6.746)	(4.252)
Other finance costs, net	(40.166)	(25.206)	(47.824)	(24.505)
	(462.001)	(478.811)	(493.321)	(503.256)
Derivative financial instruments				
Income	2.844	1.063	2.844	1.063
Expenses		(5.866)		(5.866)
	2.844	(4.803)	2.844	(4.803)
Foreign exchange and monetary variations, net	465.977	(996.762)	469.892	(1.005.052)
	153.858	(1.291.368)	145.672	(1.316.881)

30 Defined contribution plan

The Company is a sponsor of private pension plans administered by Fundação Senador José Ermírio de Moraes (“FUNSEJEM”), a not-for-profit private pension fund available to all employees. According to the fund regulations, the contributions made to FUNSEJEM by the employees are based on their remuneration. For employees with remuneration below the limits established in the regulations, the defined contribution will not exceed 1.5% of their monthly remuneration. For employees with remuneration above those limits, the defined contribution will be of up to 6% of their monthly remuneration. Voluntary contributions can also be made to FUNSEJEM. The Company is not required to make additional payments after the contributions to the plan are made.

31 Insurance

Pursuant to the Corporate Insurance Management Policy of the Company and its subsidiaries, different types of insurance policy are contracted, such as operational risk and civil liability insurance, to protect against possible losses arising from production interruptions, property damage and damage to third parties. The operational insurance coverage at December 31, 2016 was as follows:

	Facilities, equipment and inventory
Coverage	**Amount covered in 12/31/2016**
Material damages	12.310.134
Loss of profits	785.833