2019 Consolidated financial statements and independent auditor's report

Votorantim S.A.

December 31, 2019

VOTORANTIM

(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. ("Company") and its subsidiaries, which comprise the consolidated balance sheet as at December 31, 2019 and the consolidated statements of income, comprehensive income, changes in equity and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

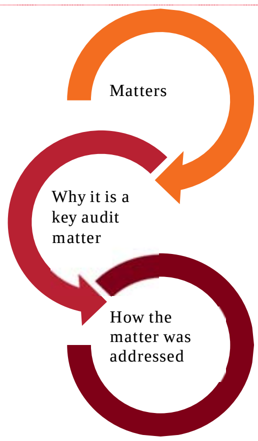
In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Votorantim S.A. and its subsidiaries as at December 31, 2019, and their financial performance and cash flows for the year then ended, in accordance with accounting 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 consolidated 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.



Our audit for the year ended December 31, 2019 was planned and performed taking into consideration that the Company's operations did not present significant changes compared to the prior year.
In this context, the key audit matters, and our audit approach remained substantially in line with those from the prior year, except for the exclusion of the matters related to the asset held for sale - Fibria Celulose S.A.

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Why it is a key audit matter	How the matter was addressed in the audit
Assessment of impairment of fixed assets and goodwill (Notes 18 and 19)	
The Company and its subsidiaries have substantial part of its assets represented by fixed and intangible assets (including goodwill based on the expectation of future profitability from business combinations made in prior years and rights over natural resources) subject to assessment of impairment. In addition to the annual impairment assessment required for the Cash Generating Units ("CGUs") that contain goodwill, the Company and its subsidiaries identified indicators of impairment or devaluation of book value in certain assets and carried out an assessment of impairment. The recoverable amount is the higher of the fair value less selling expenses and its value in use, and its determination involves assumptions and critical judgments from Management, the determination of the appropriate discount rates, among others used in the calculations. Adverse economic and market conditions can cause these assumptions to change significantly. In view of the relevance of the amounts involved, the level of subjectivity of the judgments made by the Company, its subsidiaries and its specialists in the assessment of the recoverable value of these assets and the possible impact that any changes in the assumptions associated with these judgments could have in the financial statements, we consider this subject as a key audit matter.	In respect of 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 or fair value net of selling and operating expenses, when applicable, 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 estimates, and to determine the discount rate. Through the sensitivity analyses 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 methodology used by management is consistent with the methodology adopted in prior years, and that the disclosures are consistent with data and information obtained through our procedures.
Realization of deferred income tax and social contribution tax assets (Notes 14 and 24(b))	
The Company and its subsidiaries record deferred tax assets arising from temporary differences and income tax and social contribution losses, as well	In respect of this matter, we obtained an understanding of the key controls that the Company uses to calculate and record tax credits,

Why it is a key audit matter	How the matter was addressed in the audit
as credits from recoverable income tax and social contribution. These assets 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 management's assessment of the realization of these assets involves important and subjective judgments to determine the future taxable bases for the utilization of these amounts.	and tested these controls, as well as the model used to estimate the future taxable profits, which were approved by the Company's management. We tested the calculations of tax credits and assessed the models and critical assumptions used by management to determine the future tax bases. We compared these assumptions with macroeconomic information available in the market and compared the information from these projections with budgets approved by the Company's governance bodies. In addition, we analyzed the realization periods considered in the Company's historical data and studies 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 25)	
At December 31, 2019, the Company and its subsidiaries had recorded provisions calculated based on probable losses estimated in the respective proceedings. The Company and its subsidiaries also have tax, civil, environmental and labor proceedings in progress for which no provisions were recorded in the financial statements because management considered the likelihood of losses for these proceedings as possible or remote, based on the opinion of the Company's internal and external legal advisors. Management applies critical judgments to determine the likelihood of positive outcomes for	In respect of this matter, we determined whether the procedures adopted by management to calculate the provisions and the related disclosures are in compliance with the related accounting policy. Furthermore, we obtained confirmation from the external legal advisors regarding the likelihood of loss for the major proceedings and the quantification of the amounts estimated as remote, possible and probable losses. We counted on the support of our tax experts to assess the reasonableness of the 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
proceedings in progress, as well as to estimate the probable losses, since these matters depend on future events that management is not able to control. In this context, the progress of these proceedings, at the several applicable levels, can differ from the results estimated by the management and its internal and external legal advisors, taking into account that changes in court directives or new case law may significantly affect management's estimates.	We consider that the criteria and assumptions used by management to determine the provisions, and the disclosures in the related explanatory notes are consistent with the information received during our audit.
ICMS on the calculation bases of PIS and COFINS (Notes 1.1(d) and 14)	
The Company recognized, in the year ended December 31, 2019, tax credits arising from the exclusion of the Value-added Tax on Sales and Services (ICMS) from the calculation bases of the Social Integration Program (PIS) and the Social Contribution on Revenues (COFINS). We considered this an area of focus in our audit since the recording of credits, as well as the assessment of their realization, required important and subjective judgments from management.	In response to this matter, we obtained the legal opinions from the Company's external legal advisors, and involved our tax experts in the assessment of the risks involved in the recognition and realization of these credits. We verified, on a test basis, the calculations of tax credits, and the models and critical assumptions used by management to determine the amounts recognized. We consider that the criteria and assumptions used by management to determine the tax credits, and the disclosures in the related explanatory notes are consistent with the information received during our audit.

Other matters

Statements of value added

The consolidated statement of value added for the year ended December 31, 2019, 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 was reconciled with the financial statements and accounting records, as applicable, and if its form and content were 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.

Other information accompanying the consolidated financial statements and the independent auditor's report

The Company's management is responsible for the other information that comprises the Management Report, which is expected to be received after the date of this report.

Our opinion on the consolidated financial statements does not cover the Management Report, and we do not express any form of audit conclusion thereon.

In connection with the audit of the consolidated financial statements, our responsibility is to read the Management Report and, in doing so, consider whether this report is materially inconsistent with the financial statements or with our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, after reading the Management Report, we conclude that there is a material misstatement in this report, we are required to report that fact.

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

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting practices adopted in Brazil and with the 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.

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.

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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 could 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 the 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

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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 5, 2020

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PricewaterhouseCoopers
Auditores Independentes
CRC 2SP000160/O-5

Carlos Eduardo Guaraná Mendonça
Contador CRC 1SP196994/O-2

Summary
Consolidated financial statements

Statements

General considerations

Liabilities and equity

Estimates and assumptions

Results

Assets

Supplementary information

All amounts in millions of reais

	Note	2019	2018
Assets			Restated (Note 2.3)
Current assets			
Cash and cash equivalents	9	6,262	7,742
Financial investments	10	4,444	3,315
Derivative financial instruments	6.1.1 (a)	62	216
Trade receivables	11	2,196	2,546
Inventory	12	4,129	3,814
Taxes recoverable	14	1,968	1,473
Dividends receivable	15	81	14
Financial instruments - firm commitment	16		202
Other assets		621	564
		19,763	19,886
Assets classified as held-for-sale			4,527
		19,763	24,413
Non-current assets			
Long-term receivables			
Financial investments	10	23	23
Financial instruments - Suzano	13	2,749	
Derivative financial instruments	6.1.1 (a)	337	256
Derivative financial instruments - put option	6.1.1 (b)	655	744
Taxes recoverable	14	3,477	2,731
Related parties	15	229	271
Deferred income tax and social contribution	24 (b)	3,341	4,079
Judicial deposits	25 (b)	345	755
Financial instruments - firm commitment	16	29	
Other assets		726	685
		11,911	9,544
Investments	17 (c)	11,720	11,310
Property, plant and equipment	18	27,148	26,213
Intangible assets	19	13,283	13,492
Right-of-use assets	20	813	
Biological assets		85	74
		64,960	60,633
Total assets		84,723	85,046

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

All amounts in millions of reais

	Note	2019	2018
Liabilities and equity			Restated (Note 2.3)
Current liabilities			
Borrowing	21 (a)	954	5,291
Lease liabilities	22	210	
Derivative financial instruments	6.1.1 (a)	69	166
Confirming payables	23	1,415	1,312
Trade payables		4,429	4,137
Salaries and payroll charges		836	845
Taxes payable		424	490
Advances from clients		102	128
Dividends payable	15	120	482
Use of public assets	26	87	83
Financial instruments - firm commitment	16	81	19
Deferred revenue - performance obligations	27	32	242
Deferred revenue - silver streaming		106	124
Other liabilities		838	808
		9,703	14,127
Liabilities related to assets held-for-sale		2	108
		9,705	14,235
Non-current liabilities			
Borrowing	21 (a)	18,801	19,160
Lease liabilities	22	631	
Derivative financial instruments	6.1.1 (a)	383	78
Deferred income tax and social contribution	24 (b)	2,087	2,194
Related parties	15	50	136
Provision	25 (a)	3,137	2,595
Use of public assets	26	1,151	1,106
Pension plan and post-employment health care benefits	28	367	319
Financial instruments - firm commitment	16	122	161
Deferred revenue - performance obligations	27		29
Deferred revenue - silver streaming		621	650
Other liabilities		761	924
		28,111	27,352
Total liabilities		37,816	41,587
Equity			
Share capital	29 (a)	28,656	28,656
Revenue reserves		11,165	7,243
Carrying value adjustments	29 (c)	1,948	1,937
Total equity attributable to the owners of the Company		41,769	37,836
Non-controlling interests	29 (d)	5,138	5,623
Total equity		46,907	43,459
Total liabilities and equity		84,723	85,046

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

All amounts in millions of reais unless otherwise stated

	Note	2019	2018
			Restated (Note 2.3)
Continuing operations			
Net revenue from products sold and services rendered	30	30,907	30,931
Cost of products sold and services rendered	31	(25,812)	(25,029)
Gross profit		**5,095**	**5,902**
Operating income (expenses)			
Selling	31	(873)	(755)
General and administrative	31	(2,496)	(2,137)
Other operating income (expenses), net	32	5,992	592
		2,623	**(2,300)**
Operating profit before equity results and finance results		**7,718**	**3,602**
Results from equity investments			
Equity in the results of investees	17 (c)	919	1,118
Dividends received			820
Realization of other comprehensive income on disposal of investments		108	4
		1,027	**1,942**
Finance results, net	33		
Finance income		1,267	1,257
Finance costs		(2,512)	(2,529)
Result of derivative financial instruments		(235)	208
Foreign exchange losses, net		(137)	(976)
		(1,617)	**(2,040)**
Profit before income tax and social contribution		**7,128**	**3,504**
Income tax and social contribution	24 (a)		
Current		(1,461)	(455)
Deferred		(705)	(556)
Profit from continuing operations		**4,962**	**2,493**
Discontinued operations			
Loss on discontinued operations		(37)	(183)
Profit for the year attributable to the owners of the Company		**4,925**	**2,310**
Profit attributable to the owners of the Company		5,170	2,102
Profit (loss) attributable to non-controlling interests		(245)	208
Profit for the year		**4,925**	**2,310**
Weighted average number of shares - thousands (to the owners of the Company)		18,278,789	18,278,789
Basic and diluted earnings per thousand shares, in reais		**282.84**	**115.00**
From continuing operations			
Basic and diluted earnings per thousand shares, in reais		**284.87**	**125.01**
From discontinued operations			
Basic and diluted loss per thousand shares, in reais		**(2.02)**	**(10.01)**

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

All amounts in millions of reais

	Note	2019	2018
			Restated
Profit for the year		**4,925**	**2,310**
Other components of comprehensive income to be subsequently reclassified to profit or loss			
Attributable to the owners of the Company			
Foreign exchange variations	29 (c)	96	1,555
Hedge accounting for net investments abroad, net of taxes	29 (c)	92	(931)
Hedge accounting for the operations of subsidiaries	29 (c)	(39)	158
Fair value of available-for-sale financial assets held by non-consolidated investments	29 (c)	43	(74)
Realization of comprehensive results in the sale of the partipation in Fibria Celulose S.A.	29 (c)	(15)	
Adjustment to the fair value of the shares held at Suzano S.A., net of the tax	29 (c)	(121)	
Loss on capital contribution to Nexa Resources S.A	29 (c)	(63)	
Realization of comprehensive income on the sale of interest in Nexa Resources S.A.	29 (c)	(108)	
Loss on capital contribution to Acerías Paz del Rio	29 (c)	(57)	
Inflation adjustment for hyperinflationary economies	29 (c)	340	419
Effect of deferred income tax liability on the capital gain of St. Mary's assets			43
Share in other comprehensive income of investees	29 (c)	(24)	(1)
Attributable to non-controlling shareholders			
Foreign exchange variations attributable to non-controlling interests		(50)	714
Hedge accounting for the operations of subsidiaries		3	(1)
Share in other comprehensive income of investees		28	
		125	**1,882**
Other components of comprehensive income that will not be reclassified to profit or loss			
Attributable to the owners of the Company			
Remeasurement of retirement benefits, net of tax	29 (c)	(133)	34
Attributable to non-controlling shareholders			
Remeasurement of retirement benefits, net of taxes		(1)	2
Other components of comprehensive income for the year		**(9)**	**1,918**
Comprehensive income (loss) from			
Continuing operations		4,953	4,411
Discontinued operations		(37)	(183)
		4,916	**4,228**
Comprehensive income attributable to			
Owners of the Company		5,181	3,305
Non-controlling interests		(265)	923
		4,916	**4,228**

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

Consolidated statement of charges in equity
Years ended December 31
All amounts in millions of reais unless otherwise stated

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(A free translation of the original in Portuguese)

		Attributable to the owners of the Company								
				Revenue reserves						
	Note	Share capital	incentives	Legal	Profit retention	Retained (loss) earnings	Carrying value adjustments	Total	Non-controlling interests	Total equity
At January 1, 2018		28,656	10	684	5,875		734	35,959	4,856	40,815
Initial adoption of IFRS 9						(342)		(342)		(342)
Initial application of FIPs, net of taxes - Banco Votorantim S.A.						(116)		(116)		(116)
Inflation adjustment - IAS 29 / CPC 42							419	419		419
Effect of deferred income tax liability on the capital gain of St. Mary's assets						94	43	137		137
At January 1, 2018, after the impacts of the adoption of the rules and restatements		28,656	10	684	5,875	(364)	1,196	36,057	4,856	40,913
Profit for the year						2,102		2,102	208	2,310
Other comprehensive income							741	741	715	1,456
Comprehensive income (loss) for the year						2,102	741	2,843	923	3,766
Dividends					(789)	(415)		(1,204)	(61)	(1,265)
Reversal of deliberate dividends					140			140		140
Share premium distribution - NEXA									(95)	(95)
Allocation of net income for the year					1,236	(1,236)				
Legal reserve				87		(87)				
Dividends										
Total contributions and distributions to shareholders				87	587	(1,738)		(1,064)	(156)	(1,220)
At December 31, 2018 (restated)		28,656	10	771	6,462		1,937	37,836	5,623	43,459
Profit (loss) for the year						5,170		5,170	(245)	4,925
Other comprehensive income							11	11	(20)	(9)
Comprehensive income (loss) for the year						5,170	11	5,181	(265)	4,916
Loss on capital increase at Karmin					(188)			(188)		(188)
Votorantim Cimentos EAA Inversiones S.L. non-controlling interests aquisition									(3)	(3)
Dividends	29 (b)				(1,475)			(1,475)	(217)	(1,692)
Reversal of deliberate dividends	29 (b)				415			415		415
Allocation of net income for the year										
Legal reserve				261		(261)				
Profit retention					4,909	(4,909)				
Total contributions and distributions to shareholders				261	3,661	(5,170)		(1,248)	(220)	(1,468)
At December 31, 2019		28,656	10	1,032	10,123		1,948	41,769	5,138	46,907

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

All amounts in millions of reais

	Note	2019	2018
Cash flow from operating activities			Restated
Profit before income tax and social contribution		7,128	3,504
Loss on discontinued operations		(37)	(183)
Adjustments to items that do not represent changes in cash and cash equivalents			
Depreciation, amortization and depletion	31	3,067	2,455
Equity in the results of investees	17 (c)	(919)	(1,118)
Interest, indexation and foreign exchange variations		510	532
Provision (reversal) for the impairment of fixed, intangible assets and investments	18, 19	714	(53)
Gain on sales of fixed and intangible assets, net	32	(8)	(42)
Fair value adjustment	21 (b)	22	(28)
Net loss (gain) on sales of investments	32	52	(126)
Constitution of provision		98	120
Derivative financial instruments	6.1.1	152	(162)
Financial instruments - firm commitment	16	195	132
Gain on transaction involving Fibria	32	(6,772)	
Net gain on financial instrument - put option	6.1.1 (b)	89	(71)
Gain on debt renegotiation	11 (c)	17	15
Realization of comprehensive income on Voto IV settlement	29 (c)	(108)	
Gain on fair value adjustment on VTRM operation			(820)
Credit of ICMS on the calculation bases of PIS and COFINS	32		(300)
Change in fair value of biological assets	32	(747)	(498)
	33		(69)
		3,453	**3,288**
Decrease (increase) in assets			
Financial investments		(695)	638
Derivative financial instruments		136	(92)
Trade accounts receivable		333	(168)
Inventory		(207)	(293)
Taxes recoverable		(494)	(262)
Related parties		42	(17)
Other accounts receivable and other assets		257	50
Increase (decrease) in liabilities			
Trade payables		292	778
Salaries and social charges		(9)	(50)
Use of public assets		(17)	(13)
Taxes payable		(51)	31
Other obligations and other liabilities		(502)	200
Cash provided by operating activities		**2,538**	**4,090**
Interest paid on borrowing and use of public assets		(1,252)	(1,461)
Income tax and social contribution paid		(189)	(614)
		1,097	**2,015**

All amounts in millions of reais

	Note	2019	2018
Cash flow from investment activities			Restated
Proceeds from disposals of fixed and intangible assets		132	177
Sales of investments		8,181	419
Dividends received		546	1,085
Acquisitions of property, plant and equipment	18	(3,189)	(2,567)
Increase in biological assets		(11)	(9)
Acquisitions of investments	17	(156)	(125)
Increase in intangible assets	19	(59)	(115)
Income tax and social contribution paid		(1,287)	
Net cash provided by (used in) investment activities		**4,157**	**(1,135)**
Cash flow from financing activities			
New borrowing	21 (b)	4,323	3,639
Repayment of borrowing	21 (b)	(9,356)	(5,532)
Repayment of leasing contracts	22	(217)	
Derivative financial instruments		(7)	(11)
Dividends paid		(1,639)	(850)
Nexa Resources S.A. share premium payment			(95)
Net cash used in financing activities		**(6,896)**	**(2,849)**
Decrease in cash and cash equivalents		**(1,642)**	**(1,969)**
Effect of companies excluded from consolidation			(109)
Effect of fluctuations in exchange rates		162	860
Cash and cash equivalents at the beginning of exercício		**7,742**	**8,960**
Cash and cash equivalents at end of year		**6,262**	**7,742**

The accompanying notes are an integral part of these consolidatedfinancial statements.

