Votorantim

Votorantim S.A. (formerly known as Votorantim Industrial S.A.)

Consolidated financial statements at December 31, 2016 and independent auditor's report

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(A free translation of the original in Portuguese)

Independent auditor's report

To the Board of Directors and Stockholders
Votorantim S.A.

Opinion

We have audited the accompanying consolidated financial statements of Votorantim S.A. (formerly Votorantim Industrial S.A.) and its subsidiaries ("Company"), which comprise the consolidated balance sheet as at December 31, 2016 and the consolidated statements of operations, comprehensive income (loss), changes in equity and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

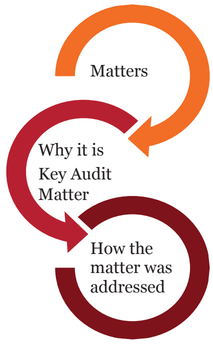
In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Votorantim S.A. and its subsidiaries as at December 31, 2016, and their financial performance and their cash flows for the year then ended, in accordance with accounting 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 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.

Key audit matters

Key audit matters 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 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

Assessment of the impairment of assets (Notes 16, 17 and 18)

During 2016, the economic scenario of the main countries in which the Company and its subsidiaries operate remained challenging. At December 31, 2016, goodwill based on expected future profitability amounted to R$ 6,585 million (of which R$ 5,193 million in "Intangible assets", and R$ 1,392 million in "Investments"), and property, plant and equipment totaled R$ 25,091 million.

We considered this an area of focus in our audit, since the test of impairment of assets involves critical judgments by the Company's management. The determination of the recoverable value depends on the materialization of the projections for economic and market conditions in Brazil, and in the several countries where the Company operates, and is susceptible to changes in assumptions related to the growth rates of prices, volume of sales, expenses and discount rates established by management, among other assumptions used in management's valuation models. Adverse economic conditions may result in significant changes in these assumptions.

Net impairment losses recorded in the year totaled R$ 1,163 million (of which R$ 352 million in "Intangible assets", R$ 43 million in "Investments" and R$ 768 million in "Property, plant and equipment", net of reversals).

How the matter was addressed in the audit

Regarding this matter, we obtained an understanding of the existing key controls for this area and tested them. We also assessed the methodology that management uses to identify the Cash-generating units (CGUs). In addition, we assessed the reasonableness of management's main assumptions, including the discount rate used to determine the value in use and the growth rates for prices and volumes, by comparing them with available economic and industry-related estimates. Furthermore, with the support of our experts, we tested the mathematical accuracy of the calculations and data for the main assumptions used in the cash flow estimations.

Through the sensitivity analysis of the main assumptions used, we also assessed whether the individual or cumulative changes would lead to impairment losses that could significantly exceed those recorded by the Company.

After performing these audit procedures, we considered that the assumptions and methodology used by management are reasonable, and the disclosures are consistent with the data and information obtained in our procedures.

Why it is a Key Audit Matter	How the matter was addressed in the audit
Realization of income tax and social contribution tax credits (Notes 13 and 21)	
The Company and its subsidiaries record deferred taxes arising from temporary differences and income tax and social contribution losses, as well as credits from income tax and social contribution recoverable. These credits were recorded to the extent management considers that the Company will generate future taxable profit that is sufficient for the utilization of these credits. We considered this an area of focus in our audit, since the Company's assessment of the realization of these credits involves important and subjective judgment to determine the future taxable bases for the utilization of these amounts.	Regarding this matter, we obtained an understanding of the key controls that the Company uses to calculate and record tax credits, and tested these controls, as well as the model used to estimate the results. We counted on the support of our experts in tax matters and in the assessment of companies, to test the calculations of credits, and in relation to the models and critical assumptions used by management. We compared these assumptions with macroeconomic information disclosed in the market. We also compared information from these projections with budgets approved by the Company's governance bodies. In addition, we analyzed the realization deadlines considered in the historical data and studies of the Company and its subsidiaries in order to test the adequacy and the consistency of these realization estimates in relation to those used in prior years. Finally, we assessed the disclosures related to the recognition of these tax credits. We consider that the criteria and assumptions that management adopted to determine the tax credits are reasonable in all material aspects in the context of the financial statements.
Provisions and contingent liabilities (Note 23)	
At December 31, 2016, the Company and its subsidiaries had provisions measured based on probable losses estimated in the respective proceedings. The Company and its subsidiaries also have tax, civil, and labor proceedings in progress for which no provisions were recorded in the financial statements because management considered as possible the likelihood of losses for these proceedings, based on the opinion of the Company's internal and external legal advisors. Management applies critical judgment to determine the likelihood of positive outcome for proceedings in progress, as well as to estimate the probable losses, since these matters depend on	Regarding this matter, we verified whether the procedures adopted by management to determine the provisions and the related disclosures are in compliance with the related accounting policy. Furthermore, we obtained confirmation from external legal advisors regarding the likelihood of loss for the major proceedings and the quantification of the amounts estimated as possible and probable losses. We counted on the support of our tax experts to assess the reasonableness of estimates prepared by management and its internal and external legal advisors for certain proceedings, considering their progress and the existing case law, when applicable.

Why it is a Key Audit Matter	How the matter was addressed in the audit
future events that management is not able to control. In this context, the progress of these proceedings, at the several applicable levels, can be different from the results estimated by the management and its internal and external legal advisors, taking into account that changes in court approaches or new case law may significantly affect management's estimates.	We consider that the criteria and assumptions that management used to determine the provisions, and the disclosures in the related explanatory notes are consistent with the information received during our audit.
Assets held for sale - Votorantim Siderurgia S.A. (Notes 1.1(e) e 34)	
On February 23, 2017, the Company entered into an agreement regarding the sale of the control over its subsidiary Votorantim Siderurgia S.A., maintaining a minority interest in the new combined operation resulting from this transaction. Accordingly, considering that the decision to sell this operation had already been made at December 31, 2016, the aforementioned subsidiary is presented in the consolidated financial statements as an asset held for sale, and stated at the fair value. This valuation resulted in a loss of R$ 652 million, net of tax effects. We considered this an area of focus in our audit, since the recording of this transaction involves significant judgments by management, especially as regards the determination of the fair value of the discontinued operations.	We verified if the transaction carried out was in compliance with the conditions established for the classification as discontinued operation, and the valuation at fair value, according to the accounting standards. We also tested the effects of the new measurement of this asset at its fair value, and verified the presentation of this transaction in the consolidated financial statements at December 31, 2016, and the restatement of the comparative figures, when applicable. In our procedures, we did not identify inconsistencies in the recognition of the effects of the transaction in the financial statements and disclosures of the asset classified as discontinued operation.
Securitization of receivables from subsidiaries of the indirect subsidiary VCNA (Note 11(a (i)))	
In 2016, the indirect subsidiary Votorantim Cement North America ("VCNA"), a company operating in the United States of America and in Canada, performed the securitization of receivables from its client portfolio. This operation was carried out with a Special-Purpose Entity ("SPE"), in which VCNA has ownership interest through junior subordinated quotas. The SPE purchases VCNA's securities on rotating bases. These securities are derecognized from the indirect subsidiary's accounts receivable	Regarding this matter, we first obtained, with the support of our experts, an understanding of the operation's format and flow. We obtained and assessed the receivable granting contracts entered into by VCNA and the SPE, as well as the SPE's operation regulation. In addition, we discussed the matter with management. Finally, we assessed the disclosures related to the derecognition of the accounts receivable.

Why it is a Key Audit Matter	How the matter was addressed in the audit
and, consequently, from the consolidated financial statements. We considered this matter an area of focus because of the significant judgment required to assess the features that define whether VCNA has control over the SPE, taking into consideration the power to control the investee, the exposure to, or rights over, variable returns arising from its involvement in the SPE operations, and the ability to affect its returns.	Based on these procedures, we satisfied ourselves regarding the fact that the recordings and disclosures are properly supported by documents and information that we obtained during our audit.

Other matters

Statements of Value Added

The consolidated Statement 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, was submitted to audit procedures performed in conjunction with the audit of the Company's consolidated financial statements. For the purposes of forming our opinion, we evaluated whether this statement is reconciled with the financial statements and accounting records, as applicable, and if its form and content are in accordance with the criteria defined in Technical Pronouncement CPC 09 - "Statement of Value Added". In our opinion, this Statement of Value Added has been properly prepared in all material respects, in accordance with the criteria established in the Technical Pronouncement, and is consistent with the consolidated financial statements taken as a whole.

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

Management is responsible for the preparation and fair presentation of these 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 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.

Votorantim S.A. and its subsidiaries

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the 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 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 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 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, March 2, 2017

PricewaterhouseCoopers
Auditores Independentes
CRC 2SP000160/O-5 "F"

Maurício Colombari
Contador CRC 1SP195838/O-3

Consolidated balance sheet

As at December 31
All amounts in millions of reais

(A free translation of the original in Portuguese)

	Note	2016	2015
Assets			
Current assets			
Cash and cash equivalents	9	6,946	6,649
Financial investments	10	3,190	3,936
Derivative financial instruments	6.1.1	136	180
Trade receivables	11	2,001	2,745
Inventory	12	3,381	3,888
Taxes recoverable	13	1,527	1,376
Dividends receivable	14	180	42
Financial instruments - firm commitment	15	317	903
Other assets		580	767
		18,258	20,486
Assets classified as held-for-sale	34	2,125	414
		20,383	20,900
Non-current assets			
Long-term receivables			
Financial investments	10	39	36
Derivative financial instruments	6.1.1	232	1,361
Taxes recoverable	13	1,586	1,315
Related parties	14	535	3,188
Deferred income tax and social contribution	21 (b)	4,055	4,065
Judicial deposits	23 (b)	420	349
Financial instruments - firm commitment	15	371	65
Other assets		858	514
		8,096	10,893
Investments	16	12,949	5,174
Biological assets		66	81
Property, plant and equipment	17	25,091	29,281
Intangible assets	18	13,013	16,570
		59,215	61,999
Total assets		79,598	82,899

The accompanying notes are an integral part of these consolidated interim financial statements.

Consolidated balance sheet

As at December 31
All amounts in millions of reais

(A free translation of the original in Portuguese)

	Note	2016	2015
Liabilities and equity			
Current liabilities			
Borrowing	19	1,772	2,616
Derivative financial instruments	6.1.1	401	476
Confirming payables	20	968	1,083
Trade payables		2,726	3,179
Salaries and payroll charges		848	918
Taxes payable		422	502
Advances from clients		174	242
Dividends payable	14	48	162
Use of public assets	24	67	61
Financial instruments - firm commitment	15		2
Deferred revenue - performance obligation	22	244	244
Other liabilities		795	713
		8,465	10,198
Liabilities related to assets as held-for-sale	34	1,522	
		9,987	10,198
Non-current liabilities			
Borrowing	19	22,631	27,915
Derivative financial instruments	6.1.1	342	601
Deferred income tax and social contribution	21 (b)	1,983	2,061
Related parties	14	22	1,216
Provision	23	2,346	2,189
Use of public assets	24	1,119	1,064
Pension plan	31	317	305
Financial instruments - firm commitment	15	10	81
Deferred revenue - performance obligation	22	515	752
Other liabilities		1,503	519
		30,788	36,703
Total liabilities		40,775	46,901
Equity			
Share capital	25 (a)	28,656	21,419
Revenue reserves		6,254	7,436
Carrying value adjustments	25 (e)	1,255	2,967
Total equity attributable to owners of the Company		36,165	31,822
Non-controlling interests	25 (f)	2,658	4,176
Total equity		38,823	35,998
Total liabilities and equity		79,598	82,899

The accompanying notes are an integral part of these consolidated interim financial statements.

Consolidated statement of income

Years ended December 31
All amounts in millions of reais unless otherwise stated

(A free translation of the original in Portuguese)

	Note	2016	2015
Continuing operations			
Net revenue from products sold and services rendered	26	26,738	29,272
Cost of products sold and services rendered	27	(20,773)	(21,967)
Gross profit		5,965	7,305
Operating expenses			
Selling	27	(1,667)	(1,625)
General and administrative	27	(2,112)	(2,083)
Other operating expenses, net	29	(2,605)	(440)
		(6,384)	(4,148)
Operating profit (loss) before equity results and finance results		(419)	3,157
Result from equity investments			
Equity in the results of investees	16	737	299
Realization of other comprehensive income on disposal of investments	1.1 (b)	44	
		781	299
Finance results, net	30		
Finance income		1,397	1,071
Finance costs		(2,666)	(2,853)
Derivative financial instruments		(1,006)	444
Foreign exchange losses, net		544	(564)
		(1,731)	(1,902)
Profit (loss) before income tax and social contribution		(1,369)	1,554
Income tax and social contribution	21 (a)		
Current		(481)	(714)
Deferred		868	(164)
Profit (loss) for the year from continuing operations		(982)	676
Discontinued operations			
Loss for the year from discontinued operations	2.3 (b) and 34	(268)	(294)
Profit (loss) for the year		(1,250)	382
Profit (loss) attributable to the owners of the Company		(1,295)	387
Profit (loss) attributable to non-controlling interests		45	(5)
Profit (loss) for the year		(1,250)	382
Weighted average number of shares - thousands		18,278,789	17,936,229
Basic and diluted earnings (loss) per thousand shares, in reais (owners of the Company)		(70.85)	21.58
From continuing operations			
Basic and diluted earnings (loss) per thousand shares, in reais		(56.19)	37.97
From discontinued operations			
Basic and diluted loss per thousand shares, in reais		(14.66)	(16.39)

The accompanying notes are an integral part of these consolidated interim financial statements.

Consolidated statement of comprehensive income

Years ended December 31
All amounts in millions of reais unless otherwise stated

(A free translation of the original in Portuguese)

	Note	2016	2015
Profit (loss) for the year		(1,250)	382
Other components of comprehensive income to be subsequently reclassified to profit or loss			
Foreign exchange variation attributable to the owners of the Company	25 (e)	(4,553)	6,649
Foreign exchange variation attributable to non-controlling interests		(711)	1,502
Hedge accounting for net investments abroad, net of taxes	6.1.3	2,033	(3,948)
Hedge accounting for the operations of subsidiaries		52	28
Fair value of financial assets available-for-sale		227	
Realization of comprehensive income on disposal of investment	1.1 (b)	(44)	
Share in other comprehensive income of investees		(59)	78
		(3,055)	4,309
Other components of comprehensive income that will not be reclassified to profit or loss			
Remeasurement of retirement benefits, net of taxes	31	(42)	25
Other comprehensive income (loss) for the year		(3,097)	4,334
Total comprehensive income (loss) for the year		(4,347)	4,716
Comprehensive income (loss) from			
Continuing operations		(3,948)	5,050
Discontinued operations		(399)	(334)
		(4,347)	4,716
Comprehensive income (loss) attributable to			
Owners of the Company		(3,681)	3,219
Non-controlling interests		(666)	1,497
		(4,347)	4,716

Consolidated statement of changes in equity

Years ended December 31
All amounts in millions of reais unless otherwise stated

(A free translation of the original in Portuguese)

		Attributable to the owners of the Company								
			Revenue reserves							
	Note	Share capital	Tax incentives	Legal	Profit retenion	Retained (loss) earnings	Carrying value adjustments	Total	Non-controlling interests	Total equity
On January 1, 2015		20,363	6	635	6,638		586	28,228	3,483	31,711
Comprehensive income for the year										
Profit (loss) for the year						387		387	(5)	382
Other comprehensive income							2,832	2,832	1,502	4,334
						387	2,832	3,219	1,497	4,716
Total contributions by and distributions to shareholders										
Securities convertible into shares		936				(138)	(830)	(32)		(32)
Increase in share capital		120						120		120
Increase in non-controlling interests - Yacuces									55	55
Increase in non-controlling interests - Itacamba									53	53
Fair value of the share increase in subsidiary Milpo							379	379	(845)	(466)
Allocation of net income for the year										
Legal reserve				19		(19)				
Profit retention					138	(138)				
Dividends						(92)		(92)	(67)	(159)
		1,056		19	138	(387)	(451)	375	(804)	(429)
On December 31, 2015		21,419	6	654	6,776		2,967	31,822	4,176	35,998
Comprehensive income (loss) for the year										
Profit (loss) for the year						(1,295)		(1,295)	45	(1,250)
Other comprehensive income (loss)							(2,386)	(2,386)	(711)	(3,097)
						(1,295)	(2,386)	(3,681)	(666)	(4,347)
Total contributions by and distributions to shareholders										
Capital increase	1.1 (a) and 25 (a)	7,237						7,237		7,237
Fair value on interest variation - Zinc & byproducts ("VMH")	1.1 (c)						572	572	(572)	
Repurchase of shares - Milpo	1.1 (c)						102	102	(191)	(89)
Reversal of dividends	25 (b)				113			113		113
Allocation of net income for the year										
Tax incentive reserve			4			(4)				
Dividends									(89)	(89)
Offset of loss for the year					(1,299)	1,299				
		7,237	4		(1,186)	1,295	674	8,024	(852)	7,172
On December 31, 2016		28,656	10	654	5,590		1,255	36,165	2,658	38,823

The accompanying notes are an integral part of these consolidated interim financial statements.

Consolidated statement of cash flows

Years ended December 31
All amounts in millions of reais

(A free translation of the original in Portuguese)

	Note	2016	2015
Cash flow from operating activities			
Profit (loss) before income tax and social contribution		(1,369)	1,554
Loss for the year from discontinued operations		(268)	(294)
Adjustments of items that do not represent changes in cash and cash equivalents			
Depreciation, amortization and depletion	35	2,788	2,754
Equity in the results of investees	16	(737)	(299)
Realization of other comprehensive income on disposal of investments	1.1 (b)	(44)	
Interest, indexation and foreign exchange variations		962	2,567
Provision for impairment of fixed, intangible assets and investments	29	2,151	650
Gain on sale of fixed and intangible assets, net	29	(149)	(345)
Gain on sale of investments, net	29	(312)	(265)
Allowance for doubtful accounts	11 (c)	4	
Fair value adjustment - Resolution 4131	19 (c)	(26)	
Discount on repurchase of bonds	30	(173)	
Provision		384	151
Derivative financial instruments	6.1.1	791	(386)
Financial instruments - firm commitment	15	252	326
Change in fair value of biological assets		(10)	44
		4,244	6,457
Decrease (increase) in assets			
Financial investments		1,754	503
Derivative financial instruments		(72)	57
Trade accounts receivable		522	(320)
Inventory		322	(435)
Taxes recoverable		171	(81)
Related parties		320	(28)
Other accounts receivable and other assets		(111)	(33)
Increase (decrease) in liabilities			
Trade payables		(300)	854
Salaries and social charges		(20)	127
Use of public assets		105	145
Taxes payable		(102)	(71)
Other liabilities		304	(29)
Cash provided by operations		7,137	7,146
Interest paid on borrowing and use of public assets		(1,779)	(1,876)
Premium paid on the Tender Offer			(136)
Income tax and social contribution paid		(491)	(634)
Net cash provided by operating activities		4,867	4,500
Cash flow from investment activities			
Proceeds from disposals of fixed and intangible assets		379	328
Proceeds from sale of investments - Sirama		566	142
Proceeds from sales of other investments		82	285
Dividends received		245	716
Capital decrease in investees	16 (c)		(22)
Acquisitions of property, plant and equipment	17	(3,026)	(3,199)
Increase in biological assets		(5)	(13)
Capital increase in investees			57
Increase in intangible assets	18	(181)	(105)
Net cash used in investment activities		(1,940)	(1,811)
Cash flow from financing activities			
New borrowing	19 (c)	6,162	7,191
Repayment of borrowing	19 (c)	(7,376)	(7,576)
Derivative financial instruments	6.1.1	(371)	151
Capital increase			120
Increase in non-controlling interests - Itacamba			53
Increase in non-controlling interests - Yacuces			55
Fair value of interest increase - Milpo			(466)
Interest on debentures - VFIN			(106)
Dividends paid		(105)	(386)
Net cash used in financing activities		(1,690)	(964)
Increase in cash and cash equivalents		1,237	1,725
Cash increase resulting from incorporation	1 (i)	177	
Effect of fluctuations in exchange rates		(1,117)	1,384
Cash and cash equivalents at the beginning of the year		6,649	3,540
Cash and cash equivalents at the end of the year		6,946	6,649
Main non-cash transactions			
Increase in non-cash assets resulting from incorporation	1 (i)	7,060	
Transfers of assets classified as held-for-sale		2,125	697
Discount on repurchase of bonds	30	(173)	
Transfer of liabilities related to assets classified as held-for-sale		(1,522)	(105)
Capital increase through ownership interests and other non-current assets			936
Exchange of lands with investee Fibria Celulose S.A.			171
Proceeds of property, plant and equipment from sale of Baraúna			30
Loans from FINAME for acquisition of property, plant and equipment			13

The accompanying notes are an integral part of these consolidated interim financial statements.

Consolidated statement of value added

Years ended December 31
All amounts in millions of reais

(A free translation of the original in Portuguese)

	Note	2016	2015
Revenue			
Sales of products and services		31,156	34,215
Estimated loss on doubtful accounts	11 (c)	(70)	(61)
Other operating income, net		585	807
		31,671	34,961
Inputs acquired from third parties			
Raw materials and other production inputs		(18,403)	(18,000)
Materials, energy, outsourced services and others		(512)	(555)
Impairment of assets	29	(2,151)	(652)
Gross value added		10,605	15,754
Depreciation, amortization and depletion	27	(2,664)	(2,631)
Net value added generated by the Company		7,941	13,123
Value added received through transfers			
Equity in the results of investees		781	299
Finance income and foreign exchange gains		5,083	7,127
		5,864	7,426
Total value added to distribute		13,805	20,549
Distribution of value added			
Personnel and payroll charges	28		
Direct remuneration		2,704	2,757
Social charges		1,047	1,008
Benefits		629	554
		4,380	4,319
Taxes and contributions			
Federal		2,085	3,008
State		2,298	3,242
Municipal		18	25
Deferred taxes		(868)	164
		3,533	6,439
Third-party capital remuneration			
Finance costs and foreign exchange losses		6,814	9,029
Rentals		328	380
		7,142	9,409
Own capital remuneration			
Non-controlling interests		45	(5)
Dividends		89	159
Reinvested profits (offset losses)		(1,116)	522
Loss on discontinued operations		(268)	(294)
		(1,250)	382
Value added distributed		13,805	20,549

The accompanying notes are an integral part of these consolidated interim financial statements.

Notes to the consolidated financial statements

at December 31, 2016
All amounts in millions of reais unless otherwise stated

1 General considerations

Votorantim S.A. (the "Company", the "parent company", or "VSA"), formerly known as Votorantim Industrial S.A., is a privately held company, fully controlled by the Ermírio de Moraes family, and is the holding company of the Votorantim Group. With its headquarters in the city of São Paulo, Brazil, the Company's purpose is to manage assets and companies, as well as to invest in other companies in order to further its objectives.

The Company, through its subsidiaries and associates, operates in the following segments: cement, zinc and byproducts, aluminum, electrical energy, steel, wood pulp, agribusiness and finance.

1.1. Main events that occurred during 2016

(a) Incorporation of Votorantim Participações S.A. ("VPAR")

With the main objective of structuring in the most appropriate way its operations in all the segments, on January 1, 2016, the Company incorporated its parent company VPAR and changed its corporate name to Votorantim S.A. The net assets incorporated were evaluated by their book value. This merger resulted in an increase of R$ 7,237, in the Company's equity, represented substantially by investments in Citrosuco and Banco Votorantim, amounting to R$ 3,242 and R$ 4,466, respectively, which are still registered by the equity method. In this context, VSA succeeds VPAR in all its rights and obligations, including compliance with the covenants of loan contracts, and, when required, certain indexes are now calculated based on the financial statements of Votorantim S.A.

The summarized balance sheet of VPAR used for the incorporation is presented below:

	1/1/2016		1/1/2016
Assets		**Liabilities**	
Current assets	539	Current liabilities	217
Non-current assets		Non-current liabilities	1,736
Long-term receivables	1,244		
Investments	39,230	**Equity**	39,060
Votorantim Industrial S.A.	31,822		
Other	7,408		
	40,474		
Total assets	41,013	**Total liabilities and equity**	41,013

(b) Sale of Sirama Participações Administração e Transportes Ltda. ("Sirama")

On January 26, 2016, the General Superintendence of the Administrative Council for Economic Defense ("CADE") issued its approval for the sale of the shares owned by Votorantim Cimentos S.A. ("VCSA") in the investee Sirama. On March 3, 2016, the company recorded the net gain related to the sale in the amount of R$ 293 and, consequently, registered the write-off related to exchange variation on investments registered abroad in "Realization of other comprehensive income on disposal of investments", in the amount of R$ 44.

(c) Corporate restructuring in the zinc and byproducts segment - VM Holding S.A. ("VMH")

On April 12, 2016, the subsidiary Votorantim Metais Cajamarquilla S.A. ("Cajamarquilla") acquired 264,157,507 shares of Compañía Minera Milpo S.A.A. ("Milpo") and raised its participation to 80.23% of the capital. The increment to the investment account was R$ 1,501 (USD 424 million), from which R$ 604 (USD 171 million) were paid with own resources and the R$ 897 (USD 253 million) amount, by way of discount, was registered as a credit in "Carrying value adjustments", in the equity.

On April 19, 2016, the Company sold 10.65% of its participation held in subsidiary VMH. The effect of investment reduction was R$ 738 (USD 208 million), from which R$ 604 (USD 171 million) was received in currency and the R$ 134 (USD 37 million) amount was registered as debt in "Carrying value adjustments", in the equity.

On April 20, 2016, there was an additional payment deliberation, in the amount of R$ 13 (USD 4 million), to the non-controlling shareholders of VMH.

On May 3, 2016, the subsidiary Votorantim FinCo GmbH transferred its shares in Votorantim GmbH ("VGmbH") to Votorantim GmbH (formerly known as Votorantim MetalsCo GmbH), a company wholly owned by VMH. The effect of this transfer reduced the participation of the Company in the investment in R$ 192 and was registered as debt in "Carrying value adjustments", inside the equity.

On December 9, 2016, Milpo repurchased 2.75% of its own shares, amounting to R$ 102 (USD 31 million).

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

In July 1, 2016, Companhia Brasileira de Alumínio ("CBA") incorporated the net assets, amounting to R$ 627, corresponding to VMSA's equity, which was, until then, controlled by the Company. This corporate reorganization is part of the strategy defined by the Group, of which CBA and VMSA are part, which aims to reduce administrative and financial expenses, as well as optimize business management. As a result of this merger, CBA had its social capital increased by the amount of the net assets, measured at the book value.

(e) Assets classified as held-for-sale

The Company began to negotiate its long steel operations in Brazil, which are developed by Votorantim Siderurgia ("VS") and, as a result, the assets and liabilities of these operations were classified as held-for-sale. The valuation of this transaction at fair value generated expenses net of tax effects of R$ 652 (Note 34). For more information, see Note 36 (vi).

(f) Provision for impairment of assets

In 2016, the subsidiary CBA registered a provision for impairment of fixed and intangible assets at the Nickel cash generating unit (CGU), in the amounts of R$ 672 and R$ 174, respectively, totaling an impairment of R$ 846, recorded in "Other operating expenses, net" (Note 29).

2 Presentation of the consolidated financial statements

2.1. Basis of preparation

(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 Administration 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.

(b) Approval of the financial statements

The Board of Directors approved these consolidated financial statements for issue on March 02, 2017.

2.2. Consolidation

(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.

All amounts in millions of reais unless otherwise stated

(b) Transactions with non-controlling interests

The Company treats transactions with non-controlling interests as transactions with equity owners of the Company. For purchases from non-controlling interests, the difference between any consideration paid and the proportion acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded directly in equity, in "Profit retention reserves".

(c) Loss of control of subsidiaries

When the Company ceases to have control, any retained interest in the entity is re-measured to its fair value, with the change in carrying amount recognized in profit and loss. The amounts previously recognized in carrying value adjustments are reclassified to profit and loss.

(d) 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.

(e) Main companies included in the consolidated financial statements

	Percentage of total and voting capital			
	2016	**2015**	**Headquarters**	**Main activity**
Cement				
Acariúba Mineração e Participação Ltda.	100.00	100.00	Brazil	Holding
Interávia Transportes Ltda.	100.00	100.00	Brazil	Transportation
Silcar Empreendimentos, Comércio e Participações Ltda.	100.00	100.00	Brazil	Holding
Votorantim Cimentos N/NE S.A. - "VCNNE"	100.00	100.00	Brazil	Cement
Votorantim Cimentos S.A. - "VCSA"	100.00	100.00	Brazil	Cement
Votorantim Cement North America Inc. - "VCNA"	100.00	100.00	Canada	Holding
Votorantim Cimentos EAA Inversiones, S.L. - "VCEAA"	100.00	100.00	Spain	Holding
St. Marys Cement Inc.	100.00	100.00	USA	Cement
Cementos Artigas S.A. - "Artigas"	51.00	51.00	Uruguay	Cement
Aluminum ("CBA")				
Companhia Brasileira de Alumínio - "CBA"	100.00	100.00	Brazil	Aluminum
Nazca Participações Ltda.		100.00	Brazil	Mining
Nickel				
Votorantim Metais S.A.		100.00	Brazil	Nickel
Zinc and byproducts ("VMH")				
Votorantim GmbH (formerly known as Votorantim Metals GmbH)	100.00	100.00	Austria	Zinc
Votorantim Investimentos Latino-Americanos S.A. - "VILA"	100.00	100.00	Brazil	Holding
Votorantim Metais Zinco S.A. - "VMZ"	100.00	100.00	Brazil	Zinc
US Zinc Corporation - "USZinc"	100.00	100.00	USA	Zinc
VM Holding S.A. - "VMH"	89.35	100.00	Luxembourg	Holding
Votorantim Metais Cajamarquilla S.A. - "Cajamarquilla"	99.91	99.91	Peru	Zinc
Compañia Minera Atacocha S.A.A.	91.00	88.19	Peru	Mining
Compañia Minera Milpo S.A.A. - "Milpo"	80.23	60.06	Peru	Mining
Steel				
Acerbrag S.A.	100.00	100.00	Argentina	Steel
Votorantim Siderurgia S.A. - "VS"	100.00	100.00	Brazil	Steel
Acerías Paz del Río S.A. - "APDR"	82.42	82.42	Colombia	Steel
Holding				
Votorantim FinCO GmbH - "Finco"	100.00	100.00	Austria	Trading
Votorantim GmbH - "VGmbH"		100.00	Austria	Trading
Santa Cruz Geração de Energia S.A.	100.00	100.00	Brazil	Electric power
Ventos de São Vicente Energias Renováveis S.A.	100.00	100.00	Brazil	Holding
Votener - Votorantim Comercializadora de Energia Ltda.	100.00	100.00	Brazil	Electric power
Votorantim Energia Ltda. - "VE"	100.00	100.00	Brazil	Holding
Votorantim Geração de Energia S.A.	100.00	100.00	Brazil	Holding
Votorantim Novos Negocios Ltda. "VNN"		100.00	Brazil	Holding
St. Helen Holding II B.V. "St. Helen"	100.00		Cayman Islands	Holding
Hailstone Ltd.	100.00		British Virgin Islands	Holding
Votorantim RE	100.00	100.00	Luxembourg	Insurance
Financial segment				
Votorantim Finanças S.A.	100.00		Brazil	Finance
Joint operations				
Baesa - Energética Barra Grande S.A.	15.00	15.00	Brazil	Electric power
Campos Novos Energia S.A.	44.76	44.76	Brazil	Electric power
Voto - Votorantim Overseas Trading Operations IV Limited	50.00	50.00	Cayman Islands	Holding
Exclusive investment funds				
Fundo de Investimento Pentágono Multimercado - Crédito Privado		100.00	Brazil	Finance
Fundo de Investimento Pentágono VC Multimercado – Crédito Privado	100.00		Brazil	Finance
Fundo de Investimento Pentágono CBA Multimercado – Crédito Privado	100.00		Brazil	Finance
Odessa Multimercado Crédito Privado	91.17	61.17	Brazil	Finance
Odessa Multimercado Crédito Privado Fundo de investimento VC	100.00		Brazil	Finance
Odessa Multimercado Crédito Privado Fundo de investimento VM	100.00		Brazil	Finance

All amounts in millions of reais unless otherwise stated

2.3. Restatement of comparative figures

(a) Confirming payable

The subsidiaries reclassified the confirming payable operation which was originally presented on the balance sheet on the row "Trade payables" and "Payables - Trading" to a specific row on the short term liability named "Confirming payable", according to the normative interpretation issue by CVM (IN 01/2016) disclosed on February 18, 2016. Due to that, seeking comparability and a reliable presentation of the confirming payable operation, the information disclosed on December 31, 2015 was reclassified, as follows:

Type	As prior presented	Restatement	Restated
Trade payables	4,136	(957)	3,179
Payables - Trading	126	(126)	
Confirming payable		1,083	1,083
	4,262		4,262

(b) Assets classified as held-for-sale

In accordance with "IFRS 5 / CPC 31 - Assets held-for-sale and discontinued operations", the Company reclassified its long steel operations in Brazil from continuing operations to discontinued operations, resulting in changes in the amounts presented previously in the financial statements as of December 31, 2015. Thus, we present below the effects of these reclassifications:

	As prior presented	Impacts of Brazil long steel operations reclassification	Restated
Continuing operations			
Net revenue from products sold and services rendered	31,521	(2,249)	29,272
Cost of products sold and services rendered	(23,532)	1,565	(21,967)
Gross profit	7,989	(684)	7,305
Operating expenses			
Selling	(1,835)	210	(1,625)
General and administrative	(2,272)	189	(2,083)
Other operating expenses, net	(817)	377	(440)
	(4,924)	776	(4,148)
Operating profit before equity results and finance results	3,065	92	3,157
Result from equity investments			
Equity in the results of investees	311	(12)	299
Realization of other comprehensive income on disposal of investments			
	311	(12)	299
Finance results, net			
Finance income	1,137	(66)	1,071
Finance costs	(2,937)	84	(2,853)
Derivative financial instruments	517	(73)	444
Foreign exchange losses, net	(729)	165	(564)
	(2,012)	110	(1,902)
Profit before income tax and social contribution	1,364	190	1,554
Income tax and social contribution			
Current	(714)		(714)
Deferred	(258)	94	(164)
Profit for the year from continuing operations	392	284	676
Discontinued operations			
Loss for the year from discontinued operations	(10)	(284)	(294)
Profit for the year	382		382
Profit attributable to the owners of the Company	387		387
Loss attributable to non-controlling interests	(5)		(5)
Profit for the year	382		382

2.4. Foreign currency translation

(a) Functional and presentation currency of the financial statements

The functional currency 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 net investment hedges.

(c) Subsidiaries with a different functional currency

The results and financial positions of all the Company entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

(i) assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;

(ii) income and expenses for each statement of income are translated at average exchange rates; and

(iii) all resulting exchange differences are recognized as a separate component of equity, in "Carrying value adjustments".

The amounts presented in the cash flow are extracted from the translated movements of the assets, liabilities and profit or loss, as detailed above.

On consolidation, exchange differences arising from the translation of the net investment in foreign operations, and of borrowings and other foreign currency instruments designated as hedges of such investments, are taken to equity. When a foreign operation is partially disposed of or sold, exchange differences that were recorded in equity are recognized in the statement of income as part of the gain or loss on sale.

Goodwill and fair value arising from the acquisition of an entity abroad are treated as assets and liabilities of the entity abroad and converted at the closing rate.

Below are the functional currencies defined for the significant foreign subsidiaries:

Company	Country	Functional currency	Main activity
VCNA	Canada	US Dollar	Holding
VCEAA	Spain	Euro	Holding
Cajamarquilla	Peru	US Dollar	Zinc
USZinc	EUA	US Dollar	Zinc
Milpo	Peru	US Dollar	Mining
APDR	Colombia	Colombian Peso	Steel
Acerbrag	Argentina	Argentine Peso	Steel
VMHolding	Luxembourg	US Dollar	Holding
Votorantim GmbH (formerly known as Votorantim Metals GmbH)	Austria	US Dollar	Zinc
FinCO	Luxembourg	US Dollar	Trading

2.5. 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.

2.6. Financial instruments

2.6.1. Classification, recognition and measurement

The Company and its subsidiaries classify their financial instruments depending on the purpose for which the financial instruments were acquired. Management determines the classification of financial instruments 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 subsidiary Votener - Votorantim Comercializadora de Energia Ltda. centralizes the energy purchase and sale transactions to meet the demands of Group companies. Part of these transactions are 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 Group companies 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.

(e) Financial assets available-for-sale

Financial assets available-for-sale are non-derivatives that are not classified in any of the previous categories. They are presented as non-current assets unless management intends to dispose of the investment within 12 months after the balance sheet date.

2.6.2. Impairment of financial assets carried at amortized cost

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.

2.7. 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 (zinc, aluminum and nickel) on sales of certain commodities combined with the sale of U.S. Dollar forward contracts. These subsidiaries adopt hedge accounting for the derivative instruments entered into for this purpose.

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 "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 realization of the hedged exports and/or sales referenced to London Metal Exchange ("LME") prices.

(b) Fair value hedges

With the objective of maintaining the flow of the metal businesses' operating revenue pegged to LME prices, the subsidiaries enter into hedging transactions under which they convert sales at fixed prices to floating prices in commercial transactions with customers interested in purchasing products at a fixed price. Changes in the fair values of derivatives that are designated and qualify as fair value hedges are recorded in "Operating income (expenses)".

(c) Net investment hedges

Hedges of net investments in foreign operations are accounted for in a similar manner to cash flow hedges.

Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognized in "Carrying value adjustments". The gain or loss relating to the ineffective portion is recognized immediately in income. Gains and losses accumulated in equity are included in the statement of income when the foreign operation is partially or fully disposed of or sold.

2.8. 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.

2.9. Inventories

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. Raw materials derived from biological assets are measured at fair value, less estimated point-of-sale costs at the point of harvest, when they are transferred to inventories in non-current assets.

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. Inventory adjustments are recorded under “Cost of goods sold and services rendered”.

2.10. 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. Thus, deferred tax assets and liabilities in different entities or in different countries are presented separately, and not net.

2.11. 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.

2.12. 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 18.

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.

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

2.13. Leases

Leases of property, plant and equipment under which the Company has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalized at the inception of the lease at the lower of the fair value of the leased item and the present value of the minimum lease payments.

Each lease payment is allocated between the liability and finance charges. The corresponding rental obligations, net of finance charges, are included in other payables.

The interest element of the finance cost is charged to the statement of income over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The property, plant and equipment acquired under finance leases are depreciated over the useful life of the asset.

2.14. Assets classified as held-for-sale

Assets (or disposal groups) are classified as assets held-for-sale when their carrying amount is to be recovered principally through a sale transaction and the sale is considered highly probable. These assets are stated at the lower of their carrying amount and fair value, less costs to sell.

Depreciation of assets ceases when a group of assets is classified as held-for-sale. The assets and liabilities are presented in single lines in assets and liabilities.

2.15. 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 Cash-Generating Units (“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).

(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.

(e) Contractual customer relationships and non-competition agreements

Contractual customer relationships and non-competition agreements acquired in a business combination are recognized at fair value at the acquisition date. The contractual customer relations and non-competition agreements have a finite useful life and are carried at cost less accumulated amortization. Amortization is calculated using the straight-line method over the estimated useful lives as follows:

Customer relationships..................... Fifteen years

Non-competition agreements ....Five years

2.16. Business combinations and goodwill based on expected future profitability

The Company applies the acquisition method to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair value of the assets transferred, the liabilities incurred and the equity interests issued by the Company. The consideration transferred includes the fair value of assets or liabilities resulting from a contingent consideration arrangement, when applicable. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The Company recognizes any non-controlling interest in the acquiree on an acquisition-by-acquisition basis, either at fair value or at the non-controlling interest's proportionate share of the fair value of the acquiree's identifiable net assets. Non-controlling interests are determined on each acquisition.

2.17. 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 were adjusted due to impairment are subsequently reviewed for possible reversal of the impairment at the balance sheet date.

2.18. 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.

2.19. 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.

2.20. Provision

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

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 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. Losses classified as possible are not recognized for accounting purposes, and are disclosed in the notes. Contingencies with probability of loss classified as remote are not provisioned nor disclosed, except when the Company considers its disclosure justified. The classification of losses between possible, probable and remote is based on the management's assessment, based on the opinion of its legal advisors.

Provision is measured at the present value of the expenditures 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 the provision due to time elapsing is recognized as interest expense. Provision does not include future operating losses.

(b) Asset retirement obligations

The calculation of asset retirement obligations involves judgment about certain assumptions. In environmental terms, they refer to the future obligation to restore the 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 the pre-existing condition. 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.

Expenditures relating to mine retirement are recorded as asset retirement obligations. 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.

(c) Obligation for environmental liabilities

The environmental liability must be recognized when there is an obligation on the part of the Company that incurred an environmental cost not yet paid, provided that it meets the recognition criteria as an obligation. Therefore, this type of liability is defined as being a present obligation of the Company that arose from past events.

2.21. Employee benefits

(a) Pension obligations

The Company, through its subsidiaries abroad (VCNA, VCEAA, Artigas and APDR) and in Brazil (VCNNE), participates in pension plans managed by a private pension entity, which provide post-employment benefits to employees.

The liability recognized in the balance sheet in respect of defined benefit pension plans is the present value of the defined benefit obligation at the balance sheet date minus the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using market interest rates that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension obligation. In countries where there is no active market related to such obligations, market rates for government securities are used.

Actuarial gains and losses arising from changes in actuarial assumptions are recognized within "Carrying value adjustments" in the period in which they arise.

Past-service costs are recognized immediately in the statement of income, unless the changes to the pension plan are conditional on the employees remaining in service for a specified period of time (the vesting period). In this case, past-service costs are amortized on a straight-line basis over the vesting period.

For defined contribution plans, the Company pays contributions to the pension plan administrators on a compulsory, contractual or voluntary basis. The Company no longer has payment obligations once the contributions are paid. Contributions are recognized as employee benefit expense when due. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in the future payments is available.