All amounts in millions of reais

	Note	2019	2018 Restated (Note 2.3)
Revenue			
Sales of products and services		35,271	35,493
Estimated loss on doubtful accounts	11 (c)	(17)	(15)
Other operating income, net	32	6,706	543
		41,960	**36,021**
Inputs acquired from third parties			
Raw materials and other production inputs		(21,014)	(20,404)
Materials, energy, outsourced services and others		(930)	(604)
Impairment of assets	32	(714)	52
Gross value added		**19,302**	**15,065**
Depreciation, amortization and depletion	18, 19 e 20	(3,067)	(2,455)
Net value added generated by the Company		**16,235**	**12,610**
Value added received through transfers			
Equity in the results of investees	17 (c)	919	1,938
Finance income and foreign exchange losses		1,748	5,204
		2,667	**7,142**
Total value added to distribute		**18,902**	**19,752**
Distribution of value added			
Personnel and payroll charges	31 (a)		
Direct remuneration		2,787	2,951
Social charges		1,066	1,040
Benefits		647	709
		4,500	**4,700**
Taxes and contributions			
Federal		3,200	2,276
State		2,332	2,220
Municipal		17	15
Deferred taxes		705	608
		6,254	**5,119**
Third-party capital remuneration			
Finance costs and foreign exchange losses		2,884	7,244
Rentals		339	379
		3,223	**7,623**
Own capital remuneration			
Non-controlling interests		(245)	208
Reinvested profits		5,207	1,090
Loss on discontinued operations		(37)	(253)
		4,925	**2,310**
Value added distributed		**18,902**	**19,752**

The accompanying notes are an integral part of these consolidatedfinancial statements.

1 General considerations

Votorantim S.A. (the "Company", the "parent company", or "VSA"), is a long-term Brazilian holding company. 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: construction, metals and mining, aluminum, electrical energy, long steel, agribusiness and finance.

1.1 Main events that occurred during the year of 2019

(a) Offer of tender and exchange offer of debt by Votorantim Cements International S.A. (“VCI”)

On January 10, 2019, the indirect subsidiary VCI announced a tender offer of its Euro bonds maturing in 2021 and 2022 and its US Dollar bonds maturing in 2041. On February 14, 2019, the repurchase transaction was settled, with the principal amount of R$ 269 (EUR 61 million) of the issuance maturing in 2021, R$ 672 (EUR 152 million) maturing in 2022 and R$ 2.1 billion (USD 540 million) maturing in 2041, with a total cash outlay of R$ 3.3 billion.

Concurrently with the tender offer, VCI announced an exchange offer of its US Dollar-denominated bonds maturing in 2041 for a new issue of bonds from its direct subsidiary St. Mary's Inc. (Canada), maturing in 2041 and with annual coupon of 7.3%. However, the transaction did not meet the minimum conditions stipulated in the offer and, was not made.

(b) Conclusion of the menger of the operations and shareholding bases of Suzano Papel e Celulose S.A. (“Suzano”) and Fibria Celulose S.A. (“Fibria”)

On January 14, 2019, Suzano Papel e Celulose S.A. ("Suzano") and Fibria (together with Suzano, the “Companies") jointly made public the details of their corporate reorganization, informing their shareholders and the market in general that, on this date, the corporate reorganization, which was the subject of the voting commitment and assumption of obligations entered into on March 15, 2018, was completed, with the effective combination of the operations and shareholding bases of Suzano and Fibria, pursuant to the protocol and justification executed on July 26, 2018 and approved by the shareholders of the Companies at meetings held on September 13, 2018.

At the date of the transaction, VSA recorded the gain resulting from the transaction, in the amount of R$ 6,772, in "other operating income (expenses), net" (Note 32). VSA maintained a direct interest of 5.5% in the capital of Suzano, which is considered as a financial instrument and is now valued at fair value in accordance with CPC 48/IFRS 9 - "Financial Instruments” (Note 13).

(c) CESP - Companhia Energética de São Paulo (“CESP”) – Results of the offer to employees

In January 2019, as expected, the indirect subsidiary VTRM Energia Participações S.A. (“VTRM”) acquired through a privatization auction additional shares of CESP, representing the remaining shares of the offer to employees, with a total investment of R$ 210. After the results of the offer to employees, VTRM will hold a 40.0% stake in CESP, equivalent to 93.52% of the voting common shares.

(d) ICMS on the basis for the calculation of Social Integration Programs ("PIS") and Contribution to Social Security Financing ("COFINS")

During 2019, there was recognition of the res judicata decision in a lawsuit of the subsidiary Votorantim Cimentos SA ("VCSA"), The lawsuit concerned the exclusion of ICMS from the PIS and COFINS calculation base, because it was recorded in its credit assets in the amount of R$ 401 (Note 14), R$ 296 of which was principal (Note 32) and R$ 105 of accumulated monetary restatement (Note 33). In addition, VCSA recorded a sum that was linked to another lawsuit, whose final decision occurred at the end of 2018, in the amount of R$ 346.

During 2019, the indirect subsidiary Votorantim Cimentos N / NE SA ("VCNNE") obtained the final judgment recognition of two of its actions related to a claim for ICMS exclusion on the PIS and COFINS calculation basis, of as credits were recorded in its assets in the amount of R$ 312 (Note 14), R$ 195 of the principal (Note 32) and R$ 117 of monetary restatement (Note 33) on the initial registration date.

During 2019, there was recognition of the final judgment in a lawsuit by Companhia Brasileira de Alumínio ("CBA"), related to the exclusion of ICMS from the PIS and COFINS calculation base, with the asset being recorded in the amount of R$ 473 (Note 14), of wich R$ 256 was the principal (Note 32) and R$ 217 the monetary restatement (Note 33).

(e) Debt issuance by the indirect subsidiary Itacamba Cementos S.A. ("Itacamba")

On April 4, 2019, in line with the consolidated financial liability management strategy aimed at lengthening VCSA's debt profile and reducing the average cost of debt, the indirect subsidiary Itacamba carried out its first issuance of debt in the Bolivian capital market. This was made in the amount of R$ 65 (BOB 116 million), maturing in 2025 and with fixed interest of 4.75% per year.

On April 23, 2019, Itacamba made its second debt issue in the Bolivian capital market, in the amount of R$ 241 (BOB 419 million), with maturity in 2029 and fixed interest of 5.55% per year.

The funds raised in the operations described above were used to partially settle, in advance, the syndicated loan in the amount of R$ 306 (BOB 534 million) with maturity in 2025 and fixed interest of 6.00% per year.

On May 31, 2019, Itacamba entered into a loan agreement with Banco BISA in the total amount of R$ 140 (BOB 244 million), maturing in 2027 and with fixed interest of 5.55% p.a. The funds raised in the operations described above were intended to prepay syndicated loan agreements in the total amount of R$ 151 (BOB 262 million), with fixed interest of 6.00% per year and maturity in 2025.

(f) CESP - Public Tender Offer ("Tender Offer")

On May 24, 2019, as a result of the acquisition of control of CESP by the indirect investor VTRM, a tender offer was held at B3, pursuant to which, in accordance with the terms and conditions VTRM acquired 1 (one) ON share, at the price of R$ 11.28, and 31 (thirty-one) class B preferred shares ("PNB"), at the price of R$ 14.32.

VTRM now holds, directly and indirectly, 102,091,755 ON shares, representing approximately 93.52% of the total ON shares and 28,928,300 PNB shares, representing approximately 13.72% of the total PNB shares.

(g) Conclusion of sale of operations in India

On April 16, 2019, the sale of a 75% total stake was concluded, of which 73.4% was bought by Votorantim Cimentos EAA Inversiones, SL ("VCEAA") and 1.6% by VCSA, in the indirect investor Shree Digvijay Cement Company Ltda., a publicly traded company in India, for the average price of INR 15.55 per share. On April 30, 2019, the amount of R$ 89 (EUR 20 million) was received, related to the settlement of the agreed installments in the sale transaction.

The sale of the business of the subsidiary VCSA and its subsidiaries in India is in line with management's objective of exiting non-priority markets and focusing on regions where they have the greatest potential to compete and expand the Company's current business. With the proceeds of this operation, on May 8, 2019, the subsidiary VCEAA prepaid all of a bilateral loan signed on June 27, 2016, in the amount of R$ 132 (EUR 30 million) maturing in 2021, and with fixed cost of 2.30% per year.

(h) Deliberation and receipt of dividends from the Company by the investee Suzano

On April 18, 2019, the investee Suzano announced to its shareholders the payment of dividends approved at the Annual General Meeting, in the total amount of R$ 600, after the payment to the Company, proportional to its interest, of the amount of R$ 33, in April 30, 2019, based on the shareholding position as at the date of that Meeting, and with an amount per share equivalent to R$ 0.44.

(i) Export financing

In April and May 2019, the subsidiary CBA entered into loan agreements (Export Credit Notes – "NCEs") to finance its exports in the total amount of R$ 1,085 million, with final maturity in April and May 2027, respectively. The operations have pegged swap contracts (derivative financial instrument), which are intended to exchange the exposure to the floating rate CDI in reais to a fixed rate in US Dollars, resulting in a weighted average cost of 5.00% per year. These swaps were contracted together with the financing and from the same financial institution.

(j) Bond repurchase offer

In April 2019, the subsidiary CBA announced a tender offer on its bonds maturing in 2024. The settlement of R$ 1,007 million (USD 256 million) occurred on May 10, 2019.

(k) Prepayments of VSA debentures

On July 31, 2019, the Company redeemed early the fourth issue of debentures maturing on July 27, 2024. The total amount of amortized principal totaled R$ 550.

(l) Contracting of Revolving Credit Facility by VCI, VCEAA and St Marys

On August 1, 2019, to replace the revolving credit facility contracted in October 2015 in the amount of USD 230 million maturing in October 2020, the subsidiaries VCI, VCEAA and St. Marys together with their subsidiaries, entered into a new revolving credit facility with a bank syndicate for USD 290 million, maturing in August 2024.

(m) Borrowing pursuant to Law 4,131 / 1962 by the indirect subsidiary VCNNE

On September 11, 2019, the indirectly controlled subsidiary VCNNE entered into a loan agreement under Law 4,131/1962 in the amount of R$ 305 (USD 75 millions) maturing on September 13, 2024, the latter being released after September 13 of 2019.

The operation has a swap contract (derivative financial instrument) that allows both the exchange of LIBOR floating rate exposure to CDI floating rate exposure and real dollar currency exchange, resulting in a final cost of 107.00% p.a. CDI. This swap was contracted with the same financial institution as the loan (USD debt + BRL swap as % of CDI).

Votorantim Cimentos used the proceeds from this funding to prepay two higher-cost, shorter-term bilateral loans totaling R$ 334, in line with its liability strategy. Of the total amortized amount, R$ 141 is related to a loan from the subsidiary VCNNE and R$ 193 (EUR 42.5 million) refers to a loan from subsidiary VCEAA.

(n) Recognition of impairment loss

The subsidiary Nexa, performing an assessment of the impairment indicators and the recoverable amount test in accordance with its anual financial standards, identified the following impairment indicators for the year ended 2019: (i) the prices of LME's short-term averages fell compared to the previous year, (ii) the useful life of some of its operations was reduced as a result of new exploratory operations research; (iii) the carrying amount of the controlled assets was above the controlled market value.

The subsidiary's management considered that the combination of these indicators could indicate a material impact that would not be recoverable from its cash-generating units (“CGUs”). Therefore, an estimate of the entire recoverable value of the CGUs was made. A combination of impairment indicators calculates the recoverable value of their CGUs that are determining factors in recognizing a loss of R$ 564 (USD 142 million).

(o) Revolving credit line

On October 25, 2019, the subsidiary Nexa entered into a revolving credit line agreement with a group of banks in the amount of USD 300 million, with a 5-year term and a cost of LIBOR 3M + 1.0% per year in fundraising. This agreement allows Nexa to use resources at any time to meet your cash flow needs.

(p) Export credit note

On October 23, 2019, to meet its short-term cash needs of the indirect subsidiary Nexa Brasil, the subsidiary Nexa entered into an Export Credit Note contract in the principal amount of R$ 366 (USD 90 million) and LIBOR cost 3M + 1.5% per year, maturing in 5 years. At the same time, the subsidiary contracted a swap to exchange the interest rate for the CDI rate + 1.30% per year, as well as the currency of payments for the debt service from the dollar to the real. The subsidiary will account for the export credit note in the fair value option to eliminate the accounting mismatch that would arise if the amortized cost were used.

(q) Remeasurement of ARO (Asset Retirement Obligation)

In December 2019, the subsidiary CBA updated its environmental obligations to demobilize assets, in the amount of R$ 4 for the aluminum units and R$ 167 for the nickel units. The subsidiary provisioned impairment for the units that are at a standstill in its operations, Itamarati de Minas, São Miguel Paulista and Niquelândia, in the amount of R$ 171. The subsidiary VCSA updated its environmental obligations to demobilize assets in the amount of R$ 87.

(r) Allocation of CESP's purchase price

In December 2019, the purchase price allocation of CESP by the indirect subsidiary VTRM was completed. Consequently, the balances of Investment, Shareholders' Equity and Equity equivalence, underwent changes in the amounts previously presented in the financial statements of December 31, 2018, as detailed in note 2.3.

2 Presentation of the consolidated financial statements

2.1 Basis of preparation

(a) Consolidated financial statements

The financial statements have been prepared in accordance with accounting practices adopted in Brazil effective up to December 31, 2019, including the pronouncements issued by the Brazilian Accounting Pronouncements Committee ("CPC"), as well as according to the International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board ("IASB") and their interpretations ("IFRIC"), and show all relevant information pertinent to interim financial statements, which is consistent with that used by the management in carrying out its duties.

The Company voluntarily discloses its consolidated statement of value added, according to the accounting practices adopted in Brazil, applicable to public companies and presented as an integral part of these financial statements. In accordance with international practice, this statement is presented as additional information, without prejudice to the set of financial statements.

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 practices. 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 to the financial statements

The Board of Directors approved the consolidated financial statements for issue on March 3, 2020.

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.

The consolidated financial statements were prepared separately from the individual financial statements, issued on March 5, 2020.

(b) Transactions whit 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 investments in associates and joint ventures includes goodwill identified on acquisition, net of any accumulated impairment loss.

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

All amounts in millions of reais unless otherwise stated

2.3 Restatement of comparative figures

								2018
Assets	As prior presented	Reclassification of the Odessa Fund (i)	ARO reclassification (ii)	Reclassification of withdrawn risk Acerías Paz del Rio (iii)	IAS 29 adjustment and exchange variation (iv)	Surplus value of St. Mary's assets (v)	Allocation of CESP purchase price (vi)	Balance restated
Current assets								
Cash and cash equivalents	7,667	75						7,742
Financial investments	3,390	(75)						3,315
Non-current assets								
Investments	10,882				124		304	11,310
Property, plant and equipment	26,180		33					26,213
Intangible assets	13,341		(33)			184		13,492

								2018
Liabilities and equity	As prior presented	Reclassification of the Odessa Fund (i)	ARO reclassification (ii)	Reclassification of withdrawn risk Acerías Paz del Rio (iii)	IAS 29 adjustment and exchange variation (iv)	Surplus value of St. Mary's assets (v)	Allocation of CESP purchase price (vi)	Balance restated
Current liabilities								
Confirming payables	1,187			125				1,312
Trade payables	4,262			(125)				4,137
Non-current liabilities								
Deferred income tax and social contribution	2,199					47	(52)	2,194
Equity								
Revenue reserves	7,088				(295)	94	356	7,243
Carrying value adjustments	1,475				419	43		1,937

(i) Reclassification of the Odessa Fund

The subsidiary CBA classified the Odessa Fund for cash and cash equivalents, according to the characteristic of the financial product and adherence to the current standard.

(ii) ARO reclassification (Asset Retirement Obligation)

The Company classified the ARO from intangible to fixed assets, according to the asset's characteristics and adherence to the current standard.

(iii) Reclassification of withdrawn risk Acerías Paz del Rio

The comparative period of the balance sheet of the figures for suppliers and withdrawn risk was altered by reclassification in the indirect subsidiary Acerías Paz del Rio S.A.

(iv) IAS 29 adjustments and foreign exchange

As of July 1, 2018, the investee Cementos Avellaneda SA (“Avellaneda"), headquartered in Argentina, had its economy officially considered as hyperinflationary for accounting purposes and the application of IAS 29 / CPC 42 - Accounting in hyperinflationary economics became required. With the application of the accounting standard, the subsidiary VCSA recorded the effect of the devaluation of the functional currency of its investee.

The investment in Avellaneda presents goodwill for expected future profitability, in the amount of 544 million Argentine Pesos, for which the subsidiary did not consider when calculating the hyperinflationary economy adjustment according to IAS 29 / CPC 42, nor did it consider the conversion of the original amount of the goodwill from pesos to reais. Considering that this is a non-monetary asset in a hyperinflationary currency, related to the expectation of future profitability on an equity investment, to which the group applied the assumptions of IAS 29; it is appropriate that, for consistency, it is updated with the corresponding investment, to the expected future profitability is aligned with the future cash flows to be generated by the business, with respect to the impacts of inflation. Accordingly, the Company carried out the correction of goodwill retrospectively, as provided for in technical pronouncement IAS 8 / CPC 23 - Accounting policies, changes in estimates and correction of errors. As a result of this process, the balance of goodwill presented in the "Investments" group was updated by the net amount of R $ 124, of which R $ 174 was due to the positive effect of inflation and R$ (50) was due to the passive exchange variation of the financial statements individual and consolidated accounts as of December 31, 2018. Additionally, the Company and its subsidiary VCSA reevaluated the classification of the application effects of IAS 29 / CPC 42 - Accounting in hyperinflationary economy in relation to the last financial statements of December 31, 2018 and concluded that such effects should be presented as "Equity valuation adjusttment". As a result of this understanding, the amounts were restated from "Retained earnings" to "Adjustment to equity valuation", in the Statement of changes in equity and in the related explanatory notes.

(v) Assets surplus value St. Mary's

The subsidiary VCSA reviewed the balances related to the business combination originating the first control investments in entities in North America. As a result of this review, it was identified that, when the Purchase Price Allocation ("PPA") results were recorded, amounts of surplus value were allocated to the assets acquired due to their measurement at fair value, without deferred income tax being accounted for corresponding liability. The recognition of deferred income tax liabilities is provided for in "IAS 12 / CPC 32 - Taxes on profit", when the measurement of assets acquired at their fair value generates temporary differences between the tax bases and the accounting balances. According to the standard, the deferred income tax liability resulting from the temporary difference should have affected the goodwill due to expected future profitability measured on the acquisition date.

Accordingly, the subsidiary recognized the tax in question and corrected the goodwill for expected future profitability retrospectively.

(vi) Allocation of CESP purchase price

According to CPC 15 (R1) - "Business combination", in the event of an advantageous purchase, the acquirer must recognize the resulting gain, in the income statement for the year, on the acquisition date. Before recognizing the gain arising from a bargain purchase, the acquirer must promote a review to make sure that all assets acquired, and liabilities assumed have been correctly identified and recognize them during the review. The acquirer must also review the procedures used to measure the amounts to be recognized on the acquisition date.

In December 2019, the purchase price allocation related to the purchase of CESP by VTRM was completed. Therefore, the balance recorded in 2018, as an "Unallocated installment", was weighted against the effects of asset gains and losses on assets and liabilities and generated a gain from a favorable purchase, recognized on the acquisition date. Consequently, the equity and income balances have changed in the amounts previously presented in the financial statements of December 31, 2018.

All amounts in millions of reais unless otherwise stated

					2018
	As prior presented	Impacts of reclassification of Uszinc (vii)	Reclassification Acerbrag (viii)	Allocation of CESP purchase price (vi)	Balance restated
Continuing operations					
Net revenue from products sold and services rendered	31,948	(1,017)			30,931
Cost of products sold and services rendered	(25,909)	929	(49)		(25,029)
Gross profit (loss)	**6,039**	**(88)**	**(49)**		**5,902**
Operating income (expenses)					
Selling	(775)	20			(755)
General and administrative	(2,173)	36			(2,137)
Other operating income (expenses), net	550	(7)	49		592
	(2,398)	**49**	**49**		**(2,300)**
Operating profit (loss) before equity results and finance results	**3,641**	**(39)**			**3,602**
Results from equity investments					
Equity in the results of investees	814			304	1,118
Dividends reveived	820				820
Realization of other comprehensive income on disposal of investments	4				4
	1,638			**304**	**1,942**
Finance results, net					
Finance income	1,261		(4)		1,257
Finance costs	(2,531)	2			(2,529)
Income from derivative financial instruments	204		4		208
Foreign exchange, net	(977)	1			(976)
	(2,043)	**3**			**(2,040)**
Profit (loss) before income tax and social contribution	**3,236**	**(36)**		**304**	**3,504**
Income tax and social contribution					
Current	(456)	1			(455)
Deferred	(608)			52	(556)
Profit (loss) on continuing operations	**2,172**	**(35)**		**356**	**2,493**
Discontinued operations					
Profit (loss) for the discontinued operations	(218)	35			(183)
Profit for the attributable to the owners	**1,954**	**35**			**2,310**
Profit attributable to the owners of the Company	1,746			356	2,102
Profit attributable to non-controlling interests	208				208
Profit for the period	**1,954**			**356**	**2,310**
Weighted average number of shares - thousands (to the owners of the Company)	18,278,789				18,278,789
Basic and diluted earnings per thousand shares, in reais	**95.52**				**115.00**
From continuing operations					
Basic and diluted earnings per thousand shares, in reais	**107.45**				**125.01**
From discontinued operations					
Basic and diluted loss per thousand shares, in reais	**(11.93)**				**(10.01)**

(vii) Impacts of reclassification of Uszinc

In accordance with IFRS 5 / CPC 31 - "Non-current assets held for sale and discontinued operation", the subsidiary FinCo GmbH reclassified the investment in USZinc, from continuing operations to discontinued operations.

(viii) Acerbrag Reclassification

The comparative period of the income statement for the year was altered by the correction in the allocation of fuel expenses of the subsidiary Acerbrag.

2.4 Foreign currency conversion

(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 hyperinflationary 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;

(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 recognized in 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
Acerbrag S.A.	Argentina	Argentine Peso	Steel
St. Marys Cement Inc. - "St. Mary's"	Canada	Canadian Dollar	Cement
Acerías Paz del Río S.A.	Colombia	Colombian Peso	Steel
Votorantim Cimentos EAA Inversiones, S.L. - "VCEAA"	Espain	Euro	Cement
Nexa Resources Cajamarquilla S.A.	Peru	US Dollar	Zinc
Nexa Resources Perú S.A.A.	Peru	US Dollar	Mining
Nexa Resources S.A.	Luxembourg	US Dollar	Holding
Votorantim Cimentos International S.A. - "VCI"	Luxembourg	US Dollar	Holding
Votorantim FinCO GmbH	Luxembourg	US Dollar	Trading

3 Changes in accounting policies and disclosures

3.1 Changes in accounting standards

3.1.1 IFRS 16 / CPC 06 – "Leases"

IFRS 16 establishes principles for the recognition, measurement, presentation and disclosure for lease agreements. The standard introduces a single model for leases accounting in the balance sheet, where the lessees are required to recognize a lease liability reflecting future payments, and the right to use the leased asset. The nature of the expenses related to these leases was changed from a linear operating lease expenses to a depreciation expense of the right-of-use and interest expenses for the restatement of the lease liability.

This international standard changes the existing lease standards, including CPC 06 (IAS 17) – "Leasing Operations" and ICPC 03 (IFRIC 4, SIC 15 and SIC 27) - "Complementary Aspects of Leasing Operations".

(a) Analysis scope and assets identification

The Company and its subsidiaries analyzed all active lease agreements upon the date of the initial adoption of the standard, when leases of machinery and equipment, light and heavy vehicles, vessels, real estate and land were identified.

As permitted by the standard, the scope of the analysis disregarded: (i) short-term leases (less than 12 months); and (ii) contracts with amounts lower than USD 5,000 (R$ 20,000).

When identifying the right-of-use assets within the scope of the contracts identified, the following were also disregarded: (i) contracts with variable payments; (ii) contracts in which the leased asset was considered non-identifiable; (iii) contracts under which the Company is not entitled to obtain substantially all of the economic benefits arising from the use of the asset; and (iv) contracts in which the Company and its subsidiaries do not have substantial control over the definition of the use of the assets.

It should be noted that the Company and its subsidiaries analyzed, but did not identify: (i) contracts that presented fixed and variable payments as part of the same negotiation; (ii) contracts dealing with identifiable and non-identifiable assets in the same trade; or (iii) service contracts in which assets had been identified within the scope of the standard.

(b) Leasing term

The Company and its subsidiaries analyzed the lease term of all contracts based on a combination of the non-cancellable term, the term covered by the option for extension, the terms covered by the termination option and, mainly, management's intention regarding the period of permanence in each agreement contract.

(c) Discount rate

For initial adoption purposes, the Company and its subsidiaries adopted the average cost of active debt (outstandings) as at December 31, 2018 for all contracts classified in accordance with IFRS 16. For the new contracts, renewals and additions will be identified at the incremental rate for each lease. The incremental rate should reflect the cost of acquisition for the Company and its subsidiaries of debt with characteristics similar to those determined under the lease agreement, in terms of the term, value, guarantee and economic environment. The Company and the subsidiaries applied the future expectations regarding the obligations on January 1, 2019 (ranging from 5% to 7.07%) for all leases.

(d) Impacts of adoption

The Company and its subsidiaries adopted IFRS 16 on January 1, 2019, in accordance with the simplified cumulative effect in which assets and liabilities are recorded at the same time in the initial period without any effect on shareholders' equity, with an impact amounting to R$ 666 related to right-of-use assets and liabilities under lease agreements.

3.1.2 IFRIC 23 / ICPC 22 – "Uncertainty over Income Tax Treatment"

Technical interpretation ICPC 22 clarifies how the recognition and measurement requirements set forth in CPC 32, which deals with taxes on profit, should be applied in cases where there is uncertainty regarding the treatment of these taxes.

(i) Impacts of adoption

The Company and its subsidiaries adhered to the standard from the beginning of its validity period on January 1, 2019. However, based on management's understanding, there is an immaterial accounting impact due to the uncertain positions related to income tax due to the adoption of this new accounting pronouncement.

4 Critical accounting estimates and judgments

Based on assumptions, the Company and its subsidiaries make estimates regarding the future. By definition, accounting estimates and judgments are continuously reviewed and are based on historical experience and other factors, including expectations of future events, which are considered reasonable for the circumstances. Revisions to the estimates are recognized prospectively.

The accounting estimates will rarely be the same as the actual results. Estimates and assumptions that present a significant risk and are likely to cause a material adjustment to the carrying amounts of assets and liabilities for the next fiscal year are described in the respective notes below:

(i) Fair value of financial instruments and derivatives (Note 6.1.1);
(ii) Trade receivable (Note 11);
(iii) Property, plant and equipment (Note 18);
(iv) Intangible assets (Note 19);
(v) Current and deferred income and social contribution taxes (Note 24);
(vi) Provision (Note 25);
(vii) Pension plan (Note 28).

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

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

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 and its subsidiaries do not carry out transactions involving financial instruments for speculative purposes.

(a) Market risk
(i) Foreign exchange risk

The Company and its subsidiaries have certain investments in foreign operations, the net assets of which are exposed to foreign exchange risk. The foreign exchange exposure arising from the Company's and its subsidiaries' participation in foreign operations is mainly hedged by borrowing in the same currency as these investments, classified as net investment hedges.

Presented below are the accounting balances of assets and liabilities indexed to the foreign currency at the closing date of the balance sheets:

	Note	2019	2018 Restated
Assets denominated in foreign currency			
Cash and cash equivalents	9	5,125	6,316
Financial investments	10	96	62
Trade receivables		1,178	1,329
Derivative financial instruments	6.1.1	234	472
Related parties		82	54
		6,715	**8,233**
Liabilities denominated in foreign currency			
Borrowing (i)		15,172	20,668
Lease liabilities		567	
Derivative financial instruments	6.1.1	155	244
Trade payables		2,227	2,517
Confirming payables	23	1,159	963
Deferred revenue - silver streaming		727	774
		20,007	**25,166**
Net exposure		**(13,292)**	**(16,933)**

(i) Does not consider borrowing costs.

All amounts in millions of reais unless otherwise stated

(ii) Hedge of net investments in foreign operations

Accounting policy

Hedges of net investments in foreign operations are accounted for similarly 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.

Hedged investments are presented in the following table including the portion of the debt of the Company and its subsidiaries Companhia Brasileira de Aluminio ("CBA"), Nexa Recursos Minerais S.A., VCI and St Marys Cement Inc., denominated in Euros and US Dollars.

Investiment	2019	Debt	2019
Nexa Resources Cajamarquilla S.A.	1,616	Votoranitm S.A.	968
		Companhia Brasileira de Aluminio	580
VCNA US Inc. (i)	2,015	St. Marys Cement Inc.	2,015
Votorantim Cimentos EAA Inversiones, S.L.	1,581	Votorantim Cimentos International S.A.	1,581
	5,212		**5,144**

Investiment	2018	Debt	2018
Nexa Resources Cajamarquilla S.A.	3,437	Votorantim S.A.	1,731
		Nexa Recursos Minerais S.A.	23
		Companhia Brasileira de Aluminio	1,556
		St. Marys Cement Inc.	1,937
Votorantim Cimentos S.A.	1,646	Votorantim Cimentos EAA Inversiones, S.L.	1,644
	5,083		**6,891**

The Company and its subsidiaries document and evaluate the effectiveness of the investment hedge operations on a monthly basis, as required under IFRS 9 - "Financial instruments: recognition and measurement".

The foreign exchange gain on the conversion of debts, net of income tax and social contribution, recognized as equity valuation adjustments on December 31, 2019, was R$ 92 (December 31, 2018, loss of R$ 931) (Note 29 (c)).

(iii) 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 and its subsidiaries to fair value interest rate risk.

(iv) Commodity price risk

The Financial Policy of the Company's operating subsidiaries 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 and its subsidiaries adopt the policy of working with issuers which have, at a minimum, been assessed by two of the following three rating agencies: Fitch Ratings, 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.

All amounts in millions of reais unless otherwise stated

(c) Liquidity risk

The following table analyzes the financial liabilities of the Company and its subsidiaries, by maturity, corresponding to the period remaining from the balance sheet date up to the contractual maturity date. The amounts disclosed in the table represent the undiscounted contractual cash flows, these amounts may not be reconciled with the amounts disclosed in the balance sheet.

	Note	Up to one year	From one to three years	From three to five years	From five to ten years	From ten years and above	Total
At December 31, 2019							
Borrowing (i)		1,362	5,506	6,918	9,126	4,544	27,456
Lease liabilities		229	288	177	119	28	841
Derivative financial instruments		69	117	51	213	2	452
Confirming payables	23	1,415					1,415
Trade payables		4,429					4,429
Dividends payable	15	120					120
Related parties	15	50					50
Use of public assets		88	152	254	732	1,233	2,459
		7,762	**6,063**	**7,400**	**10,190**	**5,807**	**37,222**
At December 31, 2018							
Borrowing (i)		6,176	5,625	7,243	9,335	4,420	32,799
Derivative financial instruments		144	69	31			244
Confirming payables	23	1,312					1,312
Trade payables		4,137					4,137
Dividends payable	15	482					482
Related parties	15	12	124				136
Use of public assets		83	159	306	635	1,356	2,539
		12,346	**5,977**	**7,580**	**9,970**	**5,776**	**41,649**

(i) Does not include the recorded fair value.

6.1.1 Derivatives contracted

Accounting policy

Initially, derivatives are recognized at fair value on the date of their contracting and are subsequently re-measured at their fair value. The method for recognizing the resulting gain or loss depends on whether or not the derivative is designated as a hedge instrument in cases of adoption of hedge accounting. If this is the case, the method depends on the nature of the item being hedged. The Company and its subsidiaries adopt hedge accounting and designates certain derivatives such as:

(i) 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 US 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.

(ii) 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)".

All amounts in millions of reais unless otherwise stated

(a) Effects of derivative financial instruments on 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 Value			2018	2019 Changes in fair value							2019	Fair value by maturity				
Programs	2019	2018	As per unit	Fair value	Inventory	Net revenue from products sold and services rendered	Cost of products sold and services rendered	Other operating income (expenses), net	Finance results, net	Other comprehensive income	Gain (lon) Realized	Fair value	2020	2021	2022	2023	2024+
Hedges for sale of zinc at a fixed price																	
Zinc forward	15,252	10,566	ton	(3)				(1)				(4)	(4)				
				(3)				(1)				(4)	(4)				
Hedges for mismatches of quotation period																	
Zinc forward	258,220	261,020	ton	(2)	2	12	(20)	(6)		5	(7)	(3)	(3)				
				(2)	2	12	(20)	(6)		5	(7)	(3)	(3)				
Operating margin hedging																	
Aluminum forward	151,800	127,750	ton	157		(8)				13	181	(19)	(17)	(2)			
Collars	18		USD							3		3	3				
USD forward	273	279	USD	(47)		15				35	(39)	42	38	4			
				110		7				51	142	26	24	2			
Foreign exchange risk																	
Collars	653	1,057	BRL	(6)					12 !		8	(2)	(2)				
USD forward		514	USD	(9)					(87)		(96)						
Turkish Lira forward	1	11	USD	(4)					(7)		(11)						
				(19)					(82)		(99)	(2)	(2)				
Interest rate risk																	
LIBOR floating rate vs. CDI floating rate swaps	315	373	USD	142					(6)		82	54	(24)	(39)	(74)	126	65
IPCA floating rate vs. CDI floating rate swaps	227		BRL						7		1	6	4	1	1		
CDI floating rate vs. USD rate swaps	747		BRL						(67)	(51)	9	(127)	(3)	10	18	19	(171)
IPCA floating rate vs. USD rate swaps	139		BRL						(1)	(2)		(3)	(1)	(1)	(1)		
				142					(67)	(53)	92	(70)	(24)	(29)	(56)	145	(106)
Total value of the derivative instruments				**228**	**2**	**19**	**(20)**	**(7)**	**(149)**	**3**	**128**	**(53)**	**(9)**	**(27)**	**(56)**	**145**	**(106)**

On December 31, 2019, the transactions involving derivative financial instruments, net of taxes, recognized in “Carrying value adjustments”, amounted to R$ 83 .Besides this, there were hedge accounting operations, net of taxes, which amounted to R$ 142 in the unconsolidated subsidiaries, recognized in “Carrying value adjustments”.

(b) Derivative financial instruments – Put-option

During the year ended December 31, 2018, the process by which Votorantim Siderurgia S.A. became a subsidiary of ArcelorMittal Brasil S.A. ("AMB") was concluded. Under the agreement between the parties, VSA became a minority stakeholder of 15% of AMB's combined long steel business which, in compliance with the applicable accounting rules, was recognized as a financial instrument, in accordance with CPC 48 - "Financial instruments". The change in fair value of this operation in the year resulted in a net gain of R$ 89, recorded under “Net financial result”.

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, 2019, the financial assets and liabilities carried at fair value were classified as levels 1 and 2 in the fair value measurement hierarchy.:

All amounts in millions of reais unless otherwise stated

				Fair value measured based on 2019
	Note	Prices quoted in an active market (Level 1)	Valuation supported by observable prices (Level 2)	Fair value
Assets				
Cash and cash equivalents	9	3,833	2,429	6,262
Financial investments	10	1,392	3,075	4,467
Derivative financial instruments	6.1.1		399	399
Derivative financial instruments - *put option*	6.1.1		655	655
Financial instruments - firm commitment	16		29	29
Financial instruments - Suzano	13		2,749	2,749
		5,225	**9,336**	**14,561**
Liabilities				
Borrowing	21	13,014	8,068	21,082
Derivative financial instruments	6.1.1		452	452
Confirming payables	23		1,415	1,415
Financial instruments - firm commitment	16		203	203
Deferred revenue - silver streaming			727	727
		13,014	**10,865**	**23,879**

				Fair value measured based on 2018 Balance restated
	Note	Prices quoted in an active market (Level 1)	Valuation supported by observable prices (Level 2)	Fair value
Assets				
Cash and cash equivalents	9	4,279	3,463	7,742
Financial investments	10	1,794	1,544	3,338
Derivative financial instruments	6.1.1		472	472
Financial instruments - firm commitment	16		202	202
		6,073	**5,681**	**11,754**
Liabilities				
Borrowing	21	16,413	8,072	24,485
Derivative financial instruments	6.1.1		244	244
Confirming payables	23		1,312	1,312
Financial instruments - firm commitment	16		180	180
Deferred revenue - silver streaming			774	774
		16,413	**10,582**	**26,995**

6.1.3 Sensitivity analysis

The main risk factors affecting the pricing of cash and cash equivalents, financial investments, loans and financing and derivative financial instruments are exposure to the fluctuation in the US Dollar, Euro, Turkish Lira, New Peruvian Sun, Argentine Peso and Bolivian interest rates, LIBOR, CDI, US Dollar coupon, commodity prices and electricity purchase and sale contracts. The scenarios for these factors are prepared using both market sources and specialized sources of information, in line with the Company's governance. The scenarios as at December 31, 2019 are described below:

Scenario I - Considers a shock to the market curves and quotations at December 31, 2019, according to the base scenario defined by management as at March 31, 2020;

Scenario II - Considers a shock of + or - 25% in the market curves at December 31, 2019;

Scenario III - Considers a shock of + or - 50% in the market curves at December 31, 2019.