(b) Health care (post-retirement)

The liability related to the health care plan for retired employees is stated at the present value of the obligation, less the market value of the plan assets, adjusted by actuarial gains and losses and past-service costs, in a manner similar to the accounting methodology used for defined benefit pension plans. The post-retirement health care obligation is calculated annually by independent actuaries. The present value of the post-retirement health care obligation is determined based on an estimate of the future cash outflow.

Actuarial gains and losses arising from changes in actuarial assumptions are fully recognized within "Carrying value adjustments" in the period in which they arise.

(c) 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".

2.22. Share capital

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

2.23. Distribution of dividends

This is recognized as a liability in the Company's financial statements at year-end based on the Company's bylaws. Any amount that exceeds the minimum required, 25% of the profit for the year, is only recognized on the date it is approved by the stockholders at the General Meeting.

2.24. Earnings per share

Earnings per share are calculated by dividing the profit attributable to the controlling stockholders by the weighted average number of common shares during the year.

2.25. Revenue recognition

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

(a) Sales of products and services

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 as described below. 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 sale of energy, which meets the definition of a financial instrument, is recognized in the Company's financial statements at its fair value.

(c) Interest income

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

2.26. Government grants

Government grants are recorded at fair value when there is a reasonable guarantee that the grant will be received and the Company will be able to comply with all of the required conditions.

Government grants related to costs are deferred and recorded in the statement of income during the period required to reconcile them with the costs that they are intended to offset.

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 - (CPC 17) "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.

The 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) Business combinations

In a business combination, the identifiable assets acquired and liabilities assumed are measured at fair value on the acquisition date. The non-controlling interest in the company acquired is valued at the fair value of the business or at the relevant portion of value of the company's net identifiable assets. The measurement of these assets and liabilities, on the acquisition date, is subject to fair value analysis, including estimates of future cash flow, fair value, credit risk and others, and could be significantly different from actual results.

(b) 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).

(c) 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.

(d) Deferred income tax and social contribution

The Company is subject to income taxes in all countries in which it operates. The provision for income tax is calculated individually by the entity based on 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 21).

(e) 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.

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

The Company is a 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 23).

(g) Impairment of goodwill and investments

The recoverable amounts of CGUs were determined according to the value in use, based on the discounted cash flow model. The recoverable amount is sensitive to the rate used in the discounted cash flow model, as well as the expected future cash receipts and the growth rate used for extrapolation purposes.

For the recoverable amount of its investments, the Company applies a similar procedure to impairment testing of goodwill (Note 18 (c)).

(h) Use of public assets

The amount is originally recognized as a financial liability (obligation) and as an intangible asset (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 (present value of the future payment cash flows).

5 Social and environmental risk management

The Company, through its subsidiaries and associates, operates in various segments and consequently, these 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, or those relating to environmental protection. The 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 the compliance with the mandatory emissions levels.

The Company carries 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.

All amounts in millions of reais unless otherwise stated

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 US 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. The financial risk management process aims to protect the cash flow and its operational (revenues and costs) and financial (financial assets and liabilities) components against adverse market events, such as fluctuations in the prices of currencies, interest rates and commodity prices, and against adverse credit events. In addition, it aims to preserve liquidity.

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 Company has certain investments in foreign operations, the net assets of which are exposed to foreign exchange risk. Foreign exchange exposure arising from the Company's foreign operations is mainly hedged by borrowings in the same currency of these investments, being classified as net investment hedges, as described in Note 2.7.

We present below the carrying amounts of assets and liabilities indexed to foreign currency at the end of the reporting period:

	Note	2016	2015
Assets denominated in foreign currency			
Cash and cash equivalents	9	4,641	3,838
Financial investments	10	517	1,034
Derivative financial instruments	6.1.1	367	1,540
Trade receivables		855	1,680
Related parties		454	2,071
		6,834	10,163
Liabilities denominated in foreign currency			
Borrowing (*)		18,423	22,547
Derivative financial instruments	6.1.1	742	1,077
Trade payables		1,828	2,923
Confirming payables	20	605	819
Related parties		585	734
		22,183	28,100
Net exposure		(15,349)	(17,937)

(*) Does not consider borrowing costs.

(ii) **Cash flow and fair value interest rate risk**

The interest rate risk arises from the fluctuations of each of the main indexes of interest rates from borrowing and from financial investments, which have an impact on the payments and receipts of the Company and its subsidiaries. Borrowing at fixed rates exposes the Company to fair value interest rate risk.

(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 considers the monthly projections of production, purchases of inputs and flows of maturities of the related hedges. Hedge transactions are classified into the following categories:

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;

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;

Hedges for "costs of inputs" - intended to ensure protection against volatility in the prices/costs of its operating subsidiaries for commodities such as oil and natural gas;

Hedges for "operating margin" - intended to set the operating margin for a portion of the production of certain operating subsidiaries.

(b) Credit risk

Derivative financial instruments and financial investments create exposure to credit risk of counterparties and issuers. The Company adopts the policy of working with issuers which 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 is described in the Votorantim Financial Policy.

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 United States, Europe and Asia are collateralized by letters of credit and credit insurance.

All amounts in millions of reais unless otherwise stated

(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.

The table below analyzes the Company's non-derivative financial liabilities and the main derivative financial assets and liabilities to the 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 flow.

The amounts disclosed in the table represent the undiscounted cash flow, which includes interest to be incurred, and, accordingly, do not reconcile directly with the amounts in the balance sheet.

	Note	Up to one year	From one to three years	From three to five years	From five to ten years	As from ten years	Total
On December 31, 2016							
Borrowing (i)		3,824	7,242	8,524	9,921	9,368	38,879
Derivative financial instruments		400	8	335			743
Trade payables		2,726					2,726
Confirming payables	20	968					968
Dividends payable	14	48					48
Related parties		10	12				22
Use of public assets		78	171	193	595	1,889	2,926
		8,054	7,433	9,052	10,516	11,257	46,312
On December 31, 2015							
Borrowing (i)		4,067	9,291	10,263	12,211	9,554	45,386
Derivative financial instruments		476	455	146			1,077
Trade payables		3,179					3,179
Confirming payables	20	1,083					1,083
Dividends payable	14	162					162
Related parties		5	1,211				1,216
Use of public assets		72	160	180	555	2,003	2,970
		9,044	11,117	10,589	12,766	11,557	55,073

(i) Does not include the recorded fair value of debts contracted by Resolution 4131.

6.1.1. Derivatives contracted

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

Hedging program for interest rates in US Dollars - derivative financial instruments contracted to adjust the exposure to LIBOR (arising from loans in US Dollars indexed to LIBOR floating rates) to the parameters established by the policy. The mitigation of these risks is carried out by means of swaps.

Hedging program for sales of nickel, zinc and aluminum at a fixed price - hedging transaction that converts 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 unit linked to the LME prices. These operations usually relate to purchases of nickel, zinc and aluminum for future settlement in the over-the-counter market.

Hedging program for mismatches of quotation periods - this program hedges 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 nickel, zinc and 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. In addition, the Company has executed derivative financial instruments to reduce the volatility of the cash flows from its zinc, copper and silver operations in Peru.

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 Interbank Deposit Certificate ("CDI") floating rates. Risk mitigation is carried out by means of swaps. Changes in fair value are recognized in the statement of income.

Hedging program for foreign currency-denominated debts - hedging instruments contracted for the purpose of protecting the cash flow in local currency. Risk mitigation is carried out by means of cross-currency swaps.

All amounts in millions of reais unless otherwise stated

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

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

Details of the main derivative operations

	Principal									Fair value		Realized gain (loss)	Fair value by maturity				
Programs	**2016**	**2015**	**As per unit**	**Purchase/ sale**	**Average FWD rate**		**Average term (days)**	**Assets**	**Liabilities**	**2016**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021+**
Hedging instruments for metal sales at a fixed price																	
Nickel forward			ton								(1.5)	(1.6)					
Zinc forward	1	7	ton	P	2,031	USD/ton	24	1.9	(0.1)	1.8	(4.0)	6.0	1.8				
										1.8	**(5.5)**	**4.4**	**1.8**				
Hedging instruments for mismatches of quotation periods																	
Nickel forward		1	ton														
Zinc forward	185	342	ton	P/S			29	27.3	(13.0)	14.3	(4.8)	(33.7)	14.3				
Silver forward			k oz (*)								0.8	0.6					
Aluminum forward	1	3	ton	P/S			19					(2.9)					
										14.3	**(4.0)**	**(36.0)**	**14.3**				
Hedging instruments for the operating margin of metals																	
Nickel forward			ton								14.6						
Zinc forward	11	7	ton	S	2,015	USD/ton	2		(23.2)	(23.2)	16.4		(23.2)				
Aluminum forward	5	8	ton	S	1,615	USD/ton	2		(1.9)	(1.9)	10.6		(1.9)				
Silver forward			k oz (*)								0.4						
US dollar forward	16	33	USD	S	4	BRL/USD	2	11.4		11.4	(24.0)		11.4				
										(13.7)	**18.0**		**(13.7)**				
Hedging instruments for foreign exchange exposure																	
US dollar forward			USD			BRL/USD						(11.9)					
Euro forward			EUR			USD/EUR						(8.7)					
Euro forward			EUR			BRL/EUR						(78.4)					
												(99.0)					
Hedging instruments for debts																	
Fixed rate in reais vs. CDI floating rate swaps	100	230	BRL		80.00%	CDI	165		(1.0)	(1.0)	(6.9)	(3.8)	(1.0)				
TJLP floating rate vs. CDI floating rate swaps	28		BRL		80.00%	CDI	563	1.4	(0.4)	1.0		(0.2)	(0.4)	1.4			
LIBOR floating rate vs. CDI floating rate swaps	773	673	USD		103.07%	CDI	1,011	227.6	(547.9)	(320.3)	395.1	(172.5)	(237.2)	(36.2)	(99.5)	30.2	22.4
US dollar fixed rate vs. CDI floating rate swaps	50	50	USD		101.90%	CDI	1,365	2.4	(50.1)	(47.7)	27.7	(22.4)	(16.3)	(12.6)	(12.6)	(6.2)	
										(368.0)	**415.9**	**(198.9)**	**(254.9)**	**(47.4)**	**(112.1)**	**24.0**	**22.4**
								272.0	**(637.6)**	**(365.6)**	**424.4**	**(329.5)**	**(252.5)**	**(47.4)**	**(112.1)**	**24.0**	**22.4**

(*) oz- Ounces troy

All amounts in millions of reais unless otherwise stated

Details of the main derivative operations

	Principal								Fair value		Realized gain (loss)	Fair value by maturity				
Programs	**2016**	**2015**	**As per unit**	**Purchase/ sale**	**Average FWD rate**	**Average term (days)**	**Assets**	**Liabilities**	**2016**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021+**
Hedge accounting - cash flow hedge																
Hedging instruments for the operating margin of metals																
Nickel forward			ton								14.6					
Zinc forward	95	37	ton	S	2,332	USD/ton 134	7.8	(82.7)	(74.9)	69.0	5.7	(74.9)				
Aluminum forward	225	40	ton	S	1,685	USD/ton 199	4.5	(15.1)	(10.6)	37.2	36.6	(11.1)	0.5			
Copper forward	1		ton	S	5,926	USD/ton 139	0.7		0.7			0.7				
Silver forward			k oz (*)							1.9	1.4					
US dollar forward	473	135	USD	S	4,00	BRL/USD 187	81.3	(0.5)	80.8	(76.5)	24.7	78.9	1.9			
									(4.0)	**31.6**	**83.0**	**(6.4)**	**2.4**			
Hedging instruments for mismatches of quotation periods																
Zinc forward	43	97	ton	P/S		53	1.6	(7.2)	(5.6)	2.0	38.9	(5.6)				
Silver forward			k oz (*)							0.9	(2.4)					
									(5.6)	**2.9**	**36.5**	**(5.6)**				
Hedging instruments for interest rates in US dollar																
LIBOR floating rate vs. USD fixed rate swaps		600	USD							6.1	(23.0)					
										6.1	**(23.0)**					
Hedge accounting - fair value hedge																
Hedging instruments for metal sales at a fixed price																
Zinc forward		2	ton	P	2,392	165	0.3		0.3	(1.0)	0.8	0.3				
									0.3	**(1.0)**	**0.8**	**0.3**				
Hedging instruments for mismatches of quotation periods																
Zinc forward	24		ton	P/S		39	0.3		0.3		(160.7)	0.3				
									0.3		**(160.7)**	**0.3**				
							96.5	**(105.5)**	**(9.0)**	**39.6**	**(63.4)**	**(11.4)**	**2.4**			
							368.5	**(743.1)**	**(374.6)**	**464.0**	**(392.9)**	**(263.9)**	**(45.0)**	**(112.1)**	**24.0**	**22.4**

(*) oz- Ounces troy

The transactions involving derivative financial instruments recognized in “Carrying value adjustments” amount to R$ (10). In addition, there are hedge accounting operations, in the amount of R$ 62, in unconsolidated subsidiaries, also recognized in “Carrying value adjustments”.

All amounts in millions of reais unless otherwise stated

(b) Effects of financial derivative instruments in the financial result

The chart below shows the impact of the financial derivative instruments in the financial result of the year, as per Note 30:

Programs	Fair value	Realized loss	Total
Hedging instruments for foreign exchange exposure			
US dollar forward		(11.9)	(11.9)
Euro forward		(87.1)	(87.1)
		(99.0)	**(99.0)**
Hedging instruments for debts			
Fixed rate in reais vs. CDI floating rate swaps	5.9	(3.8)	2.1
TJLP vs. CDI floating rate swaps	1.0		1.0
LIBOR floating rate vs. CDI floating rate swaps	(658.8)	(172.4)	(831.2)
US dollar fixed rate vs. CDI floating rate swaps	(34.0)	(22.4)	(56.4)
	(685.9)	**(198.6)**	**(884.5)**
Hedge accounting - cash flow hedge			
Hedging instruments for interest rates in US dollar			
LIBOR floating rate vs. USD fixed rate swaps		(23.0)	(23.0)
		(23.0)	**(23.0)**
	(685.9)	**(320.6)**	**(1,006.5)**

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 of the following fair value measurement hierarchy:

Level 1 - Quoted prices (unadjusted) in active markets for identical assets and liabilities.

Level 2 - 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 3 - Inputs for the assets or liabilities that are not based on observable market data (that is, unobservable inputs).

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.

			Fair value measured based on	2016
	Note	Prices quoted in an active market (Level 1)	Valuation supported by observable prices (Level 2)	Fair value
Assets				
Cash and cash equivalents	9	3,128	3,818	6,946
Financial investments	10	1,401	1,828	3,229
Derivative financial instruments	6.1.1		368	368
Financial instruments - firm commitment	15		688	688
		4,529	6,702	11,231
Liabilities				
Borrowing	19	11,252	12,011	23,263
Derivative financial instruments	6.1.1		743	743
		11,252	12,754	24,006

			Fair value measured based on	2015
	Note	Prices quoted in an active market (Level 1)	Valuation supported by observable prices (Level 2)	Fair value
Assets				
Cash and cash equivalents	9	3,942	2,707	6,649
Financial investments	10	1,342	2,630	3,972
Derivative financial instruments	6.1.1		1,541	1,541
Financial instruments - firm commitment	15		968	968
		5,284	7,846	13,130
Liabilities				
Borrowing	19	11,699	15,304	27,003
Derivative financial instruments	6.1.1		1,077	1,077
		11,699	16,381	28,080

6.1.3. Hedges of net investments in foreign operations

The hedged items that the Company and its subsidiaries designated as a calculation tool refer to the investments shown in the table below, as well as part of its debts and its subsidiaries VCSA, CBA, VMZ, VS, and St. Hellen, denominated in Euros and US Dollars.

		2016		2015
	Investment	Debt	Investment	Debt
Votorantim Metais Cajamarquilla S.A. (“Cajamarquilla”) (i)	3,233	2,968	7,288	6,447
US Zinc Corporation (“US Zinc”)	1,634	1,456	1,747	1,747
Votorantim Cement North America Inc. ("VCNA")	3,173	4,540	3,826	5,560
Votorantim Cimentos EAA Inversiones, S.L. ("VCEAA")	2,410	2,575	3,442	4,888
Hailstone Limited ("Hailstone")	558	487		
Votoratim Andina S.A. ("VASA") (i)	1,590	2,347		

(i) Cajamarquilla’s allocated investment and the corresponding designated debt decreased in July 2016, due to the new designation of the Votorantim Andina hedge and the assignment of debts previously used.

All amounts in millions of reais unless otherwise stated

The Company documents the correlation between its hedges and the related obligations by assessing the effectiveness of net investment hedges both prospectively and retrospectively on a quarterly basis.

The exchange gain on the translation of debts recognized in "Other comprehensive income" in the year ended December 31, 2016 was R$ 2,033 (2015, loss of R$ 3,948).

6.1.4. 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, euro, turkish lira, argentine peso and boliviano exchanges rates, LIBOR and CDI interest rates, US Dollar coupon 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 - 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.

						Impacts on profit (loss)					Impacts on comprehensive income				
						Scenario I	Scenarios II & III				Scenario I	Scenarios II & III			
Risk factors	**Cash and cash equivalents and financial investments (i)**	**Borrowing (i)**	**Derivative financial instruments**	**As per unit**	**Changes from 2016**	**Results of scenario I**	**-25%**	**-50%**	**+25%**	**+50%**	**Results of scenario I**	**-25%**	**-50%**	**+25%**	**+50%**
Foreign exchange rates															
USD	4,005	15,690 (*)	1,312	USD million	4%	17	(71)	(142)	71	142	(450)	2,698	5,022	(2,511)	(5,022)
EUR	277	2,532			5%	(30)	164	327	(164)	(327)	(79)	427	855	(427)	(855)
BOB (**)	79	327			3%						(17)	83	166	(83)	(166)
ARS	201				2%						4	(51)	(103)	51	103
TRY (***)		357			5%						(32)	84	169	(84)	(169)
Interest rates															
BRL - CDI	4,988	3,810	4,403	BRL million	-99 bps	(11)	(31)	(61)	32	64	3	20	42	(19)	(38)
LIBOR		5,416	2,142	USD million	15 bps	3	(17)	(35)	17	35	(1)	2	5	(2)	(5)
US dollar coupon			1,312	USD million	-194 bps	137	61	125	(58)	(113)	(14)	(7)	(15)	7	14
Price of commodities															
Zinc			358,666	ton	-10%	(4)	(10)	(20)	10	20	125	304	608	(304)	(608)
Aluminum			231,662	ton	-7%						82	310	620	(310)	(620)
Silver			540	ton	-16%						2	2	5	(2)	(5)
Firm commitment - electric energy															
Sale and purchase agreements - fair value			678	BRL million			8	15	(8)	(15)					

(*) Considers baskets of currencies

(**) Boliviano

(***) Turkish lire

(i) The balances presented in the sensitivity analysis do not match the cash and cash equivalents and short-term investments notes, as the sensitivity analysis covers only the most significant currencies.

Notes to the consolidated financial statements

at December 31, 2016
All amounts in millions of reais unless otherwise stated

7 Financial instruments by category

	Note	2016	2015
Assets			
Borrowing and receivables			
Cash and cash equivalents	9	6,946	6,649
Trade receivables	11	2,001	2,745
Related parties	14	535	3,188
		9,482	12,582
Assets held-for-trading			
Financial investments	10	3,204	3,275
Derivative financial instruments	6.1.1	258	1,358
Financial instruments - firm commitment		688	968
		4,150	5,601
Assets available-for-sale			
Financial investments	10	3	670
		3	670
Held-to-maturity investments			
Financial investments	10	22	27
		22	27
Derivatives used for hedging			
Derivative financial instruments	6.1.1	110	183
		110	183
Liabilities			
Liabilities at fair value through profit or loss			
Borrowing	19	963	792
Derivative financial instruments	6.1.1	613	951
Financial instruments - firm commitment		2	
		1,576	1,743
Derivatives used for hedging			
Derivative financial instruments	6.1.1	130	126
		130	126
At amortized cost			
Borrowing	19	23,440	29,739
Trade payables		2,726	3,179
Financial instruments - firm commitment		8	83
Related parties	14	22	1,216
Confirming payables	20	968	1,083
Use of public assets	24	1,186	1,125
		28,350	36,425

All amounts in millions of reais unless otherwise stated

8 Credit quality of financial assets

			2016			2015
	Local rating	Global rating	Total	Local rating	Global rating	Total
Cash and cash equivalents						
AAA				1,903		1,903
AA+				617		617
AA				291		291
AA-	1,831	815	2,646		6	6
A+	175	815	990		255	255
A		278	278		661	661
A-		736	736		252	252
BBB+		479	479		652	652
BBB		409	409		106	106
BBB-		111	111		233	233
BB+		34	34		1	1
BB	297	91	388		18	18
B+		81	81		116	116
CCC+		96	96		11	11
CCC					1	1
CCC-					19	19
Unrated (i)	2	696	698		1,507	1,507
	2,305	4,641	6,946	2,811	3,838	6,649
Financial investments						
AAA				1,672		1,672
AA+	59		59	851		851
AA				188		188
AA-	2,105		2,105			
A+	479	308	787		8	8
A	3	12	15	3		3
A-	17	66	83	16	358	374
BBB		3	3		1	1
BBB-					195	195
BB	23		23			
CCC+		104	104			
CCC					179	179
CCC-					136	136
Unrated (ii)	26	24	50	208	157	365
	2,712	517	3,229	2,938	1,034	3,972
Derivative financial instruments						
AAA	84		84	474		474
AA+				441		441
AA				2		2
AA-	173		173			
A+	10	1	11		402	402
A		24	24		222	222
A-		76	76			
	267	101	368	917	624	1,541
	5,284	5,259	10,543	6,666	5,496	12,162

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

(i) Relates to amounts invested in banks abroad that are not rated by rating agencies.