All amounts in millions of reais unless otherwise stated

						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 and related parties (i)	Derivative financial instruments/As per unit		Changes from 2019	Results of scenario I	-25%	-50%	25%	50%	Results of scenario I	-25%	-50%	25%	50%
Foreign exchange rates															
USD	4,051	12,711	1,911	USD millions	-2.0%	18	71	214	(50)	(157)	199	2,494	4,988	(2,492)	(4,986)
EUR	244	1,580	1	EUR millions	-2.4%	(1)					32	338	677	(338)	(677)
PEN	148				-3.0%	(4)	(35)	(70)	35	70		(2)	(4)	2	4
BOB	22	460			-3.1%						14	110	219	(110)	(219)
TRY	60	75			-12.6%	(8)	(15)	(30)	15	30	10	19	38	(19)	(38)
ARS	52				-9.7%						(8)	(13)	(26)	13	26
	4,577	**14,826**	**1,912**			**5**	**21**	**114**		**(57)**	**247**	**2,946**	**5,892**	**(2,944)**	**(5,890)**
Interest rates															
BRL - CDI	5,461	3,307	4,068	BRL	-16 bps	11	94	189	(93)	(185)		(4)	(9)	3	5
USD - LIBOR		1,442	1,216	USD millions	2 bps	1	(8)	(16)	8	17		2	5	(2)	(5)
Dollar Coupon			1,007	USD millions	-19 bps	5	19	39	(18)	(36)	(14)	(55)	(114)	51	98
	5,461	**4,749**	**6,291**			**17**	**105**	**212**	**(103)**	**(204)**	**(14)**	**(57)**	**(118)**	**52**	**98**
Price of commodities															
Zinc			273,472	ton	4.7%	(23)	125	249	(125)	(249)	3	(18)	(36)	18	36
Aluminum			151,800	ton	-3.3%						34	263	525	(263)	(525)
			425,272			**(23)**	**125**	**249**	**(125)**	**(249)**	**37**	**245**	**489**	**(245)**	**(489)**
Firm commitment - electric energy															
Purchase and sale agreement - fair value			173	BRL			(3)	(7)	3	7					
			173				**(3)**	**(7)**	**3**	**7**					

(i) The balances presented do not reconcile with the notes, as the analysis carried out included only the most significant currencies and rates. Interest rates only include the principal amount.

7 Financial instruments by category

Accounting policy

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 instruments at fair value through other comprehensive income

Financial instruments that meet the criterion of contractual terms, which give rise to cash flows that are exclusively the payment of principal and interest and are maintained in a business model, the objective of which is achieved both by obtaining contractual cash flows and by sale of financial assets. The instruments in this classification are measured at fair value through other comprehensive income.

(c) Financial instruments at amortized cost

Financial instruments maintained in a business model whose purpose is to obtain contractual cash flows and their contractual terms give rise to cash flows that are exclusively the payment of principal and interest. The instruments in this classification are measured at amortized cost.

(d) Impairment of financial assets measured at cost

This is measured as the difference between the book value of the assets and the present value of the estimated future cash flows (excluding future credit losses that were not incurred), discounted at the current interest rate of financial assets. The book value of the asset is reduced and the amount of the loss is recognized in the statement of income.

If, in a subsequent period, the impairment loss decreases and the impairment can be objectively related to an event occurring after recognition of the impairment (such as an improvement in the debtor's credit rating), the reversal of the loss will be recognized in the statement of the results.

All amounts in millions of reais unless otherwise stated

	Note	2019	Restated 2018
Assets			
At amortized cost			
Trade receivables	11	2,196	2,546
Related parties	15	229	271
		2,425	2,817
Fair value through profit or loss			
Cash and cash equivalents	9	6,262	7,742
Financial investments	10	4,467	3,321
Derivative financial instruments	6.1.1		287
Derivative financial instruments - put option	6.1.1	655	744
Financial instruments - firm commitment	16	29	202
		11,413	12,296
Fair value through other comprehensive income			
Financial investments	10		17
Financial instruments - Suzano	13	2,749	
Derivative financial instruments	6.1.1	399	185
		3,148	202
Liabilities			
At amortized cost			
Borrowing	21	18,848	11,592
Trade payables		4,429	4,137
Related parties	15	50	136
Confirming payables	23	1,415	1,312
Use of public assets	26	1,238	1,189
		25,980	18,366
Fair value through profit or loss			
Borrowing	21	907	12,859
Derivative financial instruments	6.1.1	69	170
Financial instruments - firm commitment	16	203	180
		1,179	13,029
Fair value through other comprehensive income			
Derivative financial instruments	6.1.1	383	74
		383	74

All amounts in millions of reais unless otherwise stated

8 Credit quality of financial assets

	2019			2018		
	Local rating	Global rating	Total	Local rating	Global rating	Total
Cash and cash equivalents						
AAA	1,563		1,563	1,404	39	1,443
AA+				4		4
AA	1	446	447	6	796	802
AA-	416	295	711		424	424
A+		884	884		543	543
A		994	994	1	1,783	1,784
A-		259	259		286	286
BBB+		384	384		759	759
BBB		130	130		118	118
BBB-		102	102		369	369
BB		29	29		21	21
BB-		9	9			
B-		76	76		64	64
B+		9	9		55	55
B					27	27
CCC		16	16			
Unrated (i)		649	649	11	1,032	1,043
	1,980	**4,282**	**6,262**	**1,426**	**6,316**	**7,742**
Financial investments						
AAA	3,840		3,840	3,024		3,024
AA+	45		45	51		51
AA	74	2	76	166		166
AA-	373	12	385	5		5
A+	20	13	33	19	29	48
A					2	2
BBB-		29	29			
B-					30	30
CCC		36	36			
Unrated	20	3	23	11	1	12
	4,372	**95**	**4,467**	**3,276**	**62**	**3,338**
Derivative financial instruments						
AAA	377		377	242		242
AA		4	4	1	52	53
AA-	7		7	5		5
A+		2	2		134	134
A					1	1
A-		9	9			
Unrated (i)				37		37
	384	**15**	**399**	**285**	**187**	**472**
Financial instruments - Suzano						
AAA	2,749		2,749			
	2,749		**2,749**			
	9,485	**4,392**	**13,877**	**4,987**	**6,565**	**11,552**

The local and global ratings were obtained from ratings agencies (Standard & Poor’s, Moody's and Fitch Ratings). The Company considered the ratings of Standard & Poor’s and Fitch Ratings for presentation purposes, and the classification as established in the Company’s Financial Policies.

(i) Refers to values invested in offshore banks, which are not rated by any ratings agency.

All amounts in millions of reais unless otherwise stated

9 Cash and cash equivalents

Accounting policy

Cash and cash equivalents include cash, bank deposits and other highly liquid short-term investments whose original maturities are less than three months, which are readily convertible into a known amount of cash and which are subject to an insignificant risk of change in value.

(a) Breakdown

Cash and cash equivalents in local currency include deposits in current bank accounts and government securities (overnight operations) or financial institutions, indexed to the interbank deposit rate. Cash equivalents in foreign currency are mainly composed of financial instruments in local currency.

	2019	2018 Restated
Local currency		
Cash and banks	9	28
Bank Deposit Certificates - ("CDBs")	567	3
Repurchase agreements - public securities	561	1,395
	1,137	**1,426**
Foreign currency		
Cash and banks	3,263	2,856
Time deposits	1,862	3,460
	5,125	**6,316**
	6,262	**7,742**

10 Financial investments

Accounting policy

Financial investments are held for the purpose of servicing investments whose maturities are long-term from the date of acquisition.

(a) Breakdown

Most financial investments have immediate liquidity, however, they are classified as financial investments based on the original maturities, considering the intended allocation of funds. The investments in national currency comprise government securities or financial institutions indexed to the interbank deposit rate. Foreign currency-denominated investments consist mainly of fixed-income financial instruments in local currency (time deposits).

All amounts in millions of reais unless otherwise stated

	2019	2018 Restated
Fair value through profit or loss		
Bank Deposit Certificates - ("CDBs")	2.248	1.321
Financial Treasury Bills - ("LFTs")	1.218	1.763
Repurchase agreements - public securities	173	106
Repurchase agreements - private securities		54
Investment fund quotas	669	15
Financial investments in foreign currency	64	62
Financial bills - private securities	3	
	4.375	**3.321**
Fair value through other comprehensive income		
Bank Deposit Certificates - ("CDBs")	60	17
	60	**17**
Amortized cost		
Financial investments in foreign currency	32	
	32	
	4.467	**3.338**
Current	4.444	3.315
Non-current	23	23
	4.467	**3.338**

All amounts in millions of reais unless otherwise stated

11 Trade receivables

Accounting policy

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.

(a) Breakdown

	Note	2019	2018
Trade receivables - Brazil		1,144	1,308
Trade receivables - foreign customers		1,230	1,398
Related parties	15	13	14
		2,387	2,720
Allowance for doubtful accounts		(191)	(174)
		(191)	(174)
		2,196	2,546

(b) Breakdown by currency

	2019	2018
Brazilian real	1,018	1,217
U.S. dollar	764	741
Colombian peso	125	120
Euro	60	102
Turkish lira	16	88
Uruguayan peso	67	82
Moroccan dirham	35	62
Argentine peso	60	61
Others	51	73
	2,196	2,546

(c) Changes in estimated loss for doubful accounts

	2019	2018
Opening balance	(174)	(159)
Additions, net	(56)	(21)
Receivables written off as uncollectible (i)	39	13
Effect of subsidiaries excluded from consolidation		(7)
Closing balance	(191)	(174)

(i) The debits on the estimated loss account with doubtful accounts are generally written off when there is no expectation of recovery of funds.

All amounts in millions of reais unless otherwise stated

(d) Aging of trade receivables

	2019	2018
Current	1,864	2,184
Up to three months past due	282	295
Three to six months past due	4	22
Over six months past due	237	219
	2,387	2,720

12 Inventory

Accounting policy

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 subsidiaries, at least once a year, carry out a physical inventory check. Inventory adjustments are recorded under "Cost of goods sold and services rendered".

The provision for inventory losses refers substantially to obsolete and low turnover materials.

	2019	2018
Finished products	862	845
Semi-finished products	1,587	1,499
Raw materials	826	832
Auxiliary materials and consumables	995	896
Imports in transit	79	142
Other	173	82
Provision for inventory losses	(393)	(482)
	4,129	**3,814**

All amounts in millions of reais unless otherwise stated

13 Financial Instruments – Suzano

	Closing	2018
Shares	75,180,059	75,180,059
Suzano Papel e Celulose S.A. (SUZB3) share (R$) (i)	39.00	36.57
Financial instrument - Suzano	**2,932**	**2,749**
Fair value change		(183)
Income tax and social contribution		62
Adjustment to the fair value, net of tax (note 29 (c))		**(121)**

(i) Uses the average share price quote for the last ninety days of the closing date.

14 Taxes recoverable

Accounting policy

The recoverable taxes are held in assets mainly for the purpose of recognizing in the balance sheet of the entity the book values that will be object of future recovery.

	2019	2018
Corporate Income Tax ("IRPJ") and Social Contribution on Net Income ("CSLL")	1,826	1,751
Social Contribution on Revenue ("COFINS") (i)	1,963	1,057
State Value-added Tax on Sales and Services ("ICMS")	695	594
Social Integration Program ("PIS") (i)	400	230
Value-added Tax ("VAT") (foreign companies)	249	297
Withholding Income Tax ("IRRF")	47	62
ICMS on property, plant and equipment	76	59
"IRPJ/CSLL" - "*Plano verão*"	32	30
Excise Tax ("IPI")	31	28
Social Security Credit (ii)	20	
Other	106	96
	5,445	**4,204**
Current	1,968	1,473
Non-current	3,477	2,731
	5,445	**4,204**

(i) The variation refers substantially to the PIS and COFINS credit recognized in the subsidiary CBA, VCSA and the indirect subsidiary VCNNE, in the amounts of R$ 1.186, as described in Note 1.1 (d).

(ii) The variation refers to out-of-date credit due to surveys on social security contributions recognized in the subsidiary CBA.

All amounts in millions of reais unless otherwise stated

15 Related parties

Accounting policy

Related parties are individuals or legal entities that are related to the entity that reports the financial statements.

Assets	Trade receivables		Dividends receivable		Non-current assets	
	2019	2018	2019	2018	2019	2018
Related companies and joint ventures						
Cementos Avellaneda S.A.	2	3	9			
Cementos Granadilla S.L.	1	1				3
Banco Votorantim S.A.				9		
Cementos Especiales De Las Islas, S.A.						
Citrosuco S.A. Agroindústria (i)		1			159	216
Citrosuco GmbH (i)					52	50
Supermix Concreto S.A.	5	4				
VTRM Energia Participações S.A			65	5		
Others	5	5	7		18	2
	13	**14**	**81**	**14**	**229**	**271**
Current	13	14	81	14		
Non-current					229	271
	13	**14**	**81**	**14**	**229**	**271**

(i) Refers to accounts receivable related to assets in excess of the basic net assets invested in Citrosuco's operation. The realization period is linked to the performance of each item under the contractual rules laid down in the shareholder agreement and the closing memorandum signed between Fischer S.A. – Commerce, Industry and Agriculture and Votorantim.

Liabilities	Trade receivables		Dividends receivable		Non-current assets	
	2019	2018	2019	2018	2019	2018
Parent company						
Hejoassu Administração S.A.				415		
Related companies and joint ventures						
Suzano Papel e Celulose S.A.		13				117
Superior Materials Holdings, LLC	7	7				
Others	5	19			50	19
	12	**39**		**415**		**136**
Non-controlling interests			120	67		
Current	12	39	120	482		
Non-current					50	136
	12	**39**	**120**	**482**	**50**	**136**

Profit and loss	Sales (purchases), net		Financial profit (loss), net	
	2019	2018	2019	2018
Related companies and joint ventures				
Cementos Avellaneda S.A.		36		
Cementos Especiales De Las Islas, S.A.	23	27		
Cementos Granadilla S.L.	15	20		
Citrosuco S.A. Agroindústria	44	32		
Suzano Papel e Celulose S.A.	6	43		
Midway Group, LLC	32	27		
Supermix Concreto S.A.	201	204		
Superior Materials Holdings, LLC	75	66		
Others	31	20	(5)	(2)
	427	**475**	**(5)**	**(2)**

All amounts in millions of reais unless otherwise stated

16 Financial instruments – firm commitment

The controlled company Votorantim Comercializadora de Energia Ltda. ("Votener") centralizes energy purchase and sale transactions to meet the demands of Votorantim companies. A portion of these transactions takes the form of contracts that have been entered into and continue to be carried out for the purpose of receiving the energy for own use or delivering the energy of self-production, in accordance with the productive demands of the Company's subsidiaries and, therefore, meet the definition of a financial instrument.

Another part of these transactions refers to purchases and sales of energy, not used in the productive process of Votorantim companies, being transacted in the active market, and therefore, it meets the definition of financial instruments, due to the fact of being liquidated in energy, and promptly convertible into cash. Such contracts are recorded as derivatives in accordance with IFRS 9 / CPC 48 and are recognized in the Company's balance sheet at fair value on the date the derivative is entered into and is revalued to fair value at the balance sheet date.

The fair value of these derivatives is estimated based, in part, on quotations of prices published in active markets, to the extent that such observable market data exist, and partly by the use of valuation techniques, which considers:

(i) prices established in the purchase and sale operations;

(ii) risk margin in the supply and (iii) projected market price in the period of availability. Whenever the fair value at initial recognition for these contracts differs from the transaction price, gain or loss, it is recognized in profit or loss for the year.

The Company, through its indirect subsidiary Votener, operates in the Regulated Contracting Environment ("ACR") and participated in the 13th electric power purchase auction on April 30, 2014, in which, through a firm commitment, it made sales until December 2019. These transactions, on initial recognition, resulted in gains from the sale of surplus energy to the Company, which was recognized at fair value. The net difference of expenses and revenues generated by the realization of the fair value, through the physical settlement of the sale and purchase agreements, was recognized as an expense in the amount of R$ 142 in "Other operating expenses, net" (Note 32).

In addition, the other operations carried out by the subsidiaries in the Free Contracting Environment ("ACL"), which meet the definition of a financial instrument, were likewise recognized at fair value. The realization of the fair value in the amount of R$ 53 was recognized as an expense in "Other operating expenses, net" (Note 32).

The values quoted above have the following composition:

	ACR			ACL				Total	
	CBA	Votorantim Energia	Total	Votorantim Cimentos	CBA	Votorantim Energia	Total	2019	2018
Realization	(105)	(31)	(136)	(31)	(17)	(80)	(128)	(264)	(199)
Recognition					28	46	74	74	65
Constitution (reversal)	(5)	(1)	(6)					(6)	2
	(110)	**(32)**	**(142)**	**(31)**	**11**	**(34)**	**(54)**	**(196)**	**(132)**

All amounts in millions of reais unless otherwise stated

The table below shows the composition of the assets and liabilities:

	ACL				Total	
	Votorantim Cimentos	CBA	Votorantim Energia	Total	2019	2018
Assets						
Current						202
Non-current			29	29	29	
			29	**29**	**29**	**202**
Liabilities						
Current	(10)	(17)	(54)	(81)	(81)	(19)
Non-current	(34)	(77)	(11)	(122)	(122)	(161)
	(44)	**(94)**	**(65)**	**(203)**	**(203)**	**(180)**

17 Investments

Accounting policy

Investments in affiliates, subsidiaries and joint ventures are accounted for using the equity method of accounting as of the date they become their jointly controlled joint ventures.