(ii) Refers to exclusive Credit Rights Investment Funds (FIDC) which do not have a rating in the rating agencies.

Notes to the consolidated financial statements

at December 31, 2016
All amounts in millions of reais unless otherwise stated

9 Cash and cash equivalents

	2016	2015
Local currency		
Cash and banks	14	16
Repurchase agreements - private securities	1,072	1,774
Repurchase agreements - public securities	1,219	1,021
	2,305	2,811
Foreign currency		
Cash and banks	1,895	2,905
Certificates of deposits	2,746	933
	4,641	3,838
	6,946	6,649

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

	2016	2015
Held-for-trading		
Bank Deposit Certificates (CDB)	657	592
Repurchase agreements - Public securities	661	663
Financial Treasury Bills (LFT)	740	679
Repurchase agreements	603	729
Financial investments in foreign currency	517	364
Investment fund quotas	26	1
Credit Rights Investment Funds (FIDC) (i)		243
Other		4
	3,204	3,275
Available-for-sale		
Financial investments in foreign currency		670
Certificados de Depósito Bancário - CDB	3	
	3	670
Held-to-maturity		
Bank Deposit Certificates (CDB)	22	27
	22	27
	3,229	3,972
Current	3,190	3,936
Non-current	39	36
	3,229	3,972

(i) In 2016, the Company began to consolidate the balances of the Credit Receivables Investment Funds "Fundo de Investimento em Direitos Creditórios Indústria" and "Fundo de Investimento em Direitos Creditórios VID Indústria". On December 31, 2016, the amount of R$ 193 was consolidated, being the amount of R$ 166 allocated in the group "Accounts receivable", R$ 23 allocated in "Shares in investment funds", R$ 3 allocated in "Financial Treasury Bills (LFT)" and R$ 1 in "Other assets".

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. Investments in foreign currency are mainly composed of fixed income financial instruments (time deposits).

11 Trade receivables

(a) Breakdown

	Note	2016	2015
Trade receivables - Brazil		1,077	1,010
Trade receivables - foreign customers (i)		1,057	1,825
Related parties	14	26	65
		2,160	2,900
Estimated loss for doubtful accounts		(159)	(155)
		2,001	2,745

(i) On the first quarter of 2016, the subsidiary VCNA entered into a revolving receivables securitization transaction with financial institutions for the sale of trade receivables owned by its american and canadian subsidiaries to a special purpose entity (SPE), which was established specifically for this purpose and is not controlled by the Company. The transaction is limited to USD 150 million available until 2019 (three years from the closing date of the transaction), depending on certain criteria of the receivables. The receivables were recognized in the balance sheet in the extension of the continuous involvement, such as the related assets and liabilities. The net carrying amount of the assets partially transferred and liabilities related reflects the rights and obligations held by VCNA.

All amounts in millions of reais unless otherwise stated

(b) Breakdown by currency

	2016	2015
Brazilian real	1,006	1,065
U.S. dollar	449	758
Euro	110	139
Argentine peso	100	89
Colombian peso	83	97
Canadian dollar	3	247
Other	250	350
	2,001	2,745

(c) Changes in estimated loss for doubtful accounts

	2016	2015
Opening balance	(155)	(114)
Additions, net	(70)	(67)
Receivables written off as uncollectible (i)	17	48
Reclassification of assets classified as held-for-sale	30	
Foreign exchange variations	19	(22)
Closing balance	(159)	(155)

(i) The values registered in the estimated loss account are generally written off when they are deemed to be uncollectible.

(d) Aging of trade receivables

	2016	2015
Current	1,796	2,283
Up to three months past due	169	426
Three to six months past due	20	59
Over six months past due	175	132
	2,160	2,900

12 Inventory

	2016	2015
Finished products	700	652
Semi-finished products	1,396	1,539
Raw materials	617	866
Auxiliary materials	952	1,130
Imports in transit	101	191
Other	104	71
Estimated loss (i)	(489)	(561)
	3,381	3,888

(i) Mainly refers to the obsolescence of inventory the value of which has a limited expectation of realization. No inventory was pledged as collateral for liabilities.

13 Taxes recoverable

	2016	2015
Corporate Income Tax ("IRPJ") and Social Contribution on Net Income ("CSLL")	1,354	886
State Value-added Tax on Sales and Services ("ICMS")	542	529
Social Contribution on Revenue ("COFINS")	386	414
Value-added Tax ("VAT") (foreign companies)	275	293
IRPJ/CSLL - "*Plano Verão*"	185	184
Withholding Income Tax ("IRRF")	90	7
Social Integration Program ("PIS")	85	93
State Value-added Tax on Sales and Services on PP&E	78	99
Excise Tax ("IPI")	29	38
Other	89	148
	3,113	2,691
Current	1,527	1,376
Non-current	1,586	1,315
	3,113	2,691

All amounts in millions of reais unless otherwise stated

14 Related parties

	Trade receivables		Dividends receivable		Non-current assets		Trade payables		Dividends payable		Non-current liabilities		Sales (purchases), net		Finance income (costs)	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Parent																
Hejoassu Administração S.A.		2				659			39			487				
Votorantim Participações S.A. (i)										152						(25)
Related companies and joint ventures																
Banco Votorantim S.A.			51													
Cementos Granadilla S.L.	1	1			6	1	1	1					64	11		
Citrovita Agro Industrial Ltda. (i)		1										21				
Citrosuco GmbH (ii)					205	246										
Citrosuco S.A. Agroindústria (iii)					302	441							12	9	15	15
Citrovita Orange Juice GmbH (i)						774										14
Fibria Celulose S.A.	4	4	116	24	1	1	4	14					59	40	(1)	
Hailstone Limited (i)						20						553				(8)
Maré Cimento Ltda.														66		
Mineração Rio do Norte S.A.			7	6												
Mizu S.A.														74		
Polimix Concreto Ltda.														175		
Sitrel - Siderurgica Três Lagoas Ltda.		13						32						81		
St. Helen Holding II B.V. (i)						1,003						40				24
Supermix Concreto S.A.	21	21												346		
Suwannee American Cement LLC							27	41								2
Other		23	6	1	21	43	2	3			22	115	93	98	1	(2)
	26	65	180	31	535	3,188	34	91	39	152	22	1,216	228	900	15	20
Non-controlling interests				11					9	10						
Current	26	65	180	42			34	91	48	162						
Non-current					535	3,188					22	1,216				
	26	65	180	42	535	3,188	34	91	48	162	22	1,216				

(i) The elimination of 2016 balances relates to the incorporation by VSA, explained in Note 1.1 (a).

(ii) Refers to accounts receivable related to assets surplus to basic net assets invested in the Citrosuco operation. The realization period is linked to the performance of each item under contractual rules laid down in the shareholder agreement and closing memorandum signed between the Fisher and Votorantim Groups.

(iii) Refers mainly to accounts receivable as association agreements via export prepayment contracts maturing in 2019, at the updated rate of 2.75% p.a., in the amount of R$ 226. The difference of R$ 76 relates to accounts receivable related to assets surplus to basic net assets invested in Citrosuco operation. The realization period is linked to the performance of each item under contractual rules laid down in the shareholder agreement and closing memorandum signed between the Fisher and Votorantim Groups.

All amounts in millions of reais unless otherwise stated

15 Financial instruments - firm commitment

The Company, through its subsidiary VOTENER -Votorantim Comercializadora de Energia Ltda. ("Votener"), is engaged in sales of electrical energy in the Regulated Contracting Environment ("ACR") and most recently participated in the 13th electric energy auction on April 30, 2014 in which it signed a firm commitment relating to the sale of surplus energy to be supplied until 2019. These transactions resulted in a gain to the Company on sale of surplus energy, which was recognized at its fair value. The fair value realization on these transactions, amounting to R$ 225, through the physical settlement of contracts of sale and purchase of energy and was recorded in "Other operating income (expenses), net".

Additionally, the Company, also through its subsidiary Votener, is engaged in the Deregulated Contracting Environment ("ACL"), which also resulted in gain recognition at fair value of the purchase and sale transactions and surplus energy. The fair value realization on these transactions, net of recognition, amounting to R$ 28, was recorded in "Other operating income (expenses), net".

The amounts mentioned above have the following composition (Note 29):

			ACR				ACL	2016	2015
	Aluminum ("CBA")	Energy	Total	Cement	Aluminum ("CBA")	Energy	Total		
Realization	(175)	(50)	(225)			(61)	(61)	(286)	(326)
Recognition				(10)	43		33	33	(37)
	(175)	(50)	(225)	(10)	43	(61)	(28)	(253)	(363)

The following table reconciles the balance sheet amounts:

			ACR				ACL		
	Aluminum ("CBA")	Energy	Total	Cement	Aluminum ("CBA")	Energy	Total	2016	2015
Assets									
Current assets	156	46	202		5	110	115	317	903
Non-current assets	290	80	370		1	(25) (i)	(24)	346	65
	446	126	572		6	85	91	663	968
Liabilities									
Current liabilities									(2)
Non-current liabilities				(10)			(10)	(10)	(81)
				(10)			(10)	(10)	(83)
	446	126	572	(10)	6	85	81	653	885

(i) The negative balance of the ACL transaction, presented in assets, is presented net, together with the ACR transaction.

16 Investments

(a) Breakdown

	Information on investees on December 31, 2016			Equity in the results		Investment balance	
	Equity	Profit (loss) for the year	Ownership percentage (%)	2016	2015	2016	2015
Investments accounted for based on the equity method							
Subsidiaries and associates							
Cementos Avellaneda S.A. (i)	488	142	49.00	70	87	237	318
Cementos Bio Bio S.A. (ii)	910	103	16.70	17	21	152	202
Alunorte - Alumina do Norte S.A. (ii)	4,953	798	3.03	24	6	150	130
Mineração Rio do Norte S.A. (ii)	1,052	430	10.00	43	36	105	91
Supermix Concreto S.A.	258	18	25.00	4	12	64	64
Hutton Transport Ltda.	31	14	25.00	4	3	15	17
Sirama Participações Administração e Transportes Ltda.				1	57		
Other investments				16	5	310	345
Joint ventures							
Banco Votorantim S.A.	8,626	332	50.00	166		4,809	
Fibria Celulose S.A. (iii)	13,751	1,655	29.42	487	54	3,867	3,573
Citrosuco GmbH (i)	2,545	384	50.00	55		2,088	
Citrosuco S.A. Agroindústria (i)	677	(271)	50.00	(172)		816	
Suwannee American Cement LLC (i)	253	33	50.00	16	(3)	222	257
Cemento Portland S.A.	107	(3)	50.00	(2)	4	53	98
Superior Building Materials LL	84	40	50.00	20	17	42	42
Sumter Cement Co LLC	37	(7)	50.00	(3)		19	26
Trinity Materials LLC.		(17)	50.00	(9)			11
				737	299	12,949	5,174

The balances from 2016 that have no comparative basis relate mainly to the effects from the VPAR merge, as described in Note 1.1 (a).

(i) Investments Cementos Avellaneda SA, Suwannee American Cement LLC, Citrosuco S.A. and Citrosuco GmbH consider, on December 31, 2016, the amounts of R$ 2 (2015 - R$ 56), R$ 96 (2015 - R$ 104), R$ 478 and R$ 816, respectively, related to goodwill paid on acquisition of investments and the balance of surplus value, that is amortized of income of the parent company.

(ii) Refers to investees in which the ownership interest is less than 20%, but over the activities of which the Company exercises significant influence through agreements established with other shareholders.

(iii) The equity income of the investee considers eliminations of unrealized profits, in the amount of R$ 178 (2015 - R$ 178), in exchange of lands with the Company.

Notes to the consolidated financial statements

at December 31, 2016
All amounts in millions of reais unless otherwise stated

(b) Information on investees

A summary of the principal financial information on associates and joint ventures at December 31, 2016 is presented below:

	Total and voting capital (%)	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Other comprehensive income	Equity	Net revenue	Operating profit (loss)	Finance income (costs)	Profit (loss) for the year
Investments accounted for based on the equity method											
Alunorte - Alumina do Norte S.A.	3.03	8,103		3,150			4,953	5,700	788	374	798
Mineração Rio do Norte S.A.	10.00	278	1,980	568	638		1,052	1,352	472	37	430
Cementos Bio Bio S.A.	16.70	649	1,632	428	936	(369)	917	1,502	175	(47)	103
Cementos Avellaneda S.A.	49.00	418	269	194	5	(186)	488	890	195	7	142
Supermix Concreto S.A.	25.00	238	213	131	62		258	1,192	14	6	18
IMIX Empreendimentos Imobiliários Ltda.	25.00	9	7	2			14	5	5	1	5
Joint ventures											
Fibria Celulose S.A.	29.42	7,517	27,009	4,016	16,692	(44)	13,818	9,615	1,545	1,616	1,655
Banco Votorantim S.A.	50.00	52,655	50,385	64,947	29,467	453	8,626	14,941	5,797		332
Citrosuco GmbH	50.00	2,852	404	342	368	(403)	2,545	3,131	495	(65)	396
Citrosuco S.A. Agroindústria	50.00	1,866	2,840	2,237	1,792	(36)	677	2,800	(266)	(52)	(271)
Suwannee American Cement LLC.	50.00	207	180	47	87	(87)	253	240	36	(3)	33
Cemento Portland S.A.	50.00	45	97	28	7	(27)	107		4	(6)	(3)
Superior Building Materials LL.	50.00	63	53	31	1	(14)	84	315	40		40
Sumter Cement Co LLC	50.00	4	102	69		(8)	37		(6)	(1)	(7)
Hutton Transport Ltda.	25.00	6	28	1	2	20	31	17	4		14
Midway Group, LLC	50.00	9	18	8			19	57	6		6
Trinity Materials LLC.	50.00					(3)			(17)		(17)

(c) Changes in investments

	2016	2015
Opening balance	5,174	6,270
Equity in the results of investees	737	299
Capital increase		22
Exchange variation on foreign investments	(590)	162
Write-off of Silcar's investment		(315)
Reclassification to assets available-for-sale	(96)	(381)
Loss due to change in shareholding percentage	(30)	
Capital reduction		(57)
Dividends	(292)	(730)
Effect of subsidiaries included in consolidation (Note 1.1 (a))	7,762	
Fair value of financial assets available for sale - Banco Votorantim S.A. (i)	227	
Impairment of investments abroad	(43)	
Unrealized profits between related parties		(132)
Hedge accounting cash flow from investees	62	
Other	38	36
Closing balance	12,949	5,174

(i) Relates to fair value of the securities available-for-sale directly recognized in equity of Banco Votorantim S.A, which has effect on the Company since the VPAR merge (Note 1.1 (a)).

All amounts in millions of reais unless otherwise stated

(d) Investments in listed companies

	2016		2015	
	Book value	Market value	Book value	Market value
Cementos Bio Bio S.A. (*)	152	141	202	127
Fibria Celulose S.A. (*)	4,046	5,197	3,573	8,414

(*) Calculated in proportion to the ownership interest held by the Company.

17 Property, plant and equipment

(a) Breakdown and changes

									2016	2015
	Land and improvements	Buildings and constructions	Machinery, equipment and facilities	Vehicles	Furniture and fittings	Construction in progress	Leasehold improvements	Other	Total	Total
Opening balance										
Cost	2,206	10,893	36,095	1,437	230	3,631	560	439	55,491	46,796
Accumulated depreciation	(52)	(4,029)	(20,220)	(1,104)	(168)		(279)	(358)	(26,210)	(20,759)
Net opening balance	2,154	6,864	15,875	333	62	3,631	281	81	29,281	26,037
Additions	11	16	147	3	1	2,845		3	3,026	3,335
Disposals	(25)	(19)	(84)	(8)	(1)		(9)		(146)	(162)
Depreciation	(5)	(315)	(1,706)	(105)	(12)		(21)	(4)	(2,168)	(2,163)
Foreign exchange variation	(175)	(422)	(939)	(36)	(4)	(406)	(33)	(1)	(2,016)	2,694
Effect of subsidiaries included in consolidation	10	2	4	30	1	1	1	6	55	
Reversal (provision) for impairment (ii)	(20)	(287)	(334)	(2)	6	(135)	1	3	(768)	(396)
Reclassification from (to) assets classified as held-for-sale	(26)	(573)	(1,243)	(3)	(4)	(119)	(14)		(1,982)	281
Transfers (i)	37	552	1,492	62	4	(2,346)	8		(191)	(345)
Closing balance	1,961	5,818	13,212	274	53	3,471	214	88	25,091	29,281
Cost	2,017	9,840	31,904	1,206	192	3,471	459	439	49,528	55,491
Accumulated depreciation	(56)	(4,022)	(18,692)	(932)	(139)		(245)	(351)	(24,437)	(26,210)
Net closing balance	1,961	5,818	13,212	274	53	3,471	214	88	25,091	29,281
Average annual depreciation rates - %	2	3	6	12	9		2	15		

(i) The transfers at December 31, 2016 are related to the reclassification from “Construction in progress” within “Property, plant and equipment” to “Software” and “Rights to use natural resources”, within “Intangible assets” (2015, to “Inventory” (R$ 53) and “Intangible assets” (R$ 292)).

(ii) Relates substantially to the record, by subsidiary CBA, of a provision for impairment based on the estimated future cash flows of the Nickel cash-generating unit (Note 1.1 (f)).

(b) Review and adjustment of estimated useful life

During 2016, the Company reviewed the useful lives of property, plant and equipment, and based on the valuation report issued internally, there were no changes in the useful lives, according to Management’s analysis.

All amounts in millions of reais unless otherwise stated

(c) Construction in progress

The balance is made up mainly of projects for the expansion and optimization of industrial units, as shown below:

	2016	2015
Segments		
Cement	2,044	2,028
Zinc and byproducts ("VMH")	737	826
Steel	154	368
Aluminum ("CBA")	257	287
Electrical energy	242	1
Other	37	121
	3,471	3,631

The main projects in progress by business segment are as follows:

Main projects in progress - Cement	2016	2015
New unit in Yacuses - Bolivia	530	253
New unit in Sivas - Turkey	364	196
Cement production capacity expansion - North America	280	90
Equipment refurbishment - Brazil	89	64
New unit in Primavera - Brazil	81	711
Burden removal - cement - Brazil	47	42
New unit in Ituaçú - Brazil	43	44
Cement grinding - Pecém - Brazil	42	6
New plant in Sobral - Brazil	34	21
New lines of co-processing - Brazil	33	9
Geology and mining rights - Brazil	27	53
Environment and security - Brazil	26	10
Expansion of the aggregates productive capacity - North America	22	39
Structural recovery - Brazil	19	
Agricultural supplies plant - Brazil	15	
Hardwares and softwares - Brazil	10	11
New lines of co-processing - North America	7	13
New plant in Edealina - Brazil	7	101
Burden removal - aggregates - Brazil	4	8
Other	364	357
	2,044	2,028

Main projects in progress - Zinc and byproducts ("VMH")	2016	2015
Vazante expansion project - Brazil	256	133
Security, health and environment projects - Brazil	95	133
Plant maintenance project - Peru	65	64
Production line construction - Brazil	65	19
Mineral extraction - Peru	62	87
Modernization and production increase projects - Brazil	33	11
Reject treatment line - Peru	28	70
Pucurhuay hydroelectric plant - Peru	28	41
Mineral grinding - Peru	24	19
Information technology projects - Peru	23	20
Project Santa Bárbara - Peru	14	17
Waste storage - Peru	9	2
Roasting - Peru	7	48
Concentrated ore plant - Peru	6	52
General services - Peru	6	17
Other	16	93
	737	826

Main projects in progress - Steel	2016	2015
Revitalization and adaptation of plant	43	5
Repair plant operating equipment	36	44
Battery vertical repair project	25	13
Modernization of plant operating equipment	19	22
Ore project exploration program	7	7
Security projects, health and environment	5	32
Expansion project - Florestal	3	4
Mechanized underground operations involving metallurgical coal		141
Other	16	100
	154	368

All amounts in millions of reais unless otherwise stated

Main projects in progress - Aluminum ("CBA")	2016	2015
Rondon Alumina project	107	100
Revitalization and adequacy of power plant	39	25
Alumina factory project	12	22
Automation system modernization	25	22
Plastic transformation and foundry projects	19	44
Furnace refurbishment	22	12
Furnace rooms project	15	20
Mining projects	5	13
Project safety, health and environment	2	8
Calcination furnace	5	5
Furnace rooms VIII project	3	3
Other	3	13
	257	287

Main projects in progress - Electric power	2016	2015
Ventos de São Vicente wind power complex	231	1
Corumbá project	11	
	242	1

18 Intangible assets

(a) Breakdown and changes

									2016	2015
	Rights over natural resources	Goodwill	ARO (i)	Use of public assets	Contracts, customer relationships and agreements	Software	Rights over trademarks and patents	Other	Total	Total
Opening balance										
Cost	10,088	7,013	840	541	489	574	491	823	20,859	15,350
Accumulated amortization	(2,281)		(426)	(141)	(283)	(425)	(362)	(371)	(4,289)	(2,832)
Net opening balance	7,807	7,013	414	400	206	149	129	452	16,570	12,518
Additions	39		3			15	1	123	181	105
Disposals	(48)							(36)	(84)	(39)
Amortization and depletion	(407)		(52)	(20)	(25)	(51)	(26)	(15)	(596)	(571)
Foreign exchange variation	(1,083)	(964)	(27)		(33)	(14)	(22)	(84)	(2,227)	4,037
Reclassification from (to) assets classified as held-for-sale	11					(10)			1	420
Effect of subsidiaries included (excluded) in consolidation	3	(774)				2	115	1	(653)	
Provision for impairment (ii)	(237)	(82)	(33)						(352)	(256)
Revision of estimated cash flow			23						23	99
Update the interest rate			(39)						(39)	(35)
Transfers	76		79			35	1	(2)	189	292
Closing balance	6,161	5,193	368	380	148	126	198	439	13,013	16,570
Cost	8,694	5,193	873	541	408	548	481	771	17,509	20,859
Accumulated amortization	(2,533)		(505)	(161)	(260)	(422)	(283)	(332)	(4,496)	(4,289)
Net closing balance	6,161	5,193	368	380	148	126	198	439	13,013	16,570
Average annual amortization and depletion rates - %	7		7	7	7	7	13	8		

(I) Asset retirement obligation.