Affiliates are those entities in which the Company, directly or indirectly, has significant influence, but not control or joint control over financial and operating policies. In order to be classified as a jointly controlled entity, there must be a contractual agreement that allows the Company to share control of the entity and gives the Company the right to the net assets of the jointly controlled entity, not the right to its specific assets and liabilities.

The Company also recognizes its assets in accordance with the venturer's participation in the assets, liabilities, revenues and expenses of the controlled entity on a proportional basis. This implies recognizing the venturer's share of the assets, liabilities, income and expenses of the joint ventures by adding such amounts to its own assets, liabilities, revenues and expenses by the straight-line method, including such amounts in corresponding to the balance sheet and income statement of the same nature.

(i) Impairment of investments

For the calculation of the recoverable amounts of the investments, the Company and its subsidiaries use criteria similar to those used to test goodwill impairment.

All amounts in millions of reais unless otherwise stated

(a) Breakdown

Main consolidated companies	Percentage of total and voting capital		Headquarters	Main activity
	2019	2018		
Subsidiaries				
Acerbrag S.A.	100.00	100.00	Argentina	Steel
Votorantim FinCO GmbH	100.00	100.00	Austria	Trading
Calmit Mineração e Participação Ltda.	100.00	100.00	Brazil	Holding
Acariuba Mineração e Participação Ltda.		100.00	Brasil	Holding
Companhia Brasileira de Alumínio	100.00	100.00	Brazil	Aluminum
Interávia Transportes Ltda.		100.00	Brazil	Transportation
Santa Cruz Geração de Energia S.A.	100.00	100.00	Brazil	Electric power
Silcar Empreendimentos, Comércio e Participações Ltda.	100.00	100.00	Brazil	Holding
Votener - Votorantim Comercializadora de Energia Ltda.	100.00	100.00	Brazil	Electric power
Votorantim Cimentos N/NE S.A.	100.00	100.00	Brazil	Cement
Votorantim Cimentos S.A.	100.00	100.00	Brazil	Cement
Votorantim Energia Ltda.	100.00	100.00	Brazil	Holding
Votorantim Finanças S.A.	100.00	100.00	Brazil	Finance
Votorantim Geração de Energia S.A.	100.00	100.00	Brazil	Holding
Votorantim Investimentos Latino-Americanos S.A.		100.00	Brazil	Holding
Nexa Recursos Minerais S.A.	66.40	70.24	Brazil	Zinc
Votorantim Cement North America Inc.	100.00	100.00	Canada	Holding
Acerías Paz del Río S.A.	91.20	82.42	Colombia	Steel
Votorantim Cimentos EAA Inversiones, S.L.	100.00	100.00	Spain	Holding
St. Marys Cement Inc.	100.00	100.00	USA	Cement
St. Helen Holding II B.V.	100.00	100.00	Cayman Islands	Holding
Hailstone Ltd.	100.00	100.00	British Virgin Islands	Holding
Nexa Resources S.A.	64.25	64.25	Luxembourg	Holding
Votorantim Cimentos International S.A.	100.00	100.00	Luxembourg	Holding
Votorantim RE	100.00	100.00	Luxembourg	Insurance
Nexa Resources Atacocha S.A.A.	91.00	91.00	Peru	Mining
Nexa Resources Perú S.A.A	80.06	80.23	Peru	Mining
Nexa Resources Cajarmarquilla S.A.	99.91	99.91	Peru	Zinc
Cementos Artigas S.A.	51.00	51.00	Uruguay	Cement
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
Great Lakes Slag Inc.	50.00	50.00	Canada	Cement
Voto - Votorantim Overseas Trading Operations IV Ltd.		50.00	Cayman Islands	Trading
Exclusive investment funds				
Fundo de Investimento Pentágono VC Multimercado – Crédito Privado	100.00	100.00	Brazil	Finance
Fundo de Investimento Pentágono CBA Multimercado – Crédito Privado	100.00	100.00	Brazil	Finance
Fundo de Investimento Pentágono VSA Multimercado – Crédito Privado	100.00	100.00	Brasil	Finance
Odessa Multimercado Crédito Privado	93.49	96.91	Brazil	Finance
Odessa Multimercado Crédito Privado Fundo de investimento VC	100.00	100.00	Brazil	Finance
Odessa Multimercado Crédito Privado Fundo de investimento VM	100.00	100.00	Brazil	Finance

All amounts in millions of reais unless otherwise stated

	Percentage of total capital		Percentage of voting capital		Headquarters	Main activity
	2019	2018	2019	2018		
Main non-consolidated companies						
Associates						
Cementos Avellaneda S.A.	49.00	49.00	49.00	49.00	Argentina	Cement
Alunorte - Alumina do Norte S.A.	3.03	3.03	3.52	3.52	Brazil	Mining
IMIX Empreendimentos Imobiliários Ltda.	25.00	25.00	25.00	25.00	Brazil	Mining
Mineração Rio do Norte S.A.	10.00	10.00	12.50	12.50	Brazil	Mining
Supermix Concreto S.A.	25.00	25.00	25.00	25.00	Brazil	Concrete
Cementos Especiales de las Islas S.A.	50.00	50.00	50.00	50.00	Spain	Cement
Joint ventures						
Citrosuco GmbH	50.00	50.00	50.00	50.00	Austria	Agribusiness
Banco Votorantim S.A.	50.00	50.00	50.00	50.00	Brazil	Finance
Citrosuco S.A. Agroindústria	50.00	50.00	50.00	50.00	Brazil	Agribusiness
Juntos Somos Mais Fidelização S.A.	45.00	45.00	45.00	45.00	Brazil	Services
VTRM Energia Participações S.A.	50.00	50.00	50.00	50.00	Brazil	Electric power
Hutton Transport Ltda.	25.00	25.00	25.00	25.00	Canada	Transportation
Midway Group, LLC.	50.00	50.00	50.00	50.00	USA	Cement
RMC Leasing, LLC.	50.00	50.00	50.00	50.00	USA	Equipment leasing
Superior Materials Holdings, LLC.	50.00	50.00	50.00	50.00	USA	Cement

All amounts in millions of reais unless otherwise stated

(b) Information about the companies investees

The following is a summary of selected financial information of the principal associates and joint ventures as at December 31, 2019:

	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Equity	Net revenue	Operation results	Finance income (costs)	Profit (loss) for the year	Total and voting capital (%)
Investments accounted for based on the equity method - Associates										
Cementos Avellaneda S.A.	375	1,016	439	10	941	1,494	359	(4)	269	49%
Alunorte - Alumina do Norte S.A.	9,280		2,391	3,370	3,519	6,022	411	(386)	3	3%
IMIX Empreendimentos Imobiliários Ltda.	13	7			19	6	6	1	6	25%
Mineração Rio do Norte S.A.	493	2,487	668	1,329	982	1,432	349	(167)	144	10%
Supermix Concreto S.A.	205	275	162	86	230	1,239	(2)	2	2	25%
Cementos Especiales de las Islas S.A.	104	114	25	8	185				30	50%
Joint ventures										
Citrosuco GmbH	3,794	829	720	343	3,560	3,183	(104)	22	(105)	50%
Banco Votorantim S.A.	48,215	48,316	58,025	27,750	10,756	8,169	12,125		1,594	50%
Citrosuco S.A. Agroindústria	3,384	4,274	1,750	5,728	181	2,795	(159)	(311)	(461)	50%
Jaguatirica empreendimento imobiliário SPE S.A.	207	7	1	1	211	11	6		5	50%
Juntos Somos Mais Fidelização S.A.	61	9	44		27	49	(7)	2	(3)	45%
VTRM Energia Participações S.A.	271	3,866	138	67	3,832		(37)	2	551	50%
Hutton Transport Ltda.	35	61	14	2	75				12	25%
Midway Group, LLC.	28	26	9		51				19	50%
RMC Leasing LLC	5	15			31					50%
Superior Materials Holdings, LLC	94	59	39		125				57	50%

All amounts in millions of reais unless otherwise stated

(c) Changes in investees

	December 31, 2019		Equity in the results		Investment balance	
	Equity	Profit (loss) for the year	2019	2018	2019	2018
Investments accounted for based on the equity method - Associates						
Cementos Avellaneda S.A.	941	269	132	81	578	502
Alunorte - Alumina do Norte S.A.	3,519	3		(28)	107	107
IMIX Empreend. Imobiliários Ltda.	19	6	2	1	5	3
Mineração Rio do Norte S.A.	982	144	14	2	98	90
Supermix Concreto S.A.	230	2	1	(4)	58	57
Cementos Especiales De Las Islas, S.A.	185	30	15	12	77	77
Outros				(1)	81	162
Joint ventures						
Citrosuco GmbH (i)	3,560	(105)	(88)	156	2,643	2,613
Banco Votorantim S.A. (ii)	10,756	1,594	797	530	5,383	5,063
Citrosuco S.A. Agroindústria (i)	181	(461)	(267)	(171)	387	610
Jaguatirica Empreendimento Imobiliário SPE S.A. (i)	211	5	2		111	67
Juntos Somos Mais Fidelização S.A.	27	(3)	(1)	(3)	12	5
VTRM Energia Participações S.A. (i)	3,832	551	271	328	2,058	1,844
Hutton Transport Ltda.	75	12	3	4	19	20
Midway Group, LLC.	51	19	9	6	26	23
RMC Leasing LLC	31				15	10
Superior Materials Holdings, LLC	125	57	29	24	62	57
Fibria Celulose S.A.				181		
			919	1,118	11,720	11,310

	2019	2018 Restated
Opening balance for the year	11,310	13,372
Equity in the results of investees	919	1,118
Foreign exchange variations	(56)	208
Addition	156	1,409
Disposals	(68)	(245)
Fair value of available for sale asset - Banco Votorantim S.A.	44	
Dividends	(613)	(127)
Gain on fair value adjustment on deconsolidation		144
Initial adoption of IFRS 9		(337)
Reclassification for assets classified as held for sale		(4,305)
Other	28	73
Closing balance for the year	11,720	11,310

(i) The following investments consider the goodwill paid on the acquisition of investments and the surplus value, which is amortized in the income statement of the parent company:

	Goodwill		Added Value	
	2019	2018	2019	2018
Citrosuco S.A. Agroindústria	194	194	112	139
Citrosuco GmbH	145	141	752	726
Jaguatirica Empreendimento Imobiliário SPE S.A.	5			
VTRM Energia Participações S.A.			141	144

(ii) On December 31, 2019 the investment included the adjustment to fair value amounting to R$ 495 (December 31, 2018 - R$ 495)

18 Property, plant and equipment

Accounting policy

(i) 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.

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.

(ii) Impairment of non-financial assets

Assets that are subject to depreciation and amortization are reviewed for impairment whenever events or changes in economic, operating or technological circumstances may indicate impairment or loss of book value. An impairment loss is recognized when the carrying amount of the asset or cash generating unit (“CGU”) exceeds its recoverable amount, adjusting the carrying amount to the recoverable amount.

The recoverable amount is the greater of an asset's fair value less costs to sell and its value-in-use. For the purpose of impairment assessment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (CGUs). Non-financial assets, except goodwill, which have been impaired, are subsequently reviewed for the analysis of a possible reversal of impairment, at the balance sheet date.

The recoverability of the assets that are used in the activities of the Company and its subsidiaries is evaluated whenever events or changes in circumstances indicate that the book value of an asset or group of assets may not be recoverable based on future cash flows. If the carrying amount of these assets exceeds their recoverable value, the net amount is adjusted and their useful life is adjusted to new levels.

All amounts in millions of reais unless otherwise stated

(a) Breakdown and changes

										2019	2018
	Land and improvements	Buildings and construction	Machinery, equipment and facilities	Vehicles	Furniture and fittings	Construction in progress	Asset retirement obligation	Leasehold improvements	Other	Total	Total
Opening balance for the year											
Cost	2,060	10,890	35,376	1,225	241	2,785	917	519	527	54,540	52,346
Accumulated depreciation	(62)	(4,624)	(21,341)	(1,000)	(172)		(484)	(296)	(348)	(28,327)	(26,123)
Net opening balance for the year	**1,998**	**6,266**	**14,035**	**225**	**69**	**2,785**	**433**	**223**	**179**	**26,213**	**26,223**
Additions	8	5	47	6	3	3,115	3		2	3,189	2,567
Disposals	(19)	(17)	(64)	(2)	(6)	(2)		(2)	(3)	(115)	(103)
Depreciation	(5)	(378)	(1,658)	(75)	(17)		(35)	(25)	(4)	(2,197)	(1,985)
Foreign exchange variation	29	40	110	10		163	4	16	(49)	323	947
Effect of subsidiaries included in (excluded from) consolidation	(3)	22	11	11	1					42	(1,286)
Reversal for impairment	(1)	(57)	(80)				(171)			(309)	29
Cash flow revaluation (i)							291			291	64
Revision of estimated cash flow											(225)
Exchange variation of countries with hyperinflationary economy						10			75	85	138
Transfers (ii)	26	351	1,550	165	8	(2,491)		17		(374)	(156)
Closing balance for the year	**2,033**	**6,232**	**13,951**	**340**	**58**	**3,580**	**525**	**229**	**200**	**27,148**	**26,213**
Cost	2,100	11,246	36,839	1,381	236	3,580	1,058	564	548	57,552	54,540
Accumulated depreciation	(67)	(5,014)	(22,888)	(1,041)	(178)		(533)	(335)	(348)	(30,404)	(28,327)
Net closing balance for the year	**2,033**	**6,232**	**13,951**	**340**	**58**	**3,580**	**525**	**229**	**200**	**27,148**	**26,213**
Average annual depreciation rates - %	**1**	**4**	**9**	**20**	**11**	**-**	**5**	**9**	**-**		

(i) Refers, substantially, to item 1.1 (q)

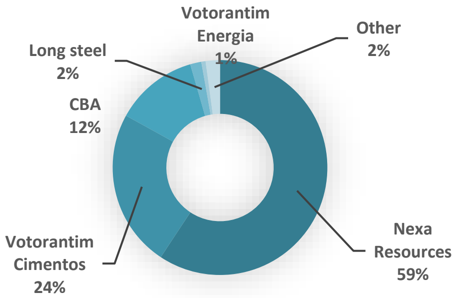
(ii) The transfers are related to the reclassification from "Construction in progress" within "Property, plant and equipment", "Goodwill", "Software", "Rights to use natural resources" and "Others" within "Intangible assets".

All amounts in millions of reais unless otherwise stated

(b) Construction in progress

The balance is composed mainly of expansion and optimization projects related to industry.

Segment	2019	2018
Nexa Resources	2,123	1,353
Votorantim Cimentos	849	771
CBA	448	492
Long steel	60	92
Votorantim Energia	23	25
Other	77	52
	3,580	2,785



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

Nexa Resources	2019	2018
Expansion and modernization projects	1,403	683
Sustaining	460	354
Security, health and enviromental projects	213	223
Information technology	45	53
Other	2	40
	2,123	1,353

Votorantim Cimentos	2019	2018
Sustaining	282	220
Industrial modernization	115	161
Cement grinding - Pecém - Brazil	76	39
New production line in Sobral - CE	72	34
New lines of co-processing	51	35
Hardware and software	33	15
Factory in Nobres - MT	29	17
Geology and mining rights	28	10
Environment and security	25	67
Other	138	173
	849	771

All amounts in millions of reais unless otherwise stated

CBA	2019	2018
Rondon Bauxite projects	118	114
Furnace refurbishment	111	131
Furnace rooms project	44	30
Plastic transformation and foundry projects	27	3
Alumina factory project	24	48
Revitalization and adequacy of power plant	22	4
Automation system modernization	21	29
Projetos de Fundição	19	7
Projetos de Mineração	18	22
Projetos de Segurança, Saúde e Meio Ambiente		29
Other	44	75
	448	**492**

Long steel	2019	2018
Sustaining	53	80
Security projects, health and environment projects - Colombia	3	7
Other	4	5
	60	**92**

Votorantim Energia	2019	2018
Corumba - GO projects	20	19
Information technology	2	4
Other	1	2
	23	**25**

19 Intangible assets

Accounting policy

(i) 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 "assets" in the consolidated financial statements. Goodwill is tested annually for impairment and carried at cost less accumulated impairment losses. Impairment losses on goodwill are not reversed. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold.

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

Annually, the Company and its subsidiaries review the net book value of goodwill, in order to assess whether there was impairment. 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.

(ii) 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 starts operating, 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.

(iii) 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).

(iv) 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.

(v) 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.

All amounts in millions of reais unless otherwise stated

(a) Breakdown and changes

									2019	2018 Restated
	Rights over natural resources	Goodwill	Asset retirement obligation	Use of public assets	Contracts, customer relationships and agreements	Software	Rights over trademarks and patents	Other	Total	Total
Opening balance for the year										
Cost	9,827	5,797	337	540	268	526	208	918	18,421	16,510
Accumulated amortization	(3,575)		(135)	(198)	(199)	(368)	(56)	(398)	(4,929)	(4,435)
Net opening balance for the year	**6,252**	**5,797**	**202**	**342**	**69**	**158**	**152**	**520**	**13,492**	**12,075**
Additions		5	21		18	1	2	12	59	115
Disposals	(7)					(2)			(9)	(32)
Amortization and depletion	(510)		(18)	(19)	(19)	(58)		(9)	(633)	(486)
Foreign exchange variation	66	206	4		3	1		22	302	1,585
Reclassification from assets classified as held-for-sale										(5)
Effect of subsidiaries included in (excluded from) consolidation					12				12	(97)
Reversal for impairment (i)	(380)							(25)	(405)	24
										184
Revision of estimated cash flow			91						91	(27)
Transfers	255					73	(1)	47	374	156
Closing balance for the year	**5,676**	**6,008**	**300**	**323**	**83**	**173**	**153**	**567**	**13,283**	**13,492**
Cost	10,263	6,008	457	540	310	602	206	1,003	19,389	18,421
Accumulated amortization	(4,587)		(157)	(217)	(227)	(429)	(53)	(436)	(6,106)	(4,929)
Net closing balance for the year	**5,676**	**6,008**	**300**	**323**	**83**	**173**	**153**	**567**	**13,283**	**13,492**
Average annual amortization and depletion rates - %	**6**		**7**	**7**	**7**	**20**				

(i) Refers, substantially, to impairment in the subsidiary Nexa described in item 1.1 (n).

All amounts in millions of reais unless otherwise stated

(b) Goodwill on acquisitions

Accounting policy

The Company and its subsidiaries use 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 and its subsidiaries recognize 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.

	2019	2018 Restated
Votorantim Cimentos		
North America	1,499	1,391
United Materials LLC		
Europe, Ásia e África		
Votorantim Cimentos EAA Inversiones S.L.	1,294	1,268
Comercializadora de Cenizas S.L.	5	4
Cementos Antequera S.A.	3	3
Latin America		
Cementos Artigas S.A.	11	12
Brazil		
Cimento Vencemos do Amazonas Ltda.	64	92
Engemix S.A.	76	76
CJ Mineração Ltda.	16	16
	2,968	2,862
Nexa Resources		
Latin America		
Nexa Resources Perú S.A.A.	2,330	2,241
Nexa Resources Cajamarquilla S.A.	373	358
Brazil		
Campos Novos Energia S.A.	26	26
Pollarix S.A.	1	1
	2,730	2,626
Long steel		
Latin America		
Acergroup S.A.	149	149
Acerholding S.A.	6	9
Acerbrag S.A.	1	2
	156	160
CBA		
Brazil		
Campos Novos Energia S.A.	32	32
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
	132	132
Holdings e others		
Latin America		
Votorantim Andina S.A.	16	16
Brazil		
Fazenda Bodoquena Ltda.	1	1
Jaguatirica	5	
	22	17
	6,008	5,797

All amounts in millions of reais unless otherwise stated

(c) Impairment test for goodwill

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

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 and its subsidiaries.

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:

	Discount rate
Votorantim Cimentos	5.86% to 14.93%
CBA	5.57% to 10.15%
Nexa Resources	6.38% to 7.10%
Long steel (i)	8.63% to 16.85%
Holding and other	6.31% to 8.94%

(i) The fair value calculations were based on the discounted cash flow model, and are based on the premise that growth rates take into account independent information about projections, such as LME quotes (mainly zinc and copper) .

All amounts in millions of reais unless otherwise stated

20 Right of use assets

(a) Breakdown and changes

						2019
	Land and improvements	Property, buildings and commercial rooms	Machinery, equipment and facilities	IT equipment	Vehicles and vessels	Total
Initial adoption	**91**	**177**	**83**	**24**	**291**	**666**
Remeasurement of principal	4	21	177	4	149	355
Remeasurement of interest	(19)	(6)				(25)
New contracts	(12)	(46)	(61)	(17)	(101)	(237)
Amortization	12	14	6	1	21	54
Closing balance for the	**76**	**160**	**205**	**12**	**360**	**813**
Cost	88	206	266	29	461	1,050
Accumulated amortization	(12)	(46)	(61)	(17)	(101)	(237)
Net closing balance for the	**76**	**160**	**205**	**12**	**360**	**813**
Average annual amortization rates - %	**12**	**18**	**35**	**62**	**33**	

21 Borrowing

Accounting policy

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.

All amounts in millions of reais unless otherwise stated

(a) Breakdown and fair value

		Current		Non-current		Total		Fair value	
Type	Average annual charges	2019	2018	2019	2018	2019	2018	2019	2018
Local currency									
Debenture	110.26% CDI / CDI + 3.80% / IPCA + 3.80%	424	91	2,287	2,718	2,711	2,809	2,678	2,749
Export credit notes (i)	112.70% CDI / CDI + 1.5%	8		1,078		1,086		1,081	
BNDES	TJLP + 2.36% / 1.86% fixed rate BRL / SELIC + 2.99% / IPCA + 5.04%	97	95	641	635	738	730	720	687
Development promotion agency	10.00% fixed rate BRL / TJLP + 0.65%	7	51	23	198	30	249	32	246
FINAME	4.60% fixed rate BRL	17	21	43	68	60	89	59	83
Other		29	11	29	11	58	22	59	20
		582	**269**	**4,101**	**3,630**	**4,683**	**3,899**	**4,629**	**3,785**
Foreign currency									
Eurobonds - USD	5.89% fixed rate USD	137	3,077	10,156	10,742	10,293	13,819	11,550	13,829
Eurobonds - EUR	3.39% fixed rate EUR	26	978	1,576	1,541	1,602	2,519	1,682	2,584
Loans - Law 4131/1962 (ii)	LIBOR + 0.48%	2	594	905	864	907	1,458	907	1,481
Eurobonds - BOB	5.38% fixed rate BOB	1		315		316		316	
Syndicated loan/bilateral agreements	EURIBOR + 2.00% / LIBOR + 1.10% / 8.43% fixed rate	22	225	358	1,399	380	1,624	394	1,626
Export prepayments	LIBOR + 1.27%			799	765	799	765	823	799
Working capital	IBR + 2.71% / 5.68% fixed rate COP	146	111			146	111	146	112
Development promotion agency	LIBOR + 1.10%	31	30	171	195	202	225	210	236
Other		7	7	420	24	427	31	425	33
		372	**5,022**	**14,700**	**15,530**	**15,072**	**20,552**	**16,453**	**20,700**
		954	**5,291**	**18,801**	**19,160**	**19,755**	**24,451**	**21,082**	**24,485**
Current portion of long-term borrowing		562	4,854						
Interest on borrowing		236	324						
Short-term borrowing		156	113						
		954	**5,291**						

All amounts in millions of reais unless otherwise stated

(i) Loan agreements (NCE - Export Credit Note) of the subsidiary CBA are intended to financing export-related operations and are linked to swap contracts (derivative financial instrument), which aim to switch floating rate exposure exchange in Brazilian reais (CDI) to an exchange rate pre-fixed in US Dollars, resulting in a weighted average cost of 5.00% per year. The subsidiary Nexa also has NCE contracts, which have linked swap contracts, which aim to exchange the exposure of floating rates in LIBOR to CDI + spread. These swaps were contracted together with the financing and with the same financial institution.

(ii) Loans relating to Law 4131/1962 are subject to swaps that are indexed both to exchange rates (LIBOR and fixed rates for floating CDI rates) and to currencies (US Dollars for reais) and resulted in a final weighted cost of 109.20% p.a. of the CDI. Borrowing of this type relates to compound financial instruments, contracted as a single product with the financial institution (debt in US Dollars + swap a percentage of the CDI in reais). The terms and conditions of the loan and derivative instruments are configured as a compound operation, so that the resulting cost is a debt adjusted by the CDI in reais. The difference in measurement between the two instruments (loan at amortized cost x derivative at fair value), creates an accounting mismatch in the statement of income. To eliminate this accounting mismatch, some of the borrowing contracts made from August 2015, were designated as at fair value, and the effect of this designation is the measurement of debt at fair value through profit or loss, according to Note 33.

Key:

BNDES – National Bank for Economic and Social Development.
BRL – Brazilian currency (Real).
CDI – Interbank Deposit Certificate.
COP – Colombian Peso.
EUR – European Union currency (Euro).
EURIBOR – Euro Interbank Offered Rate.
FINAME – Government Agency for Machinery and Equipment Financing.
IBR – Interbank Rate (Colombia).
INR – Indian Rupee
IPCA – Extended Consumer Price Index.
LIBOR – London Interbank Offered Rate.
SELIC – Special System for Clearance and Custody.
TJLP – Long-term interest rate set by the National Monetary Council. Until December 2017, the TJLP is the BNDES basic cost of financing. As of January 2018, the Long Term Rate (TLP) became the main financial cost of BNDES financing.
USD – US Dollar.

(b) Changes

	2019	2018
Opening balance for the year	**24,451**	**24,630**
New borrowing	4,323	3,639
Interest	1,007	1,359
Addition of borrowing fees, net of amortization	17	26
Fair value adjustment	22	(28)
Effect of subsidiaries excluded in consolidation		(909)
Foreign exchange variation	507	2,771
Payments - interest	(1,217)	(1,423)
Payments - principal	(9,356)	(5,532)
Gain on debt renegotiation		(69)
Others	1	(13)
Closing balance for the year	**19,755**	**24,451**

All amounts in millions of reais unless otherwise stated

(c) New borrowing and amortizations

Through the funding and prepayment of certain debts, the Company seeks to extend the average maturities, as well as to balance the exposure to different currencies for loans and financing against cash generation in these currencies.

The main amortization in the year was as follows:

New borrowing

Date	Company	Type	Currency	Principal	Principal BRL	Maturity	Cost
Apr-19	Itacamba Cementos S.A.	Syndicated / Bilateral Loans	BOB	(244)	(140)	2027	5.68% Fixed rate
Apr-19	Itacamba Cementos S.A.	Debt in the local market	BOB	(116)	(65)	2025	4.75% Fixed rate
Apr-19	Votorantim Cimentos Internacional	Syndicated / Bilateral Loans	USD	(21)	(82)	2020	LIBOR 03M + 1.10%
Apr-19	Itacamba Cementos S.A.	Debt in the local market	BOB	(419)	(241)	2029	5.55% Fixed rate
Apr-19	Companhia Brasileira de Aluminio	Export Credit Note	BRL	(787)	(787)	2027	5.03% Fixed rate
May-19	Companhia Brasileira de Aluminio	Export Credit Note	BRL	(198)	(198)	2027	4.92% Fixed rate
May-19	Companhia Brasileira de Aluminio	Export Credit Note	BRL	(100)	(100)	2027	4.90% Fixed rate
Sep-19	Companhia Brasileira de Aluminio	BNDES	BRL	(90)	(90)	2034	4.15% Fixed rate
Sep-19	Votorantim Cimentos N/NE S.A.	Borrowing Law 4131 - MTM	USD	(75)	(305)	2024	107% CDI
Oct-19	Nexa Recursos Minerais S.A.	Export Credit Note	BRL	(90)	(374)	2024	CDI + 1.30%
Dec-19	Votorantim Cimentos N/NE S.A.	Certificate of Real Estate Receivables	BRL	(179)	(179)	2029	IPCA + 3.80%
Dec-19	Votorantim Cimentos S.A.	Certificate of Real Estate Receivables	BRL	(348)	(348)	2029	IPCA + 3.80%

(*) The Export Credit Note and BNDES modalities have a fixed rate in US Dollars as described in item (a).

All amounts in millions of reais unless otherwise stated

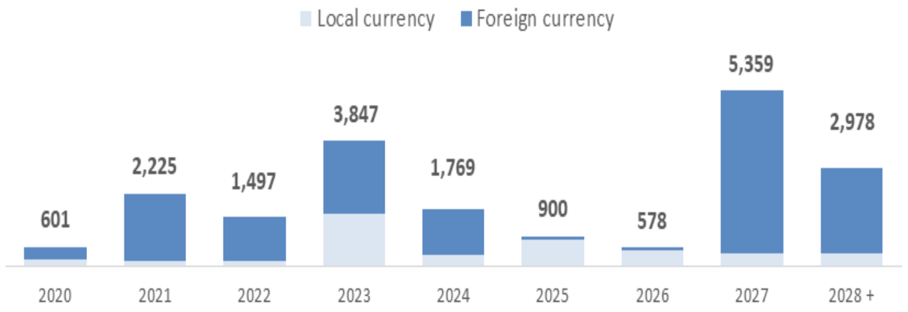
Amortizations

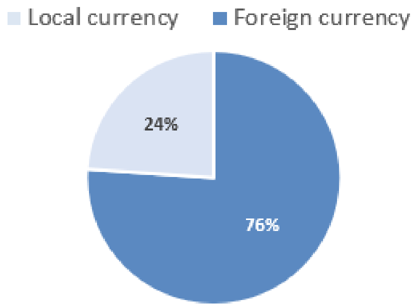
Date	Company	Type	Currency	Principal	Principal BRL	Maturity	Cost
Feb-19	Votorantim Cimentos Internacional	Eurobonds	EUR	(61)	(256)	2021	Prepayment
Feb-19	Votorantim Cimentos Internacional	Eurobonds	EUR	(151)	(640)	2022	Prepayment
Feb-19	Votorantim Cimentos Internacional	Eurobonds	USD	(540)	(2,014)	2041	Prepayment
Feb-19	Votorantim S.A.	Law 4131	USD	(50)	(185)	2020	Prepayment
Feb-19	Votorantim S.A.	Law 4131	USD	(100)	(377)	2021	Prepayment
Apr-19	Itacamba Cementos S.A.	Syndicated / Bilateral Loans	BOB	(268)	(154)	2025	Prepayment
Apr-19	Itacamba Cementos S.A.	Syndicated / Bilateral Loans	BOB	(201)	(116)	2025	Prepayment
Apr-19	Votorantim S.A.	Law 4131	USD	(73)	(282)	2021	Prepayment
May-19	Companhia Brasileira de Aluminio	Eurobonds	USD	(256)	(1,007)	2024	Prepayment
May-19	Votorantim Cimentos EAA Inversiones S.L.	Syndicated / Bilateral Loans	EUR	(30)	(132)	2021	Prepayment
Jun-19	Itacamba Cementos S.A.	Syndicated / Bilateral Loans	BOB	(133)	(75)	2025	Prepayment
Jun-19	Itacamba Cementos S.A.	Syndicated / Bilateral Loans	BOB	(129)	(73)	2025	Prepayment
Jul-19	Votorantim S.A.	Debenture	BRL	(550)	(550)	2024	Prepayment
Nov-19	Votorantim Cimentos Internacional	Syndicated / Bilateral Loans	USD	(75)	(313)	2024	Prepayment
Nov-19	Votorantim Cimentos EAA Inversiones S.L.	Syndicated / Bilateral Loans	TRY	(120)	(88)	2023	Prepayment
Nov-19	Votorantim Cimentos S.A.	BNDES	BRL	(52)	(52)	2028	Prepayment
Dec-19	Votorantim Cimentos Internacional	Syndicated / Bilateral Loans	USD	(30)	(123)	2024	Prepayment

All amounts in millions of reais unless otherwise stated

VOTORANTIM

(d) Maturity





(e) Breakdown by currency

	Current		Non-current		Total	
	2019	2018	2019	2018	2019	2018
USD	174	3,707	12,597	13,083	12,771	16,790
Real	582	269	4,101	3,630	4,683	3,899
Euro	25	1,098	1,576	1,879	1,601	2,977
Bolivian	2	64	459	406	461	470
Turkish lire	34	39	42	148	76	187
Colombian peso	132	111			132	111
Other	5	3	26	14	31	17
	954	**5,291**	**18,801**	**19,160**	**19,755**	**24,451**

(f) Breakdown by index

	Current		Non-current		Total	
	2019	2018	2019	2018	2019	2018
Local currency						
CDI	431	91	2,848	2,718	3,279	2,809
TJLP	73	79	238	314	311	393
TLP	30	32	312	289	342	321
Fixed rate	28	53	74	209	102	262
SELIC	20	14	114	100	134	114
IPCA			515		515	
	582	**269**	**4,101**	**3,630**	**4,683**	**3,899**
Foreign currency						
Fixed rate	251	4,729	12,262	13,160	12,513	17,889
LIBOR	36	230	2,438	2,331	2,474	2,561
EURIBOR		11		39		50
Other	85	52			85	52
	372	**5,022**	**14,700**	**15,530**	**15,072**	**20,552**
	954	**5,291**	**18,801**	**19,160**	**19,755**	**24,451**

All amounts in millions of reais unless otherwise stated

(f) Collateral

As at December 31, 2019, R$ 5,859 (December 31, 2018 R$ 10.389) of the balance of borrowing of the Company and its subsidiaries was collateralized under promissory notes and sureties and R$ 895 of property, plant and equipment items (December 31, 2018: R$ 792) was collateralized by liens on the financed assets.

(h) Covenants/financial ratios

Certain borrowing items are subject to compliance with certain financial ratios ("covenants"). Where applicable, such obligations are standardized for all loan and financing agreements.

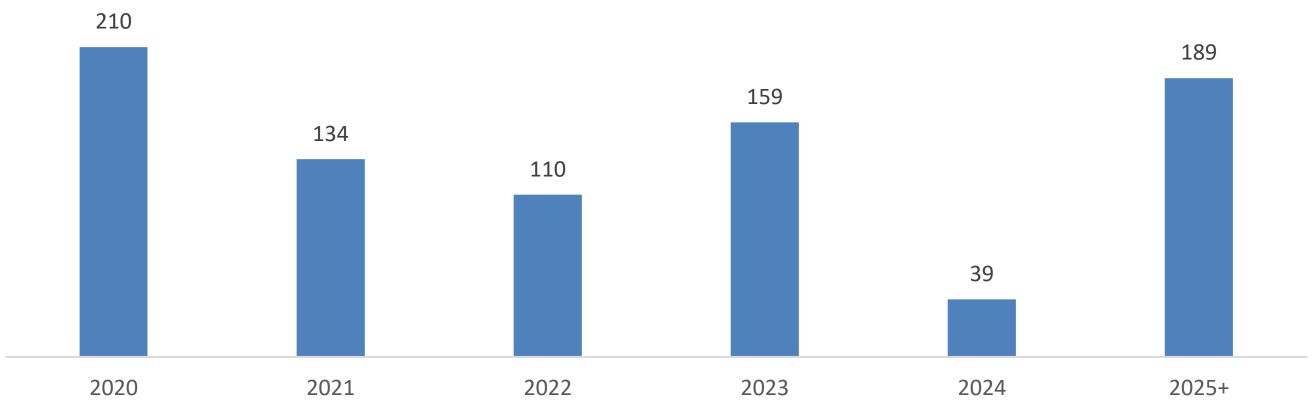
The Company and its subsidiaries were in compliance with all of these covenants, as applicable.

22 Lease liabilities

(a) Changes to lease obligations – IFRS16

	2019
Initial adoption IFRS 16	666
New contracts	355
Amortization	(217)
Fair value adjustment	13
Foreign exchange variation	24
Closing balance for the year	**841**
Current	210
Non-current	631
	841

(b) Maturity profile



All amounts in millions of reais unless otherwise stated

23 Confirming payables

The Company and subsidiaries have entered into agreements with financial institutions, aiming to anticipate receivables from suppliers in domestic and foreign markets. As part of this operation, suppliers transfer the right to receive their accounts receivable related to sales of goods to financial institutions.

Operations - Confirming payables	2019	2018 Restated (Note 2.3)
Domestic market	256	349
Foreign market	1,159	963
	1,415	1,312

24 Current and deferred income tax and social contribution

Accounting policy

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.

The Company and its subsidiaries are 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 and its subsidiaries 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.