(II) Relates substantially to: record, by subsidiary CBA, of a provision for impairment based on the estimated future cash flows of the Nickel cash-generating unit (Note 1.1 (f)); Impairment of goodwill on investees of subsidiary VCSA.

All amounts in millions of reais unless otherwise stated

(b) Goodwill on acquisitions

Description	2016	2015
Cement		
Votorantim Cimentos EAA Inversiones, S.L.	1,192	1,474
Prairie Material Sales Inc	653	782
St. Marys Cement Inc.	360	410
Prestige Materials	132	158
Prestige Gunite Inc.	94	111
Engemix S.A.	76	76
Votorantim Investimentos Internacionais S.A.	48	831
Companhia de Cimento Ribeirão Grande	47	111
CJ Mineração Ltda.	16	16
Cementos Artigas S.A.	12	13
Mineração Potilíder Ltda.		14
Pedreira Pedra Negra Ltda.		4
Other	3	3
	2,633	**4,003**
Zinc and byproducts		
Compañía Minera Milpo S.A.A.	1,885	2,259
Votorantim Metais - Cajamarquilla S.A.	301	361
US Zinc Corporation	29	35
	2,215	**2,655**
Steel		
Acergroup S.A.	149	149
Acerholding S.A.	18	27
Acerbrag S.A.	4	6
	171	**182**
Aluminum		
Campos Novos Energia S.A.	57	57
Metalex Ltda.	49	49
Rio Verdinho Energia S.A.	29	29
Machadinho Energética S.A.	15	15
BAESA - Energética Barra Grande S.A.	7	7
	157	**157**
Holding and other		
Votorantim Andina S.A.	16	16
Fazenda Bodoquena Ltda.	1	
	17	**16**
	5,193	**7,013**

(c) Impairment testing of goodwill

The Company and its subsidiaries evaluate at least annually the recoverability of the carrying value of the operating segment of each 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 determined 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.

These calculations use cash flow projections, before income tax and social contributions, based on financial budgets approved by management for a five-year period. Cash flow that exceeds the five-year period is extrapolated using the estimated growth rates. The growth rate does not exceed the average long-term growth rate of the operating sector of each segment.

The calculations of the value-in-use were based on the discounted cash flow model, and are based on the assumptions below:

	Growth rate	Discount rate
Cement	0.5% to 3.0%	6.50% to 13.40%
Aluminum ("CBA")	Not used	10.07% to 12.43%
Zinc and byproducts ("VMH")	Not used	9.50% to 11.53%
Steel (i)	Not used	11.99% to 17.10%
Holding and other	Not used	09.23% to 09.37%

(i) Considers units located abroad only (Argentina and Colombia).

Losses from impairment on goodwill as at December 31, 2016, amounted to R$ 82 (2015 - R$ 237), recorded in "Other operating expenses, net".

The amount of the impairment refers to goodwill of investees Companhia de Cimento Ribeirão Grande (merged with VCSA) in the amount of R$ 64, Mineração Potilider Ltda. of R$ 14, and Pedreira Pedra Negra of R$ 4.

All amounts in millions of reais unless otherwise stated

19 Borrowing

(a) Breakdown and fair value

		Current (iii)		Non-current		Total		Fair value	
Type	**Average annual charges (i)**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**
Local currency									
Debentures	115.53% CDI	252	631	3,633	4,723	3,885	5,354	3,936	4,998
BNDES	TJLP + 2.69% / 4.81% fixed rate BRL / SELIC + 2.66%	453	668	938	1,400	1,391	2,068	1,285	1,710
Development promotion agency	8.55% fixed rate BRL / TJLP + 1.22%	38	10	243	219	281	229	246	158
Comercial notes	TR + 12.36%	267				267		266	
FINAME	4.88% fixed rate BRL / TJLP + 2.60%	29	32	113	143	142	175	117	119
Export credit notes	8.00% fixed rate BRL	101	131		100	101	231	99	216
Other		13	11	16	18	29	29	24	30
		1,153	1,483	4,943	6,603	6,096	8,086	5,973	7,231
Foreign currency									
Eurobonds - USD	6.28% fixed rate USD	122	123	9,518	9,510	9,640	9,633	9,298	8,157
Loans - Resolution 4131 (ii)	LIBOR USD + 1.46% / 3.10% fixed rate USD	6	8	2,663	3,393	2,669	3,401	2,482	3,399
Export prepayments	LIBOR USD + 2.07%	78	(3)	2,160	2,335	2,238	2,332	1,666	2,417
Eurobonds - EUR	3.41% fixed rate EUR	26	85	1,939	4,837	1,965	4,922	1,954	3,543
Syndicated loan/bilateral agreements	Euribor + 2.00% / 7.30% fixed rate	38	2	1,234	659	1,272	661	1,416	721
BNDES	UMBNDES + 2.52%	122	233	150	399	272	632	268	660
Development promotion agency	LIBOR USD + 1.38%	128	31	5	158	133	189	93	196
Working capital	IBR + 3.37% / 9.25% fixed rate INR	90	633			90	633	89	635
Other		9	21	19	21	28	42	24	44
		619	1,133	17,688	21,312	18,307	22,445	17,290	19,772
		1,772	2,616	22,631	27,915	24,403	30,531	23,263	27,003
Current portion of long-term borrowing		1,358	1,606						
Interest on borrowing		323	393						
Short-term borrowing		91	617						
		1,772	2,616						

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

(ii) The transactions carried out under Law 4,131 have swaps linked to them that aim at both the exchange of floating rates in LIBOR and pre-fixed to floating rate in CDI, as the exchange of currency, US dollar to real, and resulted in the final average cost of 102.84% of the CDI. These swaps were contracted with the financial institution in conjunction with the loan (USD debt + swap to BRL % of CDI). The terms and conditions of the loan and derivative are set up as a single transaction, so that the result is a debt in a percentage of CDI in BRL. The difference between the measurement between the two instruments (loan at amortized cost x derivative at fair value), generates an “accounting mismatch” in the result. To eliminate this “accounting mismatch”, the transactions conducted from August 2015 and on, were designated in the modality of fair value, and the effect of this designation that is the measurement of the debt at fair value was recorded through profit and loss (Note 30).

(iii) The negative balances refer to borrowing costs.

Glosary:

BNDES - National Bank for Economic and Social Development.
BRL - Brazilian Currency (Real).
CDI - Interbank Deposit Certificate.
EUR - European Union currency (Euro).
EURIBOR - Euro Interbank Offered Rate.
FINAME - Government Agency for Machinery and Equipment Financing.
IBR - Inter-Bank Rate (Colombia).
INR - Indian Rupee.
LIBOR - London Interbank Offered Rate.
PBoC - People’s Bank of China.
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.
TR - Reference Rate.
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 millions of reais unless otherwise stated

(b) Maturity

	2016	2017	2018	2019	2020	2021	2022	2023	2024	As from 2025	Total
Local currency											
Debentures	252	39	39	396	396	356	1,701	703	3		3,885
BNDES	453	387	255	95	77	51	25	19	17	12	1,391
Development promotion agency	38	38	38	38	38	30	30	28	3		281
Comercial notes (i)	267										267
FINAME	29	22	21	20	19	17	10	4			142
Export credit notes	101										101
Other	13	11	5								29
	1,153	497	358	549	530	454	1,766	754	23	12	6,096
	18.91%	8.15%	5.87%	9.01%	8.69%	7.45%	28.97%	12.37%	0.38%	0.20%	100.00%
Foreign currency											
Eurobonds - USD (i)	122	(6)	667	308	777	(6)	1,112	1,298	(5)	5,373	9,640
Loans - Resolution 4131 (i)	6	562	647	1,128	326						2,669
Export prepayments	78	469	529	594	568						2,238
Eurobonds - EUR (i)	26	(5)	(5)	(5)	733	1,221					1,965
Syndicated loans/bilateral agreement	38	109	242	254	239	141	137	56	56		1,272
BNDES	122	83	55	10	2						272
Development promotion agency	128	2	2	1							133
Working capital	90										90
Other	9	7	1	1	1	1	1	5	2		28
	619	1,221	2,138	2,291	2,646	1,357	1,250	1,359	53	5,373	18,307
	3.38%	6.67%	11.68%	12.51%	14.46%	7.41%	6.83%	7.42%	0.29%	29.35%	100.00%
	1,772	1,718	2,496	2,840	3,176	1,811	3,016	2,113	76	5,385	24,403
	7.26%	7.04%	10.23%	11.64%	13.01%	7.42%	12.36%	8.66%	0.31%	22.07%	100.00%

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

(c) Changes

	2016	2015
Opening balance	30,531	24,003
New borrowing	6,162	7,270
Interest	1,757	1,782
Reclassification for assets held-for-sale	(846)	
Effect of subsidiaries included in consolidation	4	417
Addition of borrowing fees, net of amortization	(40)	(28)
Fair value adjustment - Resolution 4131	(26)	10
Discount on repurchase of bonds	(173)	
Payments - interest	(1,735)	(1,838)
Foreign exchange variation	(3,855)	6,491
Payments - principal	(7,376)	(7,576)
Closing balance	24,403	30,531

All amounts in millions of reais unless otherwise stated

(d) Breakdown by currency

	Current		Non-current		Total	
	2016	2015	2016	2015	2016	2015
US dollar	369	224	14,396	15,631	14,765	15,855
Real	1,153	1,483	4,943	6,603	6,096	8,086
Euro	32	85	2,500	5,261	2,532	5,346
Boliviano	3		392		395	
Turkish lire	27		279		306	
Currencies basket	90	182	101	277	191	459
Chinese yuan		399				399
Hong Kong dollar		131				131
Other	98	112	20	143	118	255
	1,772	2,616	22,631	27,915	24,403	30,531

(e) Breakdown by index

	Current		Non-current		Total	
	2016	2015	2016	2015	2016	2015
Local currency						
CDI	252	631	3,633	4,723	3,885	5,354
TJLP	421	611	824	1,329	1,245	1,940
Fixed rate	196	233	354	491	550	724
TR	267				267	
SELIC	17	8	132	60	149	68
	1,153	1,483	4,943	6,603	6,096	8,086
Foreign currency						
Fixed rate	235	283	12,649	14,901	12,884	15,184
LIBOR	213	34	4,671	5,588	4,884	5,622
UMBNDES	122	233	150	399	272	632
EURIBOR	5		218	424	223	424
PBoC		399				399
HIBOR		131				131
Other	44	53			44	53
	619	1,133	17,688	21,312	18,307	22,445
	1,772	2,616	22,631	27,915	24,403	30,531

(f) Collateral

At December 31, 2016, R$ 8,828 (2015 - R$ 9,902) of the balance of the Company's borrowing was collateralized under promissory notes and sureties and R$ 183 (2015 - R$ 175) of the property, plant and equipment items were collateralized by liens on the financed assets.

(g) Covenants/financial ratios

Certain borrowing agreements are subject to compliance with financial ratio rules ("covenants. When applicable, these obligations are standard for all borrowing agreements.

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

(h) New borrowing

By means of new borrowing transactions and the early repayment of certain existing debts, the Company has sought to extend the average maturity profile of its borrowing as well as to balance the exposure of its borrowing to different currencies.

The main new borrowing transactions carried out were as follows:

(i) On February 22, 2016, the subsidiary VCSA signed a contract in accordance with Resolution 4131 for USD 100 million (R$ 404) maturing in February 2020 and the final cost of 103% p.a. of the CDI, after conducting a swap. This operation is guaranteed by its subsidiary VCNA and the funds were used for the early redemption of debentures.

(ii) On February 25, 2016, the subsidiary VCSA renegotiated the contractual terms of the loan in accordance with Resolution 4131, signed in October 2014, totaling USD 100 million (R$ 248). The company has extended the deadline of 2017 to 2021 and renegotiated the cost of the swap from 103.0% to 109.9% of the CDI.

(iii) On March 2, 2016, the subsidiary VCSA announced a tender offer to repurchase its bonds emissions in euro maturing in 2021 and 2022. In March 2016, it repurchased EUR 69 million (R$ 284), the main issue maturing in 2021, and EUR 53 million (R$ 218), the main issue maturing in 2022. The total cash outlay was EUR 90 million (R$ 368). The financial settlement occurred on March 17, 2016, and generated a revenue of EUR 32 million (R$ 149).

(iv) On March 16, 2016, the subsidiary VCSA renegotiated the contractual conditions of the second public issue of debentures, which reached the amortized amount of R$ 200, maturing in October 2018 to March 2021, maintaining the original conditions. On December 15, 2016, the company renegotiated its second public issue of debentures, amounting to R$ 1,000, altering the average cost to 118.66% of the CDI and extending its maturing from 2019, 2020 and 2021 to January 2023. On December 27, 2016, three public issues (fifth, sixth and eighth) of debentures were renegotiated, amounting to R$ 1,600, changing the average costs to 118.9% of the CDI and extending is maturing from 2018, 2019 and 2020 to the following: R$ 200 maturing in March 2022, R$ 700 maturing in March 2023 and R$ 700 maturing in March 2024.

(v) On March 30, 2016, the subsidiary Itacamba Cementos S.A. held the second release of unionized loan-line resources contracted in 2015 in the amount of BOB 835 million. The amount released in March 2016 was BOB 278 million (R$ 144) and will be used to finance the expansion of a local cement plant. On August 5, 2016, was held the third release in the amount of BOB 209 million (R$ 96). On November 29, 2016 the last release was held, in the amount of BOB 139 million (R$ 68).

(vi) On June 27, 2016, the subsidiary Votener made the first issue of commercial promissory notes, in one series, amounting to R$ 250. Maturing in December 2017, they are remunerated by the Reference Rate ("TR", calculated and published by the Brazilian Central Bank) plus a spread of 12.36% p.a. This operation is guaranteed by the Company and the proceeds of the borrowing will be used for the development of wind farms.

(vii) In 20 and 27 June, 2016, the indirect subsidiary VCEAA contracted loans in the value of EUR 65 million (R$ 230), maturing in 2021 and 2023. The proceeds of these operations were used to anticipate the payment of borrowing maturing in 2017. For the same purpose, in July 2016, VCEAA contracted loans amount of EUR 100 million (R$ 358), maturing in 2021 and 2023.

(viii) In August 31, 2016, the company Votorantim Çimento Sanayi ve Ticaret Anonim Şirketi, a subsidiary of VCEAA, contracted a loan amounting to TRY 330 million (R$ 361) maturing in 2023. This operation is guaranteed by VCEAA and part of the proceeds were used for the payment of debts in China.

(ix) On October 3, 2016, VCSA, through its subsidiary, St. Marys Cement Inc., issued bonds in the international market in the amount of USD 500 million (R$ 1,617) maturing in 2027 and with coupon of 5.75%. With part of the proceeds, on October 10, 2016, through its subsidiary VCEAA, the company repurchased bonds (Tender Offer) of its Euro issues maturing in 2021 and 2022. The company repurchased EUR 332 million (R$ 1,189) of the principal of the issue maturing in 2021 and EUR 63 million (R$ 227) of the principal of the issue maturing in 2022, with a total cash outlay of EUR 395 million (R$ 1,416).

(x) On November 30, December 1 and December 9, 2016, the subsidiary VGmbH contracted new Prepayment Export loans in the gross amount of USD 400 million (R$ 1,365), maturing in 2021. The operation was guaranteed by VMH, VMZ and Cajamarquilla. The proceeds were used in debt payments due in 2016 and are intended to extend the amortization profile.

20 Confirming payable

The Company and its subsidiaries entered in agreement with financial institutions, aiming to anticipate receivables from suppliers in domestic and foreign markets. In this operation, suppliers transfer the right to receive its accounts receivable related to sales of goods to financial institutions.

Operations - Confirming payable	2016	2015
Trade payables - domestic market	363	264
Trade payables - foreign market	605	819
	968	1,083

21 Current and deferred income tax and social contribution

(a) Reconciliation of the 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:

	2016	2015
Profit (loss) before income tax and social contribution	(1,369)	1,554
Standard rates	34%	34%
Income tax and social contribution at standard rates	465	(528)
Adjustments for the calculation of income tax and social contribution at effective rates		
Equity in the results of investees	265	106
Differences in the tax rates of foreign subsidiaries	(87)	66
Tax on mining operations	(37)	(33)
Income tax and social contribution losses without recording the deferred amounts	(340)	(177)
Reversal of deferred income tax and social contribution		(237)
Constitution of deferred tax on exchange variation of fixed assets	176	
Other additions, net	(55)	(75)
Income tax and social contribution calculated	387	(878)
Current	(481)	(714)
Deferred	868	(164)
Income tax and social contribution expenses	387	(878)
Effective rate	28%	56%

(b) Breakdown of deferred tax balances

	2016	2015
Tax credits on tax losses	1,868	2,091
Tax credits on temporary differences		
Foreign exchange gains	1,496	2,544
Estimation for losses on investments, fixed and intangible assets	1,102	200
Tax, civil and labor provision	545	489
Tax benefit on goodwill	263	4
Use of public assets	178	183
Asset retirement obligation	170	127
Deferred losses on derivative instruments	109	(115)
Estimation for inventory losses	77	126
Environmental liabilities	106	31
Estimation for asset disposals	7	17
Other tax credits	313	293
Tax debits on temporary differences		
Market value adjustments to property, plant and equipment	(1,669)	(1,760)
Accelerated depreciation and adjustment of useful lives	(1,367)	(1,428)
Goodwill amortization	(337)	(300)
Financial instruments - firm commitment	(234)	(329)
Market value Citrosuco	(148)	
Capitalized interest	(133)	(134)
Fair value adjustments	(112)	86
Adjustment to present value	(57)	(56)
Pension funds	(42)	(40)
Asset retirement obligation	(25)	(7)
Borrowing costs	(4)	(5)
Other tax debits	(34)	(13)
Net	2,072	2,004
Net deferred tax assets related to the same legal entity	4,055	4,065
Net deferred tax liabilities related to the same legal entity	(1,983)	(2,061)

All amounts in millions of reais unless otherwise stated

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

	2016	2015
Opening balance	2,004	692
Effects on the results of the year	868	(164)
Effects on the results of the year - discontinued operations		(94)
Deferred income tax and social contribution on hedge accounting	(906)	1,771
Effects of foreign exchange variation in other comprehensive income	155	(306)
Effect of subsidiaries included in the consolidation	2	
Reclassification to assets classified as held-for-sale	120	
Other	(171)	105
Closing balance	2,072	2,004

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

	2016	Percentage
In 2017	159	8%
In 2018	192	12%
In 2019	354	18%
In 2020	707	38%
After 2021	456	24%
	1,868	100%

22 Deferred revenue - obligation for performance

In December 2014, the subsidiary Votener assigned to a financial institution the receivables up to the December 2019 maturity due to contracts for Electrical Energy Trading in the Regulated Environment, amounted to R$ 1,253, with no right of return and without the Company holding joint liability. For the assignment of receivables, Votener received a total amount of R$ 905, and the interest to be appropriated is being recognized pro rata to income over the term of the contract.

In May 2015, the Votener carried out a second credit assignment operation, without any right of return and without the Company holding joint liability, totaling R$ 368. For the assignment of receivables, the Votener received the total amount R$ 251, and the interest to be appropriated is being recognized pro rata to income over the term of the contract.

As the physical delivery of energy occurs, Votener proportionally recognizes the revenue from the sale of these receivables. The updated amount of these operations as at December 31, 2016 is R$ 759 (2015 - R$ 996).

23 Provision

(a) Breakdown and changes

							2016	2015
			Legal claims					
	ARO (i)	Restructuring	Tax	Labor	Civil	Other	Total	Total
Opening balance	1,159	20	595	180	173	62	2,189	1,910
Present value adjustment	27						27	40
Additions	6		116	149	205	10	486	335
Reversals		(19)	(81)	(123)	(24)	(9)	(256)	(313)
Judicial deposits, net of write-offs			(53)	(20)	(3)		(76)	(4)
Settlement with cash	(32)		(23)	(40)	(25)	(7)	(127)	(233)
Settlement with compensation of judicial deposits				(7)	(4)		(11)	
Transfers				8		(9)	(1)	1
Reclassifications from (to) liabilities related to assets held-for sale			(5)	(11)	(2)		(18)	42
Effect of subsidiaries included in consolidation			56	20	3		79	
Monetary restatement	29		124	23	52	3	231	152
Foreign exchange variation	(111)	(1)	(4)	(3)	(3)	(12)	(134)	204
Revision of estimated cash flow	(43)						(43)	55
Closing balance	1,035		725	176	372	38	2,346	2,189

(i) Asset retirement obligation.

(b) 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:

				2016				2015
	Judicial deposits	Provision	Net amount	Outstanding judicial deposits (i)	Judicial deposits	Provision	Net amount	Outstanding judicial deposits (i)
Tax	(562)	1,287	725	214	(509)	1,104	595	219
Civil	(15)	387	372	104	(12)	185	173	86
Labor	(97)	273	176	99	(77)	257	180	39
Other		38	38	3		62	62	5
	(674)	1,985	1,311	420	(598)	1,608	1,010	349

(i) The Company has balances deposited in relation to lawsuits classified by management, following the directions of the Company's legal counsel, as remote or possible loss and, therefore, they are made without the respective provision.

(c) Asset retirement obligation

The interest rate used to adjust these obligations to its present value, considering the real interest rate updated by inflation in 2016 was 8.47% p.a. (2015 - 7.51% p.a.). The recognized liability is periodically adjusted based on these discount rates plus inflation for the reference period.

All amounts in millions of reais unless otherwise stated

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

(i) **Provision for tax contingencies**

The tax proceedings with a probable likelihood of loss relate to discussions of federal, state and municipal taxes. The tax obligations that the Company is challenging in court on legal or constitutional grounds are fully recorded, irrespective of the likelihood of a favorable outcome to the litigation.

(ii) **Provision for labor contingencies**

VSA and its subsidiaries are party to 6,705 (2015 - 6,283) labor lawsuits filed by former employees, third parties and labor unions, mostly claiming the payment of indemnities on dismissals, health hazard premiums and hazardous duty premiums, overtime, and commuting hours, as well as indemnity claims by former employees and third parties based on alleged occupational illnesses, work accidents, property damage and pain and suffering, in the common courts, arising under the terms of Constitutional Amendment 45 and the need to comply with normative clauses.

(iii) **Provision for civil contingencies**

The Company and its subsidiaries are parties to civil lawsuits involving claims for compensation for property damage and pain and suffering, collection and execution, and administrative claims.

(iv) **Provision for environmental contingencies**

The Company and its subsidiaries are subject to laws and regulations in the various countries in which they operate. 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 to ensure that the systems in place are adequate to manage these risks.

The environmental litigation to which the Company and its subsidiaries are parties basically relate to public civil claims and citizens' lawsuits, whose objects include the interruption of the environmental licensing of new projects, and the recovery of areas of permanent preservation, among other matters.

(e) Litigation with likelihood of loss considered possible

The Company and its subsidiaries are party to other litigation involving a risk of possible loss, as detailed below:

	2016	2015
Tax	7,500	4,983
Civil	7,227	6,766
Environmental	487	539
Labor and social security	355	429
	15,569	12,717

(e.1) Comments on contingent tax and public rights liabilities with likelihood of loss considered possible

The contingent liabilities relating to tax lawsuits in progress with a likelihood of loss considered possible, for which no provision has been recorded, are commented on below. In the table below we present the materiality of these lawsuits:

Nature	2016	2015
ICMS Credit utilization (i)	895	
Tax assessment notice – IRPJ/CSLL (ii)	828	154
Compensation for exploration for mineral resources (iii)	547	476
Disallowances of PIS/COFINS credits (iv)	425	367
Disallowance of IRPJ negative balance (v)	290	155
Offset of tax loss – 30% limit (merger) (vi)	271	250
ICMS – transfer costs (vii)	225	206
IRPJ/CSLL – transfer costs (viii)	222	
IRPJ/CSLL – Profits abroad (ix)	172	155
Tax assessment notice – ICMS (x)	146	140
IRPJ/CSLL – Deduction of expenses (xi)	86	
ICMS requirement on TUSD (xii)	23	199
Other lawsuits of individual amounts lower than R$ 100	3,370	2,881
	7,500	4,983

The balances from 2016 that have no comparative basis relate, substantially, to the effects of the subsidiaries arising from the VPAR incorporation operation, according to Note 1.1 (a).

(i) **ICMS - Credit utilization**

Between 2011 and 2013, eight infringement and imposition assessments were registered against Citrovita Agro Industrial Ltda., aiming at, mainly, the payment of ICMS already credited, as highlighted in transfer invoices to other subsidiaries for exportation, which cannot be taxed. The assessments are worth, on December 31, 2016, R$ 757.

From the eight mentioned litigations, seven await trial in the first administrative instance, being: (i) three of them with a decision totally unfavorable; (ii) four of them in which the decision was maintained only in part, decreasing the registered value; and (iii) one of them with a decision unfavorable in the administrative sphere, and that will be discussed in the judicial sphere, through the filing of an annulment action. Because of these decisions, the Company and the Attorney of the State Treasury of São Paulo presented recourses, which await appraisal by the Taxation and Duty Court.

In the fourth quarter of 2016, the Company received a new tax assessment notice whose amount, updated up to December 31, 2016 was R$ 138. The lawsuit currently awaits judgment in the first administrative instance.

(ii) **Tax assessment notice - IRPJ/CSLL**

In December 2011, the subsidiary VCSA was assessed by the Federal Revenue of Brazil in the amount of R$ 185 for alleged failure to pay or underpayment of IRPJ and CSLL relating to the period from 2006 to 2010, due to: (i) the amortization of goodwill supposedly being incorrect; (ii) the utilization of tax loss above the 30% limit permitted by the tax regulation (merger); and (iii) failure to pay IRPJ and CSLL obligations due on a monthly estimate basis. At December 31, 2016, the subsidiary understands that the best estimate of possible contingency was only R$ 168. In the lower court judgment, the judges decided on the reduction of the assessed amount by approximately R$ 50. In March 2015, there was a trial of the mandatory and voluntary appeal by the Board of Tax Appeals, where the exclusion of the qualified and isolated fines and also the confirmation of the decision of the first instance was decided, which relates to the decision above. Currently, the subsidiary is awaiting the judgment of the mandatory and special appeal presented to the responsible agent.

In April 2015, the Company was assessed by the Federal Revenue of Brazil demanding payment of income tax and social contribution due to the disallowance of the deductibility of expenses under the "REFIS" (Law 11,941/09) made in the 2010 calendar year. The objection was judged valid by the "DRJ" and the tax credit was dismissed. On December 15, 2016, the Company was informed about the non-appeal filed by the National Treasury, which made the decision that exempted the tax credit definitive. The decision is awaiting filing. On December 31, 2016, the updated value of the fine was R$ 185.

In December 2016, VCSA was assessed by the Federal Revenue of Brazil in the amount of R$ 470, demanding the payment of IRPJ and CSLL related to the 2011 period, due to the alleged undue deduction of expenses and operating costs. Currently, the company awaits the judgment of the impugnation presented to the Federal Revenue. On December 31, 2016, the amount in controversy was R$ 475, whose likelihood of loss is possible.

All amounts in millions of reais unless otherwise stated

(iii) **Compensation for exploration for mineral resources**

The subsidiaries VCSA, VMZ and CBA have received various tax assessment notices issued by the National Department of Mineral Production for alleged failure to pay or underpayment of Financial Compensation for the Exploration of Mineral Resources, for the periods 1991 to 2012, January 1991 to December 2000, January 1991 to December 2006, 1991 to 2003 and 2013, respectively. At December 31, 2016, the amount subject to litigation totaled R$ 547 and was considered a possible loss.

(iv) **Disallowances of PIS/COFINS credits**

The Company's subsidiary CBA received various court decisions relating to the disallowance of PIS and COFINS credits on items applied during the production process, which in the Federal Revenue of Brazil's understanding would not entitle them to credits. The restated amount at December 31, 2016 was R$ 425. The lawsuits are currently pending decisions in the lower administrative court.

(v) **Disallowance of IRPJ negative balance**

The Company, its subsidiary CBA and Cia. Nitroquímica Brasileira Ltda. ("CNBQ"), sold by the Company to third parties, received court decisions related to the disallowance of an IRPJ negative balance in the calendar years 2006 (VSA), 2003, 2004, 2006 (CNBQ) and 2008 (CBA), totaling a restated amount of R$ 290 at December 31, 2016. Currently, the lawsuits are pending judgment on the manifestation of dissatisfaction filed by the companies. One of the cases was closed at the administrative level, and the Company presented surety insurance and is discussing the debt in court.

The responsibility for any liability of CNBQ, in accordance with the company purchase and sale agreement, rests with the Company.

(vi) **Offset of tax loss - 30% limit (merger)**

The subsidiary VE was assessed by the Federal Revenue of Brazil, as the successor to the company VBC Participações S.A., due to the supposedly incorrect offsetting of tax losses without complying with the 30% limit (merger). In the administrative level, the voluntary appeal was approved to reject the applicability of the limit of 30% of the taxable income and the social contribution calculation basis, to offset the tax loss carryforwards and the CSLL tax loss carryforwards on the termination of the legal entity. In the face of such a decision, the prosecution filed a special appeal in September 2016. As to the merit, the special appeal of the National Treasury was granted. Regarding the fine, the Federal Revenue determined the return of the case to the court of origin for the matter to be assessed. This means that the decision is final in the administrative level regarding the merits, in a way unfavorable to the interests of Votorantim, remaining pending the discussion only as to the matter of the fine. As to the merit, the Company will enter the judicial discussion. The amount involved at December 31, 2016 was R$ 271.

(vii) **ICMS - Transfer costs**

The subsidiary VMSA, incorporated by CBA, was assessed for alleged failure to pay ICMS on transfers of nickel carbonate to its branch located in the State of São Paulo, relating to the periods from January 2003 to December 2003, April 2014 to March 2005, April 2005 to March 2006, April 2006 to March 2007 and April 2007 to March 2008. These assessments totaled R$225 at December 31, 2016. Currently the lawsuits are pending a decision in the administrative or judicial courts.

(viii) **IRPJ/CSLL - transfer costs**

Between 2007 and 2010 four infringement assessments were registered against the subsidiary Citrovita Agro Industrial Ltda., aiming the payment of "IRPJ" and "CSLL" and the adjustment in the base for fiscal loss and the negative base for "CSLL", because of disallowances made in the adjustments that happened when calculating transfer costs, in 2003 and 2004 periods, worth R$ 222, updated until December 31, 2016.

All litigation was judged by the Federal Revenue Office of Judgment, being three of them in favor of Citrovita. In another case, the decision was partially favorable. Because of that, the recourses were presented and, at the moment await judgment by the Administrative Council of Tax Appeals.

(ix) **IRPJ/CSLL - profits abroad**

In October 2013, VCSA was assessed by the Federal Revenue of Brazil in the amount of R$ 107, for alleged failure to pay IRPJ and CSLL on profits earned abroad in calendar years 2008 to 2010, through its subsidiaries and associates. At the lower court, the judges decided that the tax assessment notice was valid. Currently, the subsidiary is awaiting a decision on the voluntary appeal filed with the Administrative Board of Tax Appeals. At December 31, 2016, the amount under litigation was R$ 147, considered a possible loss.

In November 2013, the Company was assessed by the Federal Revenue of Brazil for alleged failure to pay IRPJ and CSLL on profits earned abroad in the calendar year 2011. The amount involved at December 31, 2016 was R$ 25, and the likelihood of loss is classified as possible. Currently, the Company awaits the judgment of the appeal of the National Treasury, by the Administrative Council of Tax Appeals.

(x) **Tax assessment notice - ICMS**

In September 2016, VCSA was assessed by the State of Mato Grosso for the alleged absence of ICMS tax payment for the period from June 2014 to December 2015, in the amount of R$ 140. Currently, the company awaits the judgment of the objection filed at the Secretary of State Finance. On December 31, 2016, the amount in controversy was R$ 146, whose likelihood of loss is possible.

(xi) **IRPJ and CSLL - Deduction of expenses**

In December 2016, the Company was assessed by Brazilian Federal Revenue authorities for the payment of IRPJ and CSLL, due to the disallowance of exclusions from the calculation base of said taxes in 2011. The amount required by the tax assessment notice, restated up to December 31, 2016, amounts to R$ 86. The Company intends to file a challenge within the legal term.

(xii) **Requirement of ICMS on Distribution System Usage Tariff**

The subsidiaries VMZ and CBA received collection notices for alleged ICMS debts on the Distribution System Usage Tariff. The total restated amount of these was R$ 23 at December 31, 2016. Currently the lawsuit involving VMZ is awaiting judgment by the Taxpayers Board of Minas Gerais, the lawsuit involving CBA has already been judged favorably to the Company, and an appeal may be filed by the State Finance Department. In December 2015, VMZ obtained a favorable final decision before the Supreme Court recognizing the non-levy of ICMS on the Distribution System Usage Tariff.

(e.2) Comments on contingent labor liabilities with likelihood of loss considered possible

Labor claims with a likelihood of loss considered possible include those filed by former employees, third parties and labor unions, mostly claiming the payment of indemnities on dismissals, health hazard premiums and hazardous duty premiums, overtime and commuting hours, as well as indemnity claims by former employees and third parties based on alleged occupational illnesses and work accidents.

(e.3) Comments on contingent civil liabilities with likelihood of loss considered possible

The contingent liabilities relating to civil lawsuits in progress with a likelihood of loss considered possible, for which no provision has been recorded, are commented on below. In the table below we present the materiality of these lawsuits:

Nature	2016	2015
Public civil suit – Violation of the economic order (i)	3,630	3,309
Administrative investigations carried out by the Secretariat of Economic Law (ii)	2,128	1,919
Litigation with a São Paulo transportation company (iii)	179	168
Indemnity lawsuits (iv)	41	270
Arbitration – Petrolina aggregates operation (v)		317
Other lawsuits	1,249	783
	7,227	6,766

(i) **Public civil suit - violation of the economic order**

The Office of the Public Prosecutor of the State of Rio Grande do Norte has filed a civil class action against the subsidiary VCSA, together with eight other defendants, including several of Brazil's largest cement manufacturers, alleging cartel formation, and demanding that: (1) the defendants make an indemnity payment, jointly, amounting to R$ 5,600, in favor of the civil class action, due to moral and collective damage; (2) the defendants make payment of 10.0% of the total amount paid by the consumers for the acquisition of cement or concrete under the brands held by the defendants during the period from 2002 until 2006, due to individual consumers damage; (3) the defendants be subject to the following penalties according to Articles 23, Section

I and Article 24 of Law nº 8.884/94: (i) in addition to the payments mentioned in item (1), a fine ranging from 1.0% to 30.0% of annual revenue after the deduction of taxes relating to the fiscal year immediately preceding the year in which the alleged violation occurred, but not less than the monetary advantage acquired; and (ii) a prohibition, for a period not shorter than five years, against obtaining financing support from governmental financial institutions or participating in bidding processes held by the federal, state or municipal governments and their associated entities. Because the current claims mentioned in item (1), amounts to R$ 5,600 and the civil class action alleges joint liability, VCSA has estimated that, based on its market share, its share of the liability would be approximately R$ 2,400. However, there can be no assurance that this apportionment would prevail, or that VCSA will not be held liable for a different portion, which could be larger, or for the entire amount of this claim. Additionally, there is no assurance that VCSA will not be held liable for other amounts in relation to indemnifications for consumer damage as mentioned in item (2) above and/or the fine mentioned in item (3) above.

There has been no relevant decision regarding this lawsuit. The expectation of loss in relation to this matter is considered possible, and no provision has been established for this claim. At December 31, 2016, the amount subject to litigation was R$ 3,630.

(ii) **Administrative investigations carried out by the Secretariat of Economic Law (“SDE”), current General Superintendence of the Administrative Council for Economic Defense (“CADE”)**

In 2006, the SDE initiated administrative proceedings against the Cement Industry Union, some industry associations (cement and concrete), the largest Brazilian cement companies, including VCSA, relating to allegations of anti-competitive practices which included price fixing and the formation of a cartel. On July 29, 2015, the CADE court reached the final terms of the judgment, applying several penalties to the companies.

The penalties imposed on VCSA include the payment of a fine amounting to R$ 1,566 and the obligation to sell (1) all its interests, minority or otherwise, in other companies operating in the cement or concrete markets in Brazil; (2) 20% of the Company’s assets from concrete producing activities in Brazil, which shall be sold in relevant markets in which there is more than one concrete producing company owned or possessed by the Company; (3) other cement assets (of which VCSA has not yet been informed) which, in CADE’s opinion, were directly related to the alleged illegal acts / crimes that VCSA is being accused of. Other non-monetary sanctions were also imposed, including (1) the mandatory disclosure of CADE’s decision in one of the five biggest Brazilian periodicals; (2) the prohibition to hire official financial institutions, in the case of credit lines with financing conditions subsidized by public resources, made available by such institutions; (3) a restriction on financing provided by Brazilian government, as well as the recommendation to limit other benefits and tax incentives. The updated balance related to this lawsuit at December 31, 2016, amounted R$ 2,128.

In November 2015, VCSA filed an annulment action to cancel the decision issued at the administrative level or, at least, reduce the applied penalties. The injunction was granted in November 24, 2015, to suspend the effects of the decision issued by CADE at the administrative level, preventing CADE from demanding fulfillment of obligations and/or executing the penalties until the new judgment. CADE was summoned and presented its defense, while VCSA presented its reply in November 2016. Currently, the reorganization of the proceedings is awaited. The company classified the likelihood of loss of the proceedings as possible.

On October 18, 2016, the CADE court unanimously decided to close the administrative proceeding initiated in 2003 against the largest concrete and cement producers in Brazil, including VCSA, relating to allegations by certain ready-mix concrete producers that the large cement companies may have breached Brazilian antitrust laws by not selling certain types of cement to concrete companies. The court recognized the existence of yhe identity of the conduct investigated in this process with those objects of the process started in 2006. With that decision, this administrative process was closed, without any imposition of penalties on the company.

(iii) **Litigation with a transportation company in São Paulo**

In September 2003, a transportation company filed a claim against Votorantim Cimentos Brasil S.A. (“VCB”, a company merged into the subsidiary VCSA) seeking compensation for material damages amounting to R$84 and moral damages at an unspecified value, alleging that the Company failed to perform two oral contracts. The transportation company argues that those breaches caused the discontinuation of the activities of its sales department and significant losses to its transportation area. The Company presented its response in September 2009, arguing that: (1) the statute of limitations had expired; (2) the Company did not change the general conditions of the reverse repurchase agreement; and (3) the transportation company mismanaged its business and caused its own insolvency. In August 2011, the Court rejected the argument of the expiration of the statute of limitations and determined the expert examination, as requested by the parties. The expert examination was concluded and the report was presented. The parties filed their challenges to the report and the lawsuit was sent to the expert for his opinion. In June 2014, clarifications were provided by the expert. On June 24, 2014, the Company’s challenge was presented. In December 2014 the Company received a decision declaring the end of the fact-finding phase and requesting the parties to declare if they would be interested in holding a conciliation hearing. In July 2016, the request was partially upheld in order to order Votorantim to pay R $ 0.4. In October 2016 Votorantim’s appeal was filed. On December 31, 2016, the updated balance related to this lawsuit was R$ 179.

(iv) **Indemnity lawsuits**

A further indemnity lawsuit has been filed against VMZ, alleging property damage and pain and suffering. VMZ has filed its defense and is awaiting judgment. The restated amount involved as at December 31, 2016 was R$ 39.

Trial is being awaited in regard to a lawsuit filed against the subsidiary VMZ. The demand discusses differences arising from the provision of services. The amount involved, updated as at December 31, 2016 was R$ 2.