All amounts in millions of reais unless otherwise stated

(a) Reconciliation of income tax and social contribution expenses

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

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

	2019	2018 Restated
Profit before income tax and social contribution	**7,128**	**3,504**
Standard rates	**34%**	**34%**
Income tax and social contribution at standard rates	**(2,424)**	**(1,191)**
Adjustments for the calculation of income tax and social contribution at effective rates		
Equity	312	380
Tax effect of the corporate reorganization VCSA	82	(431)
Realization of comprehensive income on disposals of investments	37	1
Dividends received	15	(53)
Tax on mining operations	(29)	(52)
Differential rate of foreign companies	(37)	559
Tax loss carryforward and non-deferred tax base	(216)	(60)
Other exclusions (additions), net	94	(164)
Income tax and social contribution calculated	**(2,166)**	**(1,011)**
Current	(1,461)	(455)
Deferred	(705)	(556)
Income tax and social contribution expenses	**(2,166)**	**(1,011)**
Effective rate - %	**30%**	**29%**

All amounts in millions of reais unless otherwise stated

(b) Breakdown of deferred tax balances

	2019	2018 Restated
Tax credits on tax losses	**2,371**	**2,669**
Tax credits on temporary differences		
Estimation for losses on investments, fixed and intangible assets	1,011	857
Tax, civil and labor provision	597	574
Tax benefit on goodwill	504	503
Deferred of losses on derivative instruments	343	(77)
Foreign exchange	278	761
Asset retirement obligation	187	182
Use of public assets	149	154
PPR - Provision for profit sharing	129	113
Environmental liabilities	109	128
Estimation for inventory losses	93	78
Settlement credits for estimated loss	74	62
Provision for energy charges	54	49
Financial instruments - firm commitment	50	(8)
Provision for social security obligations	48	41
Estimated asset disposals	3	2
Other tax credits	168	197
Tax debits on temporary differences		
Adjustment of useful lives of PP&E (depreciation)	(1,981)	(2,192)
Market value Milpo	(1,162)	(1,233)
Adjust the fair value in the Suzano transaction	(549)	
Goodwill amortization	(299)	(405)
Capitalized interest	(206)	(141)
Goodwill	(182)	(435)
Market value assets	(179)	123
Gain in fair value in VTRM´s operation	(48)	(50)
Market value adjustment	(34)	(35)
Asset retirement obligation	(9)	(10)
Other tax debits	(265)	(22)
Net	**1,254**	**1,885**
Net deferred tax assets related to the same legal entity	**3,341**	**4,079**
Net deferred tax liabilities related to the same legal entity	**(2,087)**	**(2,194)**

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

	2019	2018 Restated
Opening balance for the year	**1,885**	**2,114**
Deferred income tax and social contribution on hedge accounting	49	396
Effects on the results of the semester - discontinued operations	51	112
Effects of foreign exchange variations in other comprehensive income	(29)	(196)
Effects on the results for the year - continuing operations	(705)	(556)
Others	3	15
Closing balance for the year	**1,254**	**1,885**

All amounts in millions of reais unless otherwise stated

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

	2019	Percentage
In 2020	78	3%
In 2021	364	15%
In 2022	60	3%
In 2023	140	6%
After 2024	1,729	73%
	2,371	**100%**

25 Provision

Accounting policy

The Company and its subsidiaries are 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.

The judicial deposits are monetarily restated and when they have a corresponding provision they are presented net in "Provision". Judicial deposits that do not have a corresponding provision are presented in non-current assets.

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

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 and its subsidiaries consider their 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.

(ii) 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.

The Company and its subsidiaries recognize a liability based on the fair value for the demobilization of assets in the period in which they occur, against the corresponding intangible asset. The Company and its subsidiaries consider the accounting estimates related to the recovery of degraded areas and the costs of closing a mine as a critical accounting practice because it involves expressive amounts of provisions and these are estimates that involve several assumptions such as interest rates, inflation, useful life of the assets considering the current stage of exhaustion, the costs involved and the projected depletion dates of each mine. These estimates are reviewed annually by the Company and its subsidiaries.

All amounts in millions of reais unless otherwise stated

(iii) Obligation for environmental liabilities

The environmental liability must be recognized when there is an obligation on the part of the Company and its subsidiaries 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 and its subsidiaries that arose from past events.

(a) Breakdown and changes

						2019	2018
		Legal claims					
	Asset retirement obligation	Tax	Labor	Civil	Other	Total	Total
Opening balance for the	**1,334**	**853**	**84**	**283**	**41**	**2,595**	**2,587**
Additions	33	93	245	41	9	421	314
Reversals		(41)	(36)	(46)	(14)	(137)	(434)
Judicial deposits, net of write-offs		(3)	26	8		31	80
Settlement in cash	(61)	(18)	(19)	(20)	(4)	(122)	(156)
Settlements with escrow deposits			(137)	(26)		(163)	(14)
Effect of subsidiaries included in (excluded from) consolidation							(26)
Present value adjustment	78					78	67
Monetary restatement	1	(7)	13	12	(2)	17	82
Foreign exchange variation	32	1				33	98
Revision of estimated cash flow (i)	384					384	(3)
Closing balance for the	**1,801**	**878**	**176**	**252**	**30**	**3,137**	**2,595**

(i) Amount refers, substantially, to item 1.1 (q).

(b) Provision for tax, civil, labor, other contingencies and outstanding judicial deposits

	2019				2018			
	Judicial deposits	Provision	Net amount	Remaining judicial deposits (i)	Judicial deposits	Provision	Net amount	Remaining judicial deposits (i)
Tax	(129)	1,007	878	182	(126)	979	853	545
Labor	(110)	286	176	46	(214)	298	84	80
Civil	(21)	273	252	108	(28)	311	283	124
Other	(1)	31	30	9	(1)	42	41	6
	(261)	**1,597**	**1,336**	**345**	**(369)**	**1,630**	**1,261**	**755**

(i) The variation was, substantially, from the collection of judicial deposits related to the ICMS process in the PIS and COFINS calculation basis.

All amounts in millions of reais unless otherwise stated

(c) Litigation with likelihood of loss considered possible

The Company and its subsidiaries are party to litigations representing a risk of possible loss, for which no constituted provision has been made, as detailed below.

	2019	2018
Tax (c.1)	11,671	11,162
Civil (c.2)	7,900	7,430
Environmental	612	516
Labor and social security	276	374
	20,459	19,482

(c.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 an analysis of the relevance of these lawsuits:

Nature	2019	2018
Tax assessment notice - "IRPJ/CSLL"	1,686	1,884
"IRPJ/CSLL" – Profits abroad	1,096	1,052
"ICMS" – Credit	818	818
Disallowances of "PIS/COFINS" credits	713	680
Compensation for exploration for mineral resources ("CFEM")	499	608
Disallowance of "IRPJ/CSLL" negative balance	485	493
Tax assessment notice – "ICMS"	308	315
Offset of tax loss – 30% limit (merger)	299	286
"ICMS" on electricity charges	222	204
"IRPJ/CSLL" – Transfer costs	206	198
Error in fiscal classification - Importation	181	172
Collection of ICMS due to divergences regarding the destination of the property	108	104
"IRPJ/CSLL" – Deduction of expenses	77	74
Other lawsuits	4,973	4,274
	11,671	11,162

(i) Tax assessment notice – "IRPJ / CSLL"

In December 2016, the subsidiary VCSA was assessed by the Brazilian Federal Revenue Office in the historical amount of R$ 470 demanding the collection of IRPJ and CSLL relating to the period of 2011, due to the alleged undue deduction of operating expenses and costs. In January 2018, the VCSA became aware of the Lower Court decision from the Federal Revenue's Judgment Office, which judged the appeal partially with grounds, reducing the lawsuit by approximately R$ 114. In December 2018, the Appeal of the Administrative Board of Tax Appeals was dismissed and the Voluntary Appeal was partially accepted for the VCSA, at this moment we await the formalization of the Court Decision. As at December 31, 2018, the restated amount of the contingency was R$ 580, of which R$ 53 was assessed as probable loss and was properly accrued, and the remaining R$ 219 was assessed as possible loss.

In December 2017, the VCSA received a tax assessment notice from the Brazilian Federal Revenue Office in the amount of R$ 1,295 for alleged non-payment or underpayment of IRPJ and CSLL relating to the period from 2012 to 2013, due to: (i) capital gain allegedly obtained due to a barter made by the VCSA; and (ii) amortization of goodwill supposedly incorrect. In October 2018, the VCSA took cognizance of the decision of the lower court, which ruled that the VCSA´s challenge was unfavorable. In December 2018, the Appeal of the Administrative Board of Tax Appeals was dismissed and the Voluntary Appeal was partially accepted for the VCSA, at this moment we await the formalization of the Court Decision. At December 31, 2019, the restated amount of the contingency assessed as possible loss was R$ 1,467.

(ii) Profits abroad – "IRPJ/CSLL"

The Company and its subsidiaries have assessments drawn up by the Brazilian Federal Revenue Office, for alleged nonpayment of IRPJ and CSLL, on profits earned abroad by its subsidiaries or affiliates, in the periods of 2007, 2008, 2010, 2012, 2013 and 2014.
The balance substantially composed by the Company, amounted R$ 1,096 at December 31, 2019 (R$ 1,052 as at December 31, 2018). All cases are awaiting judgment at the administrative level.

(iii) ICMS credit

Between 2011 and 2013, eight notices of infringement and fines were filed against the Company's subsidiary Citrovita Agro Industrial Ltda. ("CAI"), mainly aimed at the collection of ICMS credited, as highlighted in invoices for the transfer of other subsidiaries, with the specific purpose of non taxable export. The tax assessment notices totaled R$ 818 as at December 31, 2019.

(iv) PIS / COFINS credit statement

Substantially comprised by the subsidiary CBA, which has Decisional Orders and tax assessments relating to the PIS and COFINS credits, referring to the items applied in the production process, which, in the opinion of the Brazilian Federal Revenue Office, would not generate the right to credit of the said contributions. The amount restated as of December 31, 2019 was R$ 690. Currently, all the processes await administrative decision.

In the opinion of Management and in the opinion of its independent legal advisors, in light of precedents and case law, the likelihood of loss of the process is considered possible.

(v) Financial Compensation for the Exploration of Mineral Resources - CFEM

The subsidiaries Nexa BR, CBA and VCSA had several assessments drawn up by the National Department of Mineral Production - "DNPM" for alleged failure to pay or lower collection of CFEM from 1991 to 2015. As of December 31, 2019, the amount of possible loss amounted to R$ 499.

(vi) IRPJ/CSLL negative balance credit

VSA and its subsidiaries CBA received decisions regarding the gloss of negative balance of IRPJ credits, totaling the updated amount of R$ 485 as of December 31, 2019. Currently, the cases await an administrative decision due to the presentation of a challenge by the Company and its Subsidiaries.

In the opinion of Management and in the opinion of its independent legal advisors, it appears that there was a misconception on the part of RFB when assessing the amounts presented by the Company and its subsidiaries, which is why the likelihood of loss in the lawsuits is considered possible.

(vii) Tax assessment notice - ICMS

In the fourth quarter of 2016, the subsidiary CAI received a tax assessment notice whose value up to December 31, 2019 amounts R$ 128. The process currently awaits judgment of the special appeal filed by the company before the Tax and Taxes Court of São Paulo Paulo.

(viii) ICMS on electricity charges

The subsidiary CBA has judicial and administrative discussions regarding the incidence of ICMS on the sector charges levied on the electricity tariff. As of December 31, 2019, the amount in controversy of these discussions amounts to R$ 222.

In the opinion of Management and in the opinion of its independent legal advisors, the assessment is unfounded, which is why the likelihood of loss of the process is considered possible.

All amounts in millions of reais unless otherwise stated

(ix) IRPJ/CSLL – Transfer Price

Between 2007 and 2010, four tax assessments were filed against its subsidiary CAI, aiming at the collection of IRPJ and CSLL, and the adjustment in the basis of tax losses and the negative basis of CSLL, due to the losses made in the adjustments made by the Company in this transfer pricing calculations in 2003 and 2004. In October 2018, one of the cases was closed in a favorable manner to the CAI, with the amount of R$ 206 remaining under administrative discussion, restated up to December 31, 2019. The active processes await judgment of appeals by the Administrative Council of Tax Appeals.

(x) Tax classification mismatch – Import

In March 2017, the subsidiary CBA was assessed on account of a supposed error in the tax classification on the importation of inputs, resulting in the tax requirement (IPI, PIS, COFINS E II), whose value in December 2019 amounts to R$ 181.

Because the undisputed legal counsel wrongly understood the complaint, the subsidiary CBA filed a challenge that was favorably judged in the first administrative instance. Currently, the case awaits judgment by the CARF of the voluntary appeal filed by the Attorney General of the National Treasury.

In the opinion of Management and in the opinion of its independent legal advisors, the likelihood of loss of said process is considered possible.

(xi) Collection of ICMS due to divergences regarding the destination of the item

The subsidiary CBA was assessed for alleged failure to pay ICMS, due to the credit claims arising from the acquisition of assets due to divergences regarding the allocation of assets in the amount of R$ 108.

In the opinion of Management and in the opinion of its independent legal advisors, the criteria adopted in relation to the destination of the assets are in accordance with the pertinent legislation and the probability of loss of the process is considered possible.

(xii) IRPJ/CSLL - Expense Deduction

In December 2016, the subsidiary CAI was assessed by the RFB for the collection of IRPJ and CSLL, due to the gloss of exclusions from the calculation base of said taxes in the 2011 calendar year. The amounts required by the tax assessment notice total R$ 77. In the last quarter of 2018, a partial cancellation of the tax assessment notice was filed by the Regional Judgment Office (DRJ), and judgment on the Voluntary Appeal filed is currently awaiting.

(c.2) Comments on contingent civil liabilities with likelihood of loss considered possible

Nature	2019	2018
Public civil suit – Violation of the economic order	4,176	4,023
Administrative investigations carried out by the Secretariat of Economic Law	2,105	2,052
Other lawsuits	1,619	1,355
	7,900	**7,430**

(i) Civil class action – Cartel

The Office of the Public Prosecutor of the State of Rio Grande do Norte filed a civil class action against the subsidiary VCSA, together with eight other defendants, including several of Brazil's largest cement manufacturers, alleging the formation of a cartel, demanding that: (1) the defendants make an indemnity payment, jointly, amounting to R$ 5,600, in favor of the civil class action, due to pain and suffering and property collective damage; (2) the defendants make a payment of 10% of the total amount paid by the customers for the acquisition of cement or concrete under the brands owned by the defendants, during the period from 2002 to 2006, due to individual consumer damages; (3) that the defendants pay the following penalties according to Article 23 Section 1 and Article 24 of Law 8,884/1994: (i) in addition to the payment mentioned in item (1) above, a fine ranging from 1% to 30% of annual gross revenues 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, from obtaining financing from governmental financial institutions or from participating in bidding processes conducted by the federal, state or municipal governments and their entities. In view of the total number of the claims in item (1) above in the amount of R$ 5,600 and because of the claims alleging joint liability, VCSA 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 and that VCSA will not be held liable for a different proportion, which may be larger, or for the total number of these claims. Additionally, there can be no assurance that VCSA will not be required to pay other amounts as compensation for damages caused to consumers as mentioned in item (2) above and/or the fine mentioned in item (3) above.

In the last quarter of 2018, an order was issued rejecting the arguments presented by the defendants and determining the production of expert evidence. At the moment a decision is awaited on the motions to clarify against such order. The likelihood of loss in this matter is considered possible, and the VCSA has not recorded any provision for this claim. As at December 31, 2019, the restated balance of the contingency was R$ 4,176.

(ii) Administrative Proceedings by SDE, currently CADE (Brazilian antitrust agency)

In 2006 the SDE initiated administrative proceedings against the largest Brazilian cement companies, including VCSA, alleging that the large cement companies would have breached Brazilian antitrust laws, such as in terms of price fixing and the formation of a cartel. After the finding of facts, the CADE court judged the lawsuit, issuing the final terms of the judgment on July 29, 2015, applying several penalties to the companies.

The penalties imposed on VCSA include the payment of a fine of approximately R$ 1,566 and an obligation for VCSA to sell: (1) all its interests in other cement and concrete companies in Brazil; (2) 20% of its installed capacity of concrete services in Brazil, in relevant markets in which VCSA has more than one concrete plant; and (3) a specific cement asset that, in CADE’s opinion, was directly related to the alleged illegal act of which VCSA is accused. Other non-monetary penalties were also imposed on VCSA, including: (1) the obligation to publish CADE’s decision in one of the five biggest Brazilian newspapers; (2) a prohibition against contracting with official financial institutions for credit lines with financing conditions subsidized by public programs or resources provided by these institutions; and (3) a recommendation to the Federal Revenue that they restrict or limit certain other benefits and tax incentives.

In November 2015, VCSA filed an annulment action to cancel the decision issued at the administrative level or, at least, to reduce the applied penalties. The injunction was granted on November 24, 2015, suspending the effects of the decision issued by CADE at the administrative level, preventing CADE from demanding the fulfillment of the obligations and/or executing the penalties until a judgment of the merits. CADE was summoned and filed its defense, while VCSA presented its reply in November 2016. Recently, an economic expert evidence has been accepted. The parties indicated technical assistants and made questions. The expert is requested to inform if he accepts the charge and presents an estimate of the fees. The VCSA classified the likelihood of loss on this lawsuit as possible.

During 2017, some construction companies and concrete producers filed lawsuits for indemnity claims against Votorantim Cimentos and other companies which were convicted by CADE, due to the alleged formation of a cartel in the cement and concrete markets, in summary claiming that the cartel caused economic and non-economic losses. In January 2018, the first sentence dismissing the merit of the indemnity claims was issued. In December 2019, there were already 26 decisions dismissing the merit in the lower court. Moreover, ten of these lawsuits already recognized that eventual damages arising from the facts identified in the administrative proceeding of CADE had already expired, of which seven were final decisions.

All amounts in millions of reais unless otherwise stated

26 Use of public assets

Accounting policy

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).