(v) **Arbitration - Petrolina Aggregates Operation**

This refers to an arbitration proceeding required by Mario de Souza Gonzaga and other against Pedreira Pedra Negra, a subsidiary of VCNNE, filed with the São Paulo State Industries Center (“CIESP”)/Federation of Industries of the State of São Paulo (“FIESP”) Conciliation, Mediation and Arbitration Chamber, initiated in January 2014, which discussed the sale of shares of the companies São Francisco Zeta and Petrolina Zeta to Pedreira Pedra Negra, and the sellers’ obligation to engage in a new business in Palmas (TO), which afterward would be sold to Pedra Negra. The Claimants request (i) the rescission of the agreement entered into by the parties, even if partially; and (ii) that Pedra Negra be sentenced to pay compensation for damages and pain and suffering. Pedra Negra, on the other hand, requests: (i) that the sellers be sentenced to buy back the shares held by shareholders P-z and SF-z and pay the amounts agreed with the Defendant in the Agreement for the Acquisition of São Francisco Zeta and Petrolina Zeta Shares, or alternatively (ii) the termination of the agreements by exclusive fault of the sellers, and that the sellers be sentenced to return the amounts disbursed by Pedra Negra under such agreements, duly adjusted for inflation; and (iii) that the sellers be sentenced to pay compensation for damages related to the nonperformance of the agreements entered into by the parties. On February 2016, the Arbitration Chamber delivered a judgment considering Mario Gonzaga’s requests unfounded and upheld Pedra Negra’s requests, declaring that Mario Gonzaga repurchased the operations, and requiring him to pay the amount set in the contract to Pedra Negra within 30 days. Mario Gonzaga presented a clarification request and Pedra Negra its response. On April 2016, the court rejected the request for clarification and maintained the verdict in all of its terms, starting to run the time of 30 days for voluntary settlement of the decision by Mario Gonzaga. Before the deadline Mario Gonzaga filed a lawsuit, with an injunction request to suspend the decision of the arbitration, alleging defects. The judge granted the lawsuit to suspend the decision of the arbitration. Pedreira Pedra Negra appealed the decision and the Pernambuco State Court rendered a decision reinstating the ruling of the arbitration, enabling its execution by Pedra Negra.

In September 2016, the arbitration litigation was terminated in the contingencies report, given that no further action against Pedra Negra may be issued by the Arbitration Court, following the decision.

(e.4) Comments on contingent environmental liabilities with likelihood of loss considered possible

The environmental litigation to which the Company and its subsidiaries are party basically relate to public civil actions, class actions and indemnity lawsuits, the objectives of which are the interruption of the environmental licensing of new projects, the recovery of areas of permanent preservation, and the decontamination of land, among other matters. The cost of the preparation of environmental studies and the cost of the recovery of the Company’s and its subsidiaries’ land in the event of an unfavorable outcome are estimated as the need arises. These costs are recorded as expenses in the statement of income as they are incurred. The current possible demands relate basically to indemnity lawsuits. The Company has filed its defense, which fully contests the allegations. All environmental lawsuits with material amounts and that are classified as possible losses are in the fact-finding phase. There has been no provision recorded in relation to environmental lawsuits in progress.

(f) Commitments

The subsidiaries VCSA and VCNNE own a lot of contracts for the acquisition of goods used in the cement production, partially replacing the clinker. These are contracts with thermal plants for coal ashes, with steel mills for blast furnace slag and with iron alloys producers for metallurgical slag. The maturities vary from contract to contract, the longest ending in 2035.

To complement the electric power supply that arises from own hydroelectric plants, the subsidiaries have-long term purchase contracts with third parties, ensuring its energy necessity.

The subsidiaries abroad have, mainly, contracts for the purchase or lease of machinery and equipment and rentals of real estate. Maturities vary from contract to contract, and the longer of these end in 2053.

All amounts in millions of reais unless otherwise stated

24 Use of public assets

The Company invests in companies that have concession contracts in the electrical energy industry. Most of these contracts provide for annual payments from the commencement 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:

						2016		2015	
Plants/Companies	Investor	Concession start date	Concession end date	Payment start date	Ownership interest	Intangible assets (Note 18)	Liabilities	Intangible assets (Note 18)	Liabilities
Salto Pilão	Companhia Brasileira de Alumínio	nov-01	dec-36	jan-10	60%	204	516	214	488
Enercan - Campos Novos	Companhia Brasileira de Alumínio	apr-00	may-35	jun-06	33%	5		5	
Salto do Rio Verdinho	Companhia Brasileira de Alumínio	aug-02	sep-37	oct-10	100%	8	21	9	19
Itupararanga	Companhia Brasileira de Alumínio	nov-03	dec-23	jan-04	100%	1	2	1	2
Piraju	Companhia Brasileira de Alumínio	dec-98	jan-34	feb-03	100%	1	6	1	6
Ourinhos	Companhia Brasileira de Alumínio	jul-00	aug-35	sep-05	100%	1	5	1	5
Baesa - Energética Barra Grande	Companhia Brasileira de Alumínio	jun-01	may-36	jun-07	15%	14	44	15	41
Capim Branco I e Capim Branco II	Votorantim Metais Zinco S.A.	aug-01	sep-36	oct-07	13%	3	11	3	10
Picada	Votorantim Metais Zinco S.A.	may-01	jun-36	jul-06	100%	19	68	20	65
Enercan - Campos Novos	Votorantim Metais S.A.	apr-00	may-35	jun-06	12%	1	12	1	12
Pedra do Cavalo	Votorantim Cimentos N/NE S.A.	mar-02	apr-37	apr-06	100%	123	501	130	477
						380	1,186	400	1,125
Current					0		67		61
Non-current						380	1,119	400	1,064

25 Equity

(a) Share capital

On December 31, 2016, the fully subscribed and paid up capital of the Company was R$ 28,656 (2015 - R$ 21,419), consisting, on December 31, 2016 and 2015, of 18,278,789 thousand common shares.

At the Extraordinary General Meeting held on January 1, 2016, the Directors approved an increase in the Company's share capital through the merger of VPAR in the amount of R$ 7,237, without issuing new shares and without stock change of control, as explained in Note 1.1 (a).

(b) Dividends

Dividends are calculated based on 25% of profit for the year, net of a legal reserve, pursuant to the Company's bylaws.

At the Ordinary General Meeting held on April 29, 2016, the Company reverted R$ 113 regarding VPAR 2015 minimum mandatory dividends, incorporated to the Company.

(c) Legal reserve and profit retention reserve

The legal reserve is credited annually with 5% of the profit for the year and cannot exceed 20% of the share capital. The reserve can only be used to increase capital and offset accumulated losses.

The profit retention reserve was established to record the appropriation of the remaining balance of retained earnings, held over to fund projected business growth, as established in the Company's investment plan.

(d) Reserve for tax incentives

This reserve was set up in accordance with Article 195-A of the Brazilian Corporation Law (amended by Law 11,638/07), and it is credited with the benefits of tax incentives, which are recognized in the results of operations for the year and appropriated to the reserve from retained earnings. These incentives are not included in the calculation basis for the minimum mandatory dividend.

All amounts in millions of reais unless otherwise stated

(e) Carrying value adjustments

	Currency translation of investees located abroad	Hedge accounting for net investments abroad, net of taxes	Hedge accounting for the operations of subsidiaries	Remeasurement of retirement benefits	Share in other comprehensive income of investees	Total
At January 1, 2015	4,108	(2,650)	(110)	(23)	(739)	586
Other comprehensive income						
Currency translation of investees located abroad	6,649					6,649
Hedge accounting for net investments abroad, net of taxes		(3,948)				(3,948)
Hedge accounting for the operations of subsidiaries			28			28
Remeasurement of retirement benefits				25		25
Share in other comprehensive income of investees					78	78
Total contributions by and distributions to shareholders						
Securities convertible into shares					(830)	(830)
Fair value of the share increase in subsidiary Milpo					379	379
At December 31, 2015	10,757	(6,598)	(82)	2	(1,112)	2,967
At January 1, 2016	10,757	(6,598)	(82)	2	(1,112)	2,967
Other comprehensive income						
Currency translation of investees located abroad	(4,553)					(4,553)
Hedge accounting for net investments abroad, net of taxes		2,033				2,033
Hedge accounting for the operations of subsidiaries			52			52
Remeasurement of retirement benefits				(37)		(37)
Fair value of financial assets available for sale					227	227
Realization of comprehensive income on disposals of investments					(25)	(25)
Share in other comprehensive income of investees					(83)	(83)
Total contributions by and distributions to shareholders						
Fair value on interest variation - Zinc & byproducts ("VMH")					572	572
Repurchase of shares - Milpo					102	102
At December 31, 2016	6,204	(4,565)	(30)	(35)	(319)	1,255

(f) Non-controlling interests

	2016	2015
VM Holding S.A (Note 1.1 (c))	808	
Refineria Cajamarquilla Ltda.	736	2,335
Compañia Minera Milpo S.A.	521	1,069
Cementos Artigas S.A.	197	222
Asment de Témara	144	173
Yacuces, S.L.	108	133
Itacamba Cemento S.A.	99	110
Shree Dijivay Cement Co. Ltd	52	49
Yibitas Yozgat Isci Birligi Insaat M.T.S	23	30
Acerías Paz Del Rio S.A.	18	89
Other (i)	(48)	(34)
	2,658	4,176

(i) The value presented as a debt is substantially derived from the balances of investees that had negative equity at the end of the year.

Notes to the consolidated financial statements

at December 31, 2016
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26 Net revenue

(a) Reconciliation of revenue

	2016	2015
Gross revenue		
Sales of products - domestic market	14,039	15,687
Sales of products - foreign market	14,240	14,833
Supply of electric energy	2,527	3,072
Services provided	663	869
	31,469	34,461
Taxes on sales, services and other deductions	(4,731)	(5,189)
Net revenue	26,738	29,272

(b) Information on geographical areas in which the Company operates

The geographical areas are determined based on the location of the customers. The net revenue of the Company, classified by currency and destination, is as follows:

(i) **Revenue by destination**

	2016	2015
Brazil	12,680	14,709
United States	3,999	3,878
Peru	1,823	1,787
Argentina	1,080	1,126
Colombia	1,005	1,080
Canada	950	994
Turkey	701	739
Spain	653	511
Morocco	425	389
Luxembourg	347	322
China	306	390
Uruguay	296	336
Switzerland	287	791
Tunisia	258	239
South Korea	227	171
India	193	195
Chile	166	181
Japan	153	194
Germany	150	79
Singapore	145	247
Belgium	143	108
Bolívia	122	86
Other countries	629	720
	26,738	29,272

(ii) **Revenue by currency**

	2016	2015
Real	12,495	14,434
US Dollar	8,912	9,106
Canadian Dollar	953	991
Colombian Peso	854	930
Argentinian Peso	800	1,059
Euro	680	905
Turkish Lira	627	658
Dirham	425	389
Dinar	258	238
Other currencies	734	562
	26,738	29,272

27 Expenses by nature

The Company's management discloses expenses by function, and also the cost of sales, selling and administrative expenses, as follows:

	2016	2015
Raw materials, inputs and consumables	14,490	15,408
Employee benefit expenses	4,380	4,319
Depreciation, amortization and depletion	2,664	2,631
Outsourced services	1,685	1,726
Transportation expenses	1,084	1,088
Other expenses	249	503
	24,552	25,675
Reconciliation		
Cost of products sold and services rendered	20,773	21,967
Selling expenses	1,667	1,625
General and administrative expenses	2,112	2,083
	24,552	25,675

Notes to the consolidated financial statements

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28 Employee benefit expenses

	2016	2015
Salaries and bonuses	2,704	2,757
Payroll charges	1,047	1,008
Social benefits	629	554
	4,380	4,319

29 Other operating expenses, net

	2016	2015
Gain on sale of investiments, net (i)	312	265
Gain on sale of fixed and intangible assets, net	149	345
Tax benefits	109	137
Net gain on co-processing	11	11
Recovery of taxes	4	25
Provision impairment of investments, fixed and intangible assets (ii)	(2,151)	(650)
Financial instrument - firm commitment (iii)	(253)	(363)
Gain (loss) on hedge	(127)	22
Expenses with environmental obligations	(248)	(39)
Spending on not activatable projects (iv)	(210)	(161)
Other expenses, net	(201)	(32)
	(2,605)	(440)

(i) Relates mainly to the sale of the indirect investee Sirama for the amount of R$ 293, as described in Note 1 (ii); the sale of the stake that the Company and the subsidiary VCSA held in Candiota Mining Ltda., amounting to R$ 9; and the proceeds of R$ 10 received in May 2016, arising from the contractual terms on the sale of the company Sul Americana de Metais S.A.

(ii) Relates substantially to the provision for impairment of investments made by the Company in the amount of R $ 988, based on the valuation of long steel operations located in Brazil at their fair value (Note 34); and the provision for impairment, made by subsidiary CBA, in the amount of R$ 846, based on the estimated future cash flows of the Nickel CGU.

(iii) Relates to the result of the sale of energy surplus, recognized by the fair value of the contracts and carried out in accordance with the physical energy delivery, as described in Note 15.

(iv) Relates mainly to the expenses on the study and research phases of mining projects in the zinc and byproducts segment (VMH) in line with the Company's investment strategy.

30 Finance results, net

	2016	2015
Finance income		
Income from financial investments	754	555
Discount on repurchase of bonds	173	
Fair value of borrowings	115	14
Interest on financial assets	156	152
Monetary updating of assets	131	132
Interest on related-party transactions (Note 14)	15	55
Discounts obtained	19	30
Other finance income	34	133
	1,397	1,071
Finance costs		
Interest on borrowing	(1,728)	(1,747)
Capitalization of borrowing costs	73	87
Interest on anticipation of receivables	(101)	(72)
Interest and monetary restatement - use of public assets	(106)	(145)
Monetary restatement of provisions	(197)	(216)
Income tax on remittances of interest abroad	(106)	(140)
Fair value of loans and financing	(89)	(24)
Borrowing fees	(74)	(94)
"PIS/COFINS" on financial results	(57)	(21)
Adjustment to present value CPC 12	(66)	(55)
Discounts granted	(20)	(41)
Interest on related-party transactions (Note 14)		(35)
Premium paid on repurchase of bonds		(136)
Other finance costs	(195)	(214)
	(2,666)	(2,853)
Income from derivative financial instruments (Note 6.1.1 (b))		
Revenue	43	687
Expenses	(1,049)	(243)
	(1,006)	444
Foreign exchange and monetary variation, net	544	(564)
Finance results, net	(1,731)	(1,902)

All amounts in millions of reais unless otherwise stated

31 Pension plan and post-employment health care benefits

The Company's subsidiaries have a defined contribution plan for employees. Certain subsidiaries, however, have a defined benefit plan.

The table below shows where the balances and activities related to post-employment benefit are allocated in the consolidated financial statements.

	2016	2015
Obligations recorded in the balance sheet with:		
Pension plan benefits	197	161
Post-employment healthcare benefits	120	144
Liabilities recorded in the balance sheet	317	305
Expenses recognized in the statement of income with:		
Pension plan benefits	22	26
Post-employment healthcare benefits	7	10
	29	36
Remeasurement with:		
Pension plan benefits - gross amount	63	(42)
Deferred income tax and social contribution	(21)	17
Pension plan benefits - net amount	42	(25)

(a) Defined contribution pension plan

The Company and its Brazilian subsidiaries sponsor private pension plans available to all employees administered by Fundação Senador José Ermírio de Moraes ("FUNSEJEM"), a private, not for profit, pension fund. Under the terms of the regulations of the fund, the contributions of the employees to FUNSEJEM are matched by the sponsors in accordance with the level of remuneration of the employee. For employees whose remuneration is lower than the threshold established by the regulations, the Company matches the contributions that represent up to 1.5% of their monthly remuneration. For employees whose remuneration exceeds the threshold, the Company matches the contributions of employees that represent up to 6% of their monthly remuneration. Voluntary contributions can also be made to FUNSEJEM. Once the plan contributions are made, no additional contributions are required.

(b) Defined benefit pension plan

The Company has subsidiaries with defined pension plans in North America, South America and Europe, which follow similar regulatory standards. The defined benefit pension plans also offer health care and life insurance, among other benefits. The cost of the retirement benefits and the other benefits of the plan granted to employees are determined by the projected benefit method on a pro rata basis considering the length of service and the best expectations of management regarding the return on plan assets, salary adjustments, costs and mortality trends, and the age of retirement of employees.

The amounts recognized in the balance sheet are determined as follows:

	2016	2015
Present value of funded obligations	865	932
Fair value of plan assets	(733)	(849)
Deficit of funded plans	132	83
Present value of non-funded obligations	176	207
Total deficit of defined benefit pension plans	308	290
Impact of the minimum funding requirement/assets ceiling	9	15
Assets and liabilities in the balance sheet	317	305

The changes in the defined benefit obligation and the fair value of the plan assets during the year were as follows:

	Present value of funded and unfunded obligations	Fair value of plan assets	Total	Impact of the minimum requirement of the funds/asset ceiling	Total 2016	Total 2015
Opening balance	1,137	(849)	288	15	303	301
Current service cost	5		5		5	6
Finance cost (income)	57	(34)	23		23	28
Past service cost and curtailments						1
	62	(34)	28		28	35
Re-measurements:						
Return on assets, excluding the amount included as finance income		(5)	(5)		(5)	(10)
Losses (gains) arising from changes in demographic assumptions	(12)		(12)		(12)	1
Losses (gains) arising from changes in financial assumptions	75		75		75	(61)
Losses arising from experience	7		7		7	16
Changes in the asset ceiling, excluding the amount included as finance cost						12
	70	(5)	65		65	(42)
Foreign exchange gains (losses)	(151)	111	(40)		(40)	73
Contributions:						
Employer		(6)	(6)		(6)	(29)
Payments of the plans:						
Payment of benefits	(82)	49	(33)		(33)	(33)
Closing balance	1,036	(734)	302	15	317	305

All amounts in millions of reais unless otherwise stated

The defined benefit obligation and the plan assets, by country, are as follows:

												Percentual
						2016						2015
	Brazil	Europe	North America	South America	Colombia	Total	Brazil	Europe	North America	South America	Colombia	Total
Present value of the obligation	43	21	540	2	258	864	39	20	609	2	261	931
Fair value of plan assets	(54)	(4)	(559)		(117)	(734)	(54)	(5)	(663)		(128)	(850)
	(11)	17	(19)	2	141	130	(15)	15	(54)	2	133	81
Present value of non-financial obligations	-	43	135			178		49	157			206
Impact of the minimum requirement of the funds/asset ceiling	8		1			9	13		3			16
	(3)	60	117	2	141	317	(2)	64	107	2	133	305

The actuarial assumptions used were the following:

						2016						2015
	Brazil	Europe	North America	South America	Colombia	Total	Brazil	Europe	North America	South America	Colombia	Total
Discount rate	11.4%	6.2%	4.0%	10.0%	7.5%	7.8%	15.3%	8.3%	4.3%	10.0%	9.0%	9.4%
Inflation rate	5.0%	0.8%	2.0%	11.5%	3.5%	4.5%	7.5%	2.3%	2.0%	11.5%	3.5%	5.4%
Future salary increases	5.8%	7.3%	2.5%	3.0%		4.6%	8.3%	6.3%	2.5%	3.0%		5.0%
Increases in future pension plans	5.0%				3.5%	4.2%	7.5%				3.5%	5.5%

The assumptions relating to mortality experience are established based on the opinion of actuaries, in accordance with published statistics and the experience in each territory. The mortality assumptions for the most important countries are based on the following post-retirement mortality tables: (i) Brazil AT-2000 Basic segregated for gender and disability table RRB-1994, modified and aggravated by 15%, segregated by gender; (ii) Europe: CSO80 with a projection period of ten to 15 years; (iii) North America: RP- 2000 segregated by gender with a projection period of eight years and (IV) Colombia: Based on table RV8, regulated by resolution 115-2010, without an expiration period.

(c) Post-employment benefits (pension and health care)

The Company operates post-employment health care plans through its subsidiary in North America, VCNA, and in Europe, VCEAA. The accounting method, assumptions and frequency of evaluations are similar to those used for the defined benefit pension plans. Most of these plans are not funded.

The obligations relating to these plans are included in the movement of the defined benefit obligations previously presented.

32 Tax benefits

VCSA and its subsidiaries have tax incentives within certain state and federal industrial development programs. The state programs are aimed at attracting industrial investments seeking regional decentralization, promoting employment and income generation, besides complementing and diversifying the industrial matrix of the states. These fiscal incentives are approved by the states in the form of percentage financing of up to 75%, presumed credit with a percentage of up to 95% and deferral of the payment of taxes or partial reductions of the amount due for imports of assets and inputs:

(a) FDI - Ceará Industrial Development Fund

Tax incentives granted until 2020 and 2026, within the scope of the Ceará Industrial Development Fund, created under State Law No. 10,367 of December 7, 1979 and State Decree No. 29,183, of February 8, 2008.

(b) PSDI - Sergipe Industrial Development Program

Tax incentives granted until 2031, under the Sergipe Industrial Development Program, created under the terms of State Law No. 3,140 of December 23, 1991 and State Decree No. 29,935 of December 30, 2014.

(c) Pro-Indústria - Tocantins Industrial Development Program - Xambioá - TO

Tax incentives granted until 2023, under the Tocantins Industrial Development Program, created under the terms of State Law No. 1,385 of July 9, 2003 and State Decree No. 2,845, of September 14, 2006.

(d) PRODEIC - Mato Grosso Industrial and Commercial Development Program

Tax incentives granted until 2021 and 2023 under the Industrial and Commercial Development Program of Mato Grosso, created under the terms of State Law 7,958, of September 25, 2003 and State Decree No. 1,432, of September 29, 2003.

(e) PRODIC - Industrial, Commercial and Mineral Development Program of the State of Rondônia

Fiscal incentives granted until 2018, within the scope of the Industrial, Commercial and Mineral Development Program of the State of Rondônia, created under the terms of State Law No. 1,558, of December 26, 2005 and State Decree No. 12,988, of July 13, 2007.