The subsidiaries own or participate in companies that hold 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:

							2019			2018
Plants/Companies	Investor	Concession start date	Concession end date	Payment start date	Ownership interest	Intangible assets (Note 18)	Liabilities	Ownership interest	Intangible assets (Note 18)	Liabilities
Salto Pilão	Companhia Brasileira de Alumínio	nov-01	dec-36	jan-10	60%	173	538	60%	184	518
Salto do Rio Verdinho	Companhia Brasileira de Alumínio	aug-02	sep-37	oct-10	100%	7	22	100%	7	21
Itupararanga	Companhia Brasileira de Alumínio	nov-03	dec-23	jan-04	100%		2	100%		2
Piraju	Companhia Brasileira de Alumínio	dec-98	jan-34	feb-03	100%	1	6	100%	1	6
Ourinhos	Companhia Brasileira de Alumínio	jul-00	aug-35	sep-05	100%	1	5	100%	1	5
Baesa - Energética Barra Grande	Companhia Brasileira de Alumínio	jun-01	may-36	jun-07	15%	12	45	15%	13	45
Capim Branco I e Capim Branco II	Pollarix S.A.	aug-01	sep-36	oct-07	13%	2	12	13%	3	11
Picada	Pollarix S.A.	may-01	jun-36	jul-06	100%	17	76	100%	17	69
Enercan - Campos Novos Energia S.A	CBA Energia Participações S.A.	apr-00	may-35	jun-06	24%	2	7	24%	2	7
Enercan - Campos Novos Energia S.A	Pollarix S.A.	apr-00	may-35	jun-06	21%	2	6	21%	2	6
Pedra do Cavalo	Votorantim Cimentos N/NE S.A.	mar-02	apr-37	apr-06	100%	106	519	100%	112	499
						323	1,238		342	1,189
Current							87			83
Non-current						323	1,151		342	1,106
						323	1,238		342	1,189

27 Deferred revenue obligation for performance

Accounting policy

Deferred revenue, arising from the anticipation of receivables from financial institutions, represents an obligation for the subsidiaries to physically deliver the electric energy already sold to customers and consequently to pass on to the financial institution the amount received from the sale of energy. The obligation is performed monthly, after the transfer of energy to the client and consequent financial transfer to the financial institution.

In December 2014, the subsidiary indirect Votener ceded to a financial institution the receivables due until December 2019 as a result of certain contracts for the Sale of Electric Energy in the Regulated Environment ("CCEAR"), which are being carried out with the physical delivery of energy. This transaction corresponded to R$ 1,252, and has no right of return and/or type of co-obligation of the Company on the receivables. Due to the assignment of receivables, Votener received a total amount of R$ 905, and the interest to be appropriated from the transaction will be recognized pro rata to the result during the term of the agreement.

In May 2015, Votener carried out a second credit assignment operation, without any right of return and/or co-obligation of the subsidiary, in the total amount of R$ 368. By assigning the receivables, Votener received the total amount R$ 251, and interest to beappropriated from the operation will be recognized pro rata to the result during the term of the agreement.

The updated value of these operations at December 31, 2019 was R$ 32 (December 31, 2018, R$ 271).

28 Pension plan and post-employment health care benefits

Accounting policity

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.

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

All amounts in millions of reais unless otherwise stated

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

	2019	2018
Rights recorded in the balance sheet with:		
Pension plan benefits	40	25
Assets recorded in the balance sheet	40	25
Obligations recorded in the balance sheet with:		
Pension plan benefits	172	155
Post-employment healthcare benefits	195	164
Liabilities recorded in the balance sheet	367	319
Expenses recognized in the statement of income with:		
Pension plan benefits	18	19
Post-employment healthcare benefits	13	12
	31	31
Remeasurement with:		
Pension plan benefits - gross amount	35	(39)
Deferred income tax and social contribution	(10)	5
Pension plan benefits - net amount	25	(34)

(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:

	2019	2018
Present value of funded obligations	1,175	1,031
Fair value of plan assets	(951)	(814)
Deficit of funded plans	224	217
Present value of non-funded obligations	88	68
Total deficit of defined benefit pension plans	312	285
Impact of the minimum funding requirement/assets ceiling	15	9
Assets and liabilities in the balance sheet	327	294

All amounts in millions of reais unless otherwise stated

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	Total
Opening balance	1,100	(815)	285	9	294	317
Current service cost	8		8		8	9
Finance cost (income)	57	(33)	24		24	25
Past service cost and curtailments	(3)		(3)	1	(2)	(2)
	62	(33)	29	1	30	32
Re-measurements:						
Return on assets, excluding the amount included as finance income		(78)	(78)		(78)	29
Losses (gains) arising from changes in demographic assumptions	(8)		(8)		(8)	
Losses (gains) arising from changes in financial assumptions	126		126		126	(69)
Losses arising from experience	(14)		(14)		(14)	(6)
Changes in the asset ceiling, excluding the amount included as finance cost				6	6	7
	104	(78)	26	6	32	(39)
Foreign exchange gains (losses)	73	(57)	16		16	30
Contributions:						
Employer		(10)	(10)		(10)	(6)
Payments of the plans:						
Payment of benefits	(56)	21	(35)		(35)	(36)
Assumed/(acquired) in a business combination						(4)
Closing balance	1,283	(972)	311	16	327	294

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

											Percentual
					2019						2018
	Brazil	Europe	North America	Colombia	Total	Brazil	Europe	North America	Uruguay	Colombia	Total
Present value of the obligation	44	14	825	292	1,175	43	29	697		263	1,032
Fair value of plan assets	(61)		(739)	(151)	(951)	(53)		(619)		(142)	(814)
	(17)	14	86	141	224	(10)	29	78		121	218
Present value of non-financial obligations		52	33	3	88		31	32	5		68
Impact of the minimum requirement of the funds/asset ceiling	15				15	8					8
	(2)	66	119	144	327	(2)	60	110	5	121	294

The actuarial assumptions used were as follows:

					2019						2018
	Brazil	Europe	North America	Colombia	Total	Brazil	Europe	North America	Uruguay	Colombia	Total
Discount rate	6.54%	8.47%	3.00%	6.30%	6.08%	10.51%	6.12%	3.84%	10.92%	7.50%	7.78%
Inflation rate	3.50%	3.90%	2.00%	3.50%	3.23%	5.37%	1.33%	2.00%		3.50%	3.05%
Future salary increases	2.94%	7.57%	2.50%	3.50%	4.13%	4.88%	7.00%	2.50%	6.92%	3.50%	4.96%
Increases in future pension plans	3.50%				3.50%	5.37%					5.37%

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

The Company operates post-employment health care plans through indirect subsidiaries 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.

29 Equity

Accounting policy

(i) Share capital

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

(ii) 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 a General Meeting. When a Company presents a loss in the year, there is no dividend.

(iii) 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. The weighted average number of shares is calculated based on the periods in which the shares were outstanding.

(iv) Statutory reserve

The statutory reserve is constituted by the appropriation of 5% of the net income for the fiscal year or remaining balance, limited to 20% of the capital stock. Its purpose is to ensure the integrity of social capital. It can only be used to offset losses and increase capital. When the Company presents a loss in the year, there will be no legal reserve.
The retained earnings reserve refers to the retention of the remaining balance of retained earnings in order to meet the business growth plan established in the Company's investment plan.

(v) Government grants

The tax incentive reserve is credited with tax incentive benefits, which are recognized in the income statement for the year and allocated to retained earnings for this reserve. These incentives are not included in the calculation of the mandatory minimum dividend.

(vi) Equity valuation adjustments

The equity valuation adjustments include:

(a) Effective portion of the cumulative net change in fair value of hedge instruments used in hedge of cash flow until the recognition of the cash flows that were hedged.

(b) Cumulative translation adjustments with the exchange differences arising from the translation of the financial statements of foreign operations.

(c) Effective portion with exchange differences of hedge of the Company's net investments in a foreign operation.

(d) Actuarial losses (gains) and measures with retirement benefits.

(a) Share capital

On December 31, 2019 and December 31, 2018, the fully subscribed and paid-up capital of the Company was R$ 28,656, consisting of 18,278,789 thousand common shares.

(b) Dividends

In the second quarter of 2019, the Ordinary and Extraordinary Shareholders' Meeting resolved to cancel the mandatory minimum dividends of 2018, in the amount of R$ 415.

During the first half of 2019, the Company resolved to pay its parent company Hejoassu Administração S.A. the amount of R$ 1,475 corresponding to dividends related to part of the balance of the "Profit reserves" account accumulated up to December 31, 2018.

All amounts in millions of reais unless otherwise stated

(c) Carrying value adjustments

	Attributable to the owners of the Company							
	Currency translation of investees located abroad	Hedge accounting for net investments abroad, net of taxes	Hedge accounting for the operations of subsidiaries	Fair value of available-for-sale financial assets of non-consolidated investments	Suzano shares fair value	Remeasurement of retirement benefits	Other comprehensive income	Total
At January 1, 2018	**4,990**	**(4,175)**	**(118)**	**266**		**(81)**	**(148)**	**734**
Currency translation of investees located abroad	1,555							1,555
Hedge accounting for net investments abroad, net of taxes		(931)						(931)
Hedge accounting for the operations of subsidiaries			158					158
Fair value of available-for-sale financial assets of non-consolidated investments				(74)				(74)
Remeasurement of retirement benefits						34		34
Inflation adjustment for hyperinflationary economies							419	419
							43	43
							(1)	(1)
At December 31, 2018 (restated)	**6,545**	**(5,106)**	**40**	**192**		**(47)**	**313**	**1,937**
Currency translation of investees located abroad	96							96
Hedge accounting for net investments abroad, net of taxes		92						92
Hedge accounting for the operations of subsidiaries			(39)					(39)
Fair value of available-for-sale financial assets of non-consolidated investments				43				43
	(15)							(15)
Adjustment to the fair value of the shares held at Suzano S.A., net of the tax					(121)			(121)
Adjust the fair value of the shares held at Suzano, net of the tax	(108)							(108)
Realization of comprehensive results on Voto liquidation - Votorantim Overseas Trading Operations IV Ltd.	(103)	22	(16)			(7)	104	
Reclassification of components of comprehensive income							(63)	(63)
Realization of comprehensive results in the sale of partipation at Fibria							340	340
Remeasurement of retirement benefits						(133)		(133)
							(57)	(57)
							(24)	(24)
At December 31, 2019	**6,415**	**(4,992)**	**(15)**	**235**	**(121)**	**(187)**	**613**	**1,948**

All amounts in millions of reais unless otherwise stated

(d) Non-controlling interests

	2019	2018
Nexa Resources S.A. (i)	3,158	3,431
Nexa CJM	826	885
Nexa Perú	446	564
Cementos Artigas S.A.	203	212
Yacuces, S.L.	124	139
Itacamba Cemento S.A.	100	99
Acerías Paz Del Rio S.A.	63	22
Other	218	271
	5,138	5,623

(i) The variation refers to the issuance of new shares and sale of interest by VSA.

All amounts in millions of reais unless otherwise stated

30 Net revenue from products sold and services rendered

Accounting policy

Revenue represents the fair value of the consideration received or receivable from the sale of goods in the ordinary course of business of the subsidiaries. Revenue is shown net of value added tax, rebates and discounts after elimination of sales among consolidated companies.

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

Revenue will not be reliably measured if all terms of sale are not resolved. The subsidiaries bases its estimates on historical results, taking into account the type of customer, the type of transaction and the specificities of each agreement.

Revenue recognition is based on the following principles:

(i) Sales of products and service

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

(ii) Sale of surplus energy

The Company's energy sales contracts are carried out in the free and regulated environments of Brazilian commercialization, being fully registered with CCEE, the agent responsible for accounting and settlement of the entire national integrated system (SIN).

The accounting measurement of the volume of energy to be billed results from the processing of the physical measurement, adjusted to the apportionment of losses reported by the CCEE.

Energy sales operations, which meet the definition of a financial instrument, are recognized in the financial statements at fair value.

(a) Reconciliation of revenues

	2019	2018 Restated
Gross revenue		
Sales of products - domestic market	15,478	15,901
Sales of products - foreign market	16,189	16,012
Supply of electrical energy	3,180	3,314
Services provided	600	521
	35,447	35,748
Taxes on sales, services and other deductions	(4,540)	(4,817)
Net revenue	**30,907**	**30,931**

All amounts in millions of reais unless otherwise stated

(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 subsidiaries classified by currency and destination, is as follows:

(i) Revenue by destination

	2019	2018 Restated
Brazil	15,049	15,268
United States	3,664	2,961
Peru	2,350	2,459
Argentina	1,346	1,421
Colombia	1,196	1,260
Canada	1,224	1,137
Spain	605	676
Turkey	414	663
Luxembourg	571	631
Switzerland	417	598
Morocco	487	447
Uruguay	353	390
Japan	282	344
Bolívia	351	304
Belgium	101	257
Tunisia	253	232
Taiwan	132	231
Chile	322	202
Austria	157	147
Singapore	392	139
Germany	90	76
Equador	51	64
Italia	73	50
India	3	29
Other countries	1,024	945
	30,907	**30,931**

All amounts in millions of reais unless otherwise stated

(ii) Revenue by currency

	2019	2018 Restated
Real	14,696	15,028
US Dollar	10,478	10,082
Canadian dollar	1,224	1,127
Colombian Peso	1,043	1,066
Argentinian Peso	1,088	1,062
Euro	698	729
Turkish Lira	275	488
Dirham	487	447
Dinar	257	232
Other currencies	661	670
	30,907	**30,931**

31 Expenses by nature

	2019				2018 Restated
	Cost of products sold and services rendered	Selling	General and administrative	Total	Total
Raw materials, inputs and consumables	15,010	23	12	15,045	15,460
Employee benefit expenses (a(ii))	2,995	394	1,111	4,500	4,700
Depreciation, amortization and depletion	2,901	42	124	3,067	2,455
Transportation expenses	2,034	36	7	2,077	1,817
Outsourced services	1,481	92	839	2,412	2,024
Other expenses	1,391	286	403	2,080	1,465
	25,812	**873**	**2,496**	**29,181**	**27,921**

(a) Employee benefit expenses

(i) 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.

All amounts in millions of reais unless otherwise stated

(ii) 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".

	2019	2018
Salaries and bonuses	2,787	2,951
Payroll charges	1,066	1,040
Benefits	647	709
	4,500	**4,700**

32 Other operating expenses, net

	Note	2019	2018
Gain on Fibria's trasaction	1.1 (b)	6,772	
Tax recovery (i)		817	498
Gain in fair value in VTRM´s operation	18 e 19	(714)	53
Net income from sale of investiment - *US ZINC*		(467)	(575)
Tax benefits		(270)	(18)
Gain on sale of fixed assets	16	(196)	(132)
Gain on scrap sales		144	110
Royalties on natural resources		56	57
Income from rentals and leasing		(56)	(46)
Financial instrument - firm commitment		54	48
Expenses on not activatable projects		(53)	
Provision, net		8	42
Reversal for impairment of investments, fixed and intangible assets		7	75
Other income, net			300
Outras receitas (despesas) líquidas			126
Gain on *hedge*		(110)	54
		5,992	**592**

(i) Refers mainly to PIS and COFINS credits recognized in the subsidiaries CBA, VCSA and the indirect subsidiary VCNNE, in the amount of R$ 747 according to Note 1.1 (d).

All amounts in millions of reais unless otherwise stated

33 Finance results, net

Accounting policy

(i) Financial income (expenses)

These comprise interest rates on loans and financial investments, monetary and exchange variation on assets and liabilities, linked to loans with a swap instrument, as a result of the exchange variation net of gains and losses on derivative financial instruments (swap contracts) and various discounts that are recognized in the income for the year on the accrual basis.

(ii) Foreign exchange variations

A foreign currency transaction shall be initially recognized in the functional currency by applying the spot exchange rate between the functional currency and the foreign currency on the transaction date on the amount in foreign currency.

At the end of each reporting period, monetary items in foreign currency must be converted using the closing exchange rate. Foreign exchange variations arising from the settlement of monetary items or the translation of monetary items at rates different from those for which they were converted at the initial measurement during the period or in previous financial statements shall be recognized in the statement of income in the year in which they arise.

	2019	2018 Restated
Finance income		
Interest on financial assets (i)	568	476
Income from financial investments	434	389
Gain on debt renegotiation	120	103
Reversal of monetary restatement of provision	59	42
Fair value of borrowing	45	64
Discounts obtained	20	35
Gain on debt renegotiation		69
Other finance income	21	79
	1,267	**1,257**
Finance costs		
Interest on borrowing	(1,178)	(1,394)
Capitalization of borrowing costs	49	43
Award paid in bond buyback (tender offer)	(172)	
Monetary restatement of provision	(219)	(194)
Fair value of borrowing and financing	(127)	(155)
Borrowing fees	(140)	(102)
Interest and monetary restatement - use of public assets (ii)	(101)	(108)
Interest on anticipation of receivables	(101)	(101)
Adjustment to present value CPC 12	(101)	(96)
"PIS/COFINS" on financial results	(60)	(46)
Income tax on remittances of interest abroad	(45)	(111)
Interest on silver streaming	(26)	(27)
Other finance costs	(291)	(238)
	(2,512)	**(2,529)**
Results of derivative financial instruments		
Revenue	139	370
Expenses	(374)	(162)
	(235)	**208**
Foreign exchange variation, net	(137)	(976)
Finance results, net	**(1,617)**	**(2,040)**

(i) Refers substantially to the PIS and COFINS credit recognized in the subsidiaries VCSA, CBA and VCNNE, in the amounts of R$ 439 according to Note 1.1 (d).

34 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.

35 Insurance

The Company and its subsidiaries maintain civil liability policies for executives and directors, in addition to insurance coverage for equity risks and loss of profits. Such policies have coverage, conditions and limits, considered by Management to be adequate to the inherent risks of the operation.

All amounts in millions of reais unless otherwise stated

36 Supplementary information – Business segments

In order to provide more detailed information the Company has elected to present financial information organized into two business segments.

The following information refers to the breakdown of VSA by business segments and considers the eliminations of balances and transactions between companies in the same segment, 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 results for 12 months, as loan covenants, and are summarized as follow:

		Industrial segments	
Adjusted EBITDA	**Note**	**2019**	**2018**
			Restated
Net income for the semester		**4,925**	**2,309**
Plus (less):			
Continuing operations			
Equity in the results of investees		(1,022)	(1,938)
Net financial results		1,624	2,048
Income and social contribution taxes		2,168	1,013
Depreciation, amortization and depletion		3,067	2,455
Discontinued operations			
Net financial results		38	6
Income and social contribution taxes		(3)	(99)
Depreciation, amortization and depletion			55
EBITDA before other additions and exceptional items		**10,797**	**5,849**
Plus:			
Dividends received		65	942
Extraordinary items			
EBITDA - discontinued operations		2	10
Non-recurring items - discontinued operations			211
Gain on sale of investments, net		(6,719)	(130)
Reversal for impairment of property, plant, equipment and intangible assets		723	(24)
Gain by adjustment to fair value in deconsolidation of VTRM			(302)
Other		252	322
Adjusted annualized EBITDA (A)		**5,120**	**6,878**
Net debt			
Borrowing	21	19,755	24,451
Lease liabilities	22	841	
Cash and cash equivalents, financial investments and derivative financial instruments		(10,614)	(11,236)
Net debt (B)		**9,982**	**13,215**
Gearing ratio (B/A)		**1.95**	**1.92**

All amounts in millions of reais unless otherwise stated

(b) Balance sheet - business segments

											2019
Assets	Votorantim Cimentos	Nexa Resources	CBA	Long steels (*)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Eliminations	Total