(f) PRO MARANHÃO - Incentive Program for Industrial Activities and in the State of Maranhão

Tax incentives granted until 2031, within the scope of the Incentive Program for Industrial and Technological Activities in the State of Maranhão, created under the terms of State Law No. 9,121, dated March 4, 2010 and State Decree No. 26,689, of June 30, 2010.

All amounts in millions of reais unless otherwise stated

(g) M.A.E. - Program for the Attraction of Companies in the State of Pará

Tax incentives granted until 2027, within the scope of the Program for the Attraction of Companies in the State of Pará, created under the terms of State Law 6,913, dated October 3, 2006 and State Decree No. 2,490, dated October 6, 2010.

(h) PRODUZIR - Industrial Development Program in the State of Goiás

Tax incentives granted up to 2020, within the scope of the Industrial Development Program in the State of Goiás, created pursuant to State Law 13,591 of January 18, 2000 and State Decree No. 5,265, of June 30, 2000.

(i) Federal tax incentives

Income tax incentives granted by the federal government through the Northeast Development Authority and the Amazon Development Authority, to encourage economic and social development in some areas of the North and Northeast regions of Brazil. These incentives are recorded in profit or loss on an accrual basis and are allocated at the end of the year to the "Tax incentives" reserve account.

33 Insurance

Pursuant to the Insurance Management Policy of the Company and its subsidiaries, different types of insurance policy, such as operational risk and civil liability insurance are contracted, to protect them against potential losses due to production stoppages, property damage and damage to third parties.

The Company and its subsidiaries have civil liability insurance for their operations and officers, with coverage and terms and conditions deemed adequate by management to cover the inherent risks.

The Company and its subsidiaries maintain property risk insurance coverage amounting to R$ 53,347 and for loss of income amounting to R$ 7,453 on December 31, 2016. The Company's management considers these amounts sufficient to cover eventual property risks and loss of profits.

34 Assets and liabilities classified as held-for-sale

The Company began to negotiate its long steel operations in Brazil, which are conducted by the subsidiary Votorantim Siderurgia S.A. and, as a result, the assets and liabilities of these operations were classified as held-for-sale. Briefly, the balances are:

		2016
	Assets	Liabilities
Assets classified as held-for-sale - long steel Brazil	2,125	1,522
Net investment (a)		603

(a) In compliance with the accounting rules for assets classified as held-for-sale, the Company carried out the valuation of the long steel operations in Brazil at their fair value and recognized an impairment of R$ 988, which was recorded as an expense in "Other operating expenses, net". The tax effects, in the amount of R$ 336, related to deferred income tax and social contribution were recognized in the respective income statement accounts and, therefore, the net effect was R$ 652.

Operating losses of the long steel operation in the amount of R$ 268 and R$ 292 in 2016 and 2015, respectively, were retained in the statement of income and reclassified from "Continuing operations" to "Discontinued operations".

Long steel assets located abroad (Argentina and Colombia) continue to be classified as investments and consolidated in the financial statements.

35 Supplemental information - Business segments

In order to provide more detailed information the Company has elected to present financial information organized into two business segments. Each segment presented has been prepared following the accounting consolidation policies in note 22 and consider, first, the elimination of balances and transactions among the companies before: (i) eliminations between business segments; (ii) eliminations of investments held by the holding companies.

Additionally, the eliminations and reclassifications among the companies are presented so that the net results reconcile with the consolidated financial information of VSA according to the supplementary information. This supplementary information is not intended to be in accordance with, and is not required by, the accounting practices adopted in Brazil, or by IFRS.

(a) Capital management

The financial leverage ratios are calculated according to the information of the industrial segments, considering the accumulated result of 12 months, as loan covenants, are summarized as follows:

		Industrual segments	
	Note	2016	2015
Adjusted EBITDA			
Profit (loss) for the year		(1,250)	382
Plus (less):			
Equity in the results of investees - continuing operations		(787)	(299)
Equity in the results of investees - discontinued operations		(18)	(12)
Net financial results - continuing operations		1,759	1,902
Net financial results - discontinued operations		84	120
Income and social contribution taxes - continuing operations		(395)	878
Income and social contribution taxes - discontinued operations		3	92
Depreciation, amortization and depletion - continuing operations		2,664	2,631
Depreciation, amortization and depletion - discontinued operations		124	122
EBITDA before the results of subsidiaries and joint ventures		2,184	5,816
Plus (less):			
Dividends received		188	716
Extraordinary items			
EBITDA - discontinued operations		75	(28)
Fair value of biological assets		(2)	45
Impairment - property, plant, equipment	29	1,120	652
Gain on sale of investments, net	29	(312)	(265)
Provision (reversal) for impairment of investments	29	1,031	(2)
Other		1	29
Adjusted annualized EBITDA (A)		4,285	6,963
Net debt			
Borrowing	19	24,403	30,531
Cash and cash equivalents, financial investments and derivative financial instruments		(9,691)	(11,085)
Net debt (B)		14,712	19,446
Gearing ratio (A/B)		3.43	2.79

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(b) Balance sheet - business segments

										2016
	Cement	**Zinc and byproducts ("VMH")**	**Aluminum ("CBA")**	**Steel (*)**	**Holding and other**	**Eliminations and reclassifications**	**Total, industrial segments**	**Votorantim Finanças**	**Eliminations and reclassifications**	**Total, consolidated**
Assets										
Current										
Cash and cash equivalents, financial investments and derivative financial instruments	4,094	3,373	940	246	1,510		10,163	109		10,272
Trade receivables	838	402	339	149	625	(352)	2,001			2,001
Inventory	1,448	951	604	293	85		3,381			3,381
Taxes recoverable	622	278	323	46	175		1,444	83		1,527
Dividends receivable	7		44		414	(295)	170	51	(41)	180
Financial instruments - firm commitment			161		156		317			317
Other assets	323	94	53	23	87		580			580
	7,332	5,098	2,464	757	3,052	(647)	18,056	243	(41)	18,258
Assets classified as held-for-sale					2,125		2,125			2,125
Non-current assets										
Long-term receivables										
Financial investments and derivative financial instruments	102		4		165		271			271
Taxes recoverable	306	87	728	12	453		1,586			1,586
Financial instruments - firm commitment			291		80		371			371
Deferred income tax and social contribution	1,013	707	968	18	1,066	263	4,035	20		4,055
Related parties	73	1,274	361	11	2,361	(3,545)	535			535
Judicial deposits	205	41	127		47		420			420
Other assets	572	60	19	4	203		858			858
	2,271	2,169	2,498	45	4,375	(3,282)	8,076	20		8,096
Investments	1,034	1	904		30,198	(19,138)	12,999	4,809	(4,859)	12,949
Property, plant and equipment	12,643	5,339	4,408	928	1,772		25,090	1		25,091
Biological assets			4	2	60		66			66
Intangible assets	5,954	6,825	631	219	157	(773)	13,013			13,013
	21,902	14,334	8,445	1,194	36,562	(23,193)	59,244	4,830	(4,859)	59,215
Total assets	29,234	19,432	10,909	1,951	41,739	(23,840)	79,425	5,073	(4,900)	79,598

(*) Relates to long steel operations abroad (Argentina and Colombia).

All amounts in millions of reais unless otherwise stated

										2016
	Cement	**Zinc and byproducts ("VMH")**	**Aluminum ("CBA")**	**Steel (*)**	**Holding and other**	**Eliminations and reclassifications**	**Total, industrial segments**	**Votorantim Finanças**	**Eliminations and reclassifications**	**Total, consolidated**
Liabilities and equity										
Current liabilities										
Borrowing	952	186	247	46	341		1,772			1,772
Derivative financial instruments	201	122	19		59		401			401
Trade payables	1,113	938	376	206	432	(339)	2,726			2,726
Confirming payable	602	333	1	32			968			968
Salaries and payroll charges	394	228	118	25	83		848			848
Taxes payable	228	71	23	62	35		419	3		422
Advances from customers	28	9	7	127	3		174			174
Dividends payable	247	6	10		78	(293)	48	41	(41)	48
Use of public assets	31		28		8		67			67
Related parties			223			(223)				
Deferred revenue - performance obligation					244		244			244
Other	440	198	61	31	64		794	1		795
	4,236	2,091	1,113	529	1,347	(855)	8,461	45	(41)	8,465
Liabilities related to assets as held-for-sale					1,522		1,522			1,522
Non-current liabilities										
Borrowing	14,528	3,494	2,573	6	2,030		22,631			22,631
Derivative financial instruments	317				25		342			342
Deferred income tax and social contribution	496	1,071			247		1,814	169		1,983
Related parties	50	783	2,101	520	449	(3,881)	22			22
Provisions	844	707	614	88	93		2,346			2,346
Use of public assets	471		521		127		1,119			1,119
Pension plan	176			141			317			317
Financial instruments - firm commitment	10						10			10
Deferred revenue - performance obligation					515		515			515
Other	247	956	66	104	130		1,503			1,503
	17,139	7,011	5,875	859	3,616	(3,881)	30,619	169		30,788
Equity										
Total equity attributable to owners of the Company	7,284	6,468	3,921	545	35,254	(17,307)	36,165	4,859	(4,859)	36,165
Non-controlling interests	575	3,862		18		(1,797)	2,658			2,658
	7,859	10,330	3,921	563	35,254	(19,104)	38,823	4,859	(4,859)	38,823
Total liabilities and equity	29,234	19,432	10,909	1,951	41,739	(23,840)	79,425	5,073	(4,900)	79,598

(*) Relates to long steel operations abroad (Argentina and Colombia).

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(c) Statement of income - business segments

											2016
	Cement	Zinc and byproducts ("VMH")	Aluminum ("CBA")	Steel (***)	Nickel (**)	Holding and other	Eliminations and reclassifications	Total, industrial segments	Votorantim Finanças	Eliminations and reclassifications	Total, consolidated
Net revenue from products sold and services rendered	12,697	6,386	4,158	1,569	332	4,370	(2,774) (*)	26,738			26,738
Cost of products sold and services rendered	(9,578)	(4,801)	(3,666)	(1,207)	(489)	(3,806)	2,774 (*)	(20,773)			(20,773)
Gross profit (loss)	3,119	1,585	492	362	(157)	564		5,965			5,965
Operating income (expenses)											
Selling	(1,091)	(315)	(99)	(111)	(5)	(46)		(1,667)			(1,667)
General and administrative	(926)	(437)	(178)	(115)	(55)	(387)		(2,098)	(14)		(2,112)
Other operating income (expenses), net	354	(586)	(1,186)	(153)	(42)	(992)		(2,605)			(2,605)
	(1,663)	(1,338)	(1,463)	(379)	(102)	(1,425)		(6,370)	(14)		(6,384)
Operating profit (loss) before equity results and finance results	1,456	247	(971)	(17)	(259)	(861)		(405)	(14)		(419)
Result from equity investments											
Equity in the results of investees	134	(1)	169		10	389	42	743	166	(172)	737
Realization of other comprehensive invome on disposal of investments	44							44			44
	178	(1)	169		10	389	42	787	166	(172)	781
Finance results, net											
Finance income	872	56	136	23	28	375	(123)	1,367	30		1,397
Finance costs	(1,675)	(201)	(442)	(87)	(37)	(345)	123	(2,664)	(2)		(2,666)
Derivative financial instruments	(770)	(13)	(2)		(5)	(216)		(1,006)			(1,006)
Foreign exchange gains (losses), net	561	499	466	(10)	270	(18)	(1,224)	544			544
	(1,012)	341	158	(74)	256	(204)	(1,224)	(1,759)	28		(1,731)
Profit (loss) before income tax and social contribution	622	587	(644)	(91)	7	(676)	(1,182)	(1,377)	180	(172)	(1,369)
Income tax and social contribution											
Current	(83)	(238)	(26)	(74)		(57)		(478)	(3)		(481)
Deferred	(119)	(99)	444	(51)		374	324	873	(5)		868
Profit (loss) for the year from continuing operations	420	250	(226)	(216)	7	(359)	(858)	(982)	172	(172)	(982)
Discontinued operations											
Profit (loss) for the year from discontinued operations	4					(272)		(268)			(268)
Profit (loss) for the year	424	250	(226)	(216)	7	(631)	(858)	(1,250)	172	(172)	(1,250)
Profit (loss) attributable to the owners of the Company	370	218	(226)	(160)	7	(631)	(873)	(1,295)	172	(172)	(1,295)
Profit (loss) attributable to non-controlling interests	54	32		(56)			15	45			45
Profit (loss) for the year	424	250	(226)	(216)	7	(631)	(858)	(1,250)	172	(172)	(1,250)

(*) Relates to the net revenue from electric energy operations (Votoner and Santa Cruz Energia).
(**) Corresponds to the period between January 1 and June 30, 2016, as VMSA was merged into CBA on July 1, 2016 (Note 1.1 (d)).
(***) Relates to long steel operations abroad (Argentina and Colombia).

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								2015
	Cement	Zinc and byproducts ("VMH")	Aluminum ("CBA")	Steel (**)	Nickel	Holding and other	Eliminations and reclassifications	Total, consolidated
Net revenue from products sold and services rendered	14,053	5,916	4,566	1,969	1,115	4,453	(2,800) (*)	29,272
Cost of products sold and services rendered	(10,094)	(4,696)	(3,652)	(1,448)	(1,043)	(3,834)	2,800 (*)	(21,967)
Gross profit	3,959	1,220	914	521	72	619		7,305
Operating income (expenses)								
Selling	(1,061)	(279)	(81)	(150)	(12)	(42)		(1,625)
General and administrative	(985)	(343)	(179)	(144)	(110)	(322)		(2,083)
Other operating income (expenses), net	225	(216)	(175)	21	(503)	341	(133)	(440)
	(1,821)	(838)	(435)	(273)	(625)	(23)	(133)	(4,148)
Operating profit (loss) before equity results and finance results	2,138	382	479	248	(553)	596	(133)	3,157
Result from equity investments								
Equity in the results of investees	202		94		12	(1,855)	1,846	299
Finance results, net								
Finance income	565	43	192	36	45	297	(107)	1,071
Finance costs	(1,769)	(167)	(480)	(89)	(66)	(389)	107	(2,853)
Derivative financial instruments	279	(12)	(5)		(11)	193		444
Foreign exchange gains (losses), net	(439)	(962)	(997)	(10)	(448)	(98)	2,390	(564)
	(1,364)	(1,098)	(1,290)	(63)	(480)	3	2,390	(1,902)
Profit (loss) before income tax and social contribution	976	(716)	(717)	185	(1,021)	(1,256)	4,103	1,554
Income tax and social contribution								
Current	(184)	(184)	(71)	(86)	(3)	(186)		(714)
Deferred	13	304	359	42	(237)	1	(646)	(164)
Profit (loss) for the year from continuing operations	805	(596)	(429)	141	(1,261)	(1,441)	3,457	676
Discontinued operations								
Loss for the year from discontinued operations						(294)		(294)
Profit (loss) for the year	805	(596)	(429)	141	(1,261)	(1,735)	3,457	382
Profit (loss) attributable to the owners of the Company	746	(510)	(429)	137	(1,261)	(1,735)	3,439	387
Profit (loss) attributable to non-controlling interests	59	(86)		4			18	(5)
Profit (loss) for the year	805	(596)	(429)	141	(1,261)	(1,735)	3,457	382

(*) Relates to the net revenue from electric energy operations (Votoner and Santa Cruz Energia).
(**) Relates to long steel operations abroad (Argentina and Colombia).

All amounts in millions of reais unless otherwise stated

(d) Adjusted EBITDA - business segments

										2016
	Cement	**Zinc and byproducts ("VMH")**	**Aluminum ("CBA")**	**Steel (***)**	**Nickel (**)**	**Holding and other**	**Eliminations and reclassifications**	**Total, industrial segments**	**Votorantim Finanças**	**Total, consolidated**
Net revenue from products sold and services rendered	12,697	6,386	4,158	1,569	332	4,370	(2,774) (*)	26,738		26,738
Cost of products sold and services rendered	(9,578)	(4,801)	(3,666)	(1,207)	(489)	(3,806)	2,774 (*)	(20,773)		(20,773)
Gross profit (loss)	3,119	1,585	492	362	(157)	564		5,965		5,965
Operating income (expenses)										
Selling	(1,091)	(315)	(99)	(111)	(5)	(46)		(1,667)		(1,667)
General and administrative	(926)	(437)	(178)	(115)	(55)	(387)		(2,098)	(14)	(2,112)
Other operating income (expenses), net	354	(586)	(1,186)	(153)	(42)	(992)		(2,605)		(2,605)
	(1,663)	(1,338)	(1,463)	(379)	(102)	(1,425)		(6,370)	(14)	(6,384)
Operating profit (loss) before equity results and finance results	1,456	247	(971)	(17)	(259)	(861)		(405)	(14)	(419)
Plus:										
Depreciation, amortization and depletion - continuing operations	1,076	951	343	146	37	111		2,664		2,664
EBITDA	2,532	1,198	(628)	129	(222)	(750)		2,259	(14)	2,245
Plus:										
Dividends received	68		32			88		188	57	245
Exceptional items										
Loss (gain) on sale of investments, net	(297)	(2)	24			(37)		(312)		(312)
Provision (reversal) for impairment - fixed assets	102	(2)	846	175	(1)			1,120		1,120
Provision (reversal) for impairment - investments						1,031		1,031		1,031
Fair value of biological assets						(2)		(2)		(2)
Other			1					1		1
Adjusted EBITDA	2,405	1,194	275	304	(223)	330		4,285	43	4,328

(*) Relates to the net revenue from electric energy operations (Votoner and Santa Cruz Energia).

(**) Corresponds to the period between January 1 and June 30, 2016, as VMSA was merged into CBA on July 1, 2016 (Note 1.1 (d)).

(***) Relates to long steel operations abroad (Argentina and Colombia).

All amounts in millions of reais unless otherwise stated

								2015
	Cement	Zinc and byproducts ("VMH")	Aluminum ("CBA")	Steel (**)	Nickel	Holding and other	Eliminations and reclassifications	Total, consolidated
Net revenue from products sold and services rendered	14,053	5,916	4,566	1,969	1,115	4,453	(2,800) (*)	29,272
Cost of products sold and services rendered	(10,094)	(4,696)	(3,652)	(1,448)	(1,043)	(3,834)	2,800 (*)	(21,967)
Gross profit	3,959	1,220	914	521	72	619		7,305
Operating income (expenses)								
Selling	(1,061)	(279)	(81)	(150)	(12)	(42)		(1,625)
General and administrative	(985)	(343)	(179)	(144)	(110)	(322)		(2,083)
Other operating income (expenses), net	225	(216)	(175)	21	(503)	341	(133)	(440)
	(1,821)	(838)	(435)	(273)	(625)	(23)	(133)	(4,148)
Operating profit (loss) before equity results and finance results	2,138	382	479	248	(553)	596	(133)	3,157
Plus:								
Depreciation, amortization and depletion - continuing operations	988	989	316	131	97	110		2,631
EBITDA	3,126	1,371	795	379	(456)	706	(133)	5,788
Plus:								
Dividends received	73		3			640		716
Exceptional items								
Fair value of biological assets					1	44		45
Provision for impairment - fixed assets	252	36	2		359	3		652
Gain on sale of investiments, net	(238)					(27)		(265)
Others	12	(2)		7	10			27
Adjusted EBITDA	3,225	1,405	800	386	(86)	1,366	(133)	6,963

(*) Relates to the net revenue from electric energy operations (Votoner and Santa Cruz Energia).

(**) Relates to long steel operations abroad (Argentina and Colombia).

36 Subsequent events

(i) On January 3, 2017, the Company decided, at the Extraordinary General Meeting, to increase the share capital in the investee Votorantim Siderurgia, amounting to R$ 50.

(ii) On January 11, 2017, the Company settled its ninth debentures issuance in the amount of R$ 500, with a cost of 119.9% of the CDI, maturing on January 10, 2022.

(iii) On January 2017, VSA renegotiated the contractual terms of the loans in accordance with Resolution 4,131, in the amount of USD 73 million (R$ 235), changing its final cost after swap to 96.9% of the CDI and extending the maturing from 2018 to 2021.

(iv) On January 2017, VSA renegotiated the contractual conditions of the third public issuance of debentures, in the amount of R$ 550, changing its cost to 118.9% of the CDI and extending the maturity from 2018, to January 2022 for an amount of R$ 69, to January 2023 for an amount of R$ 241 and to January 2024 for an amount of R$ 240.

(v) On February 2017, VSA renegotiated the contractual terms of the loans in accordance with Resolution 4,131 in the amount of USD 100 million (R$ 321), changing its final cost after swap to 119.8% of the CDI and extending the maturing from 2018 to 2021.

(vi) On February 22, 2017, ArcelorMittal Brasil S.A. (AMB) and Votorantim S.A. (VSA) entered into an agreement under which Votorantim Siderurgia S.A. will become a subsidiary of AMB and VSA will hold a minority interest in capital of AMB. Votorantim's long steel operations in Argentina (Acerbrag) and Colombia (PazdelRío) were not included in the transaction. The agreement is subject to prior regulatory approvals in Brazil, including the approval of the Administrative Council for Economic Defense (CADE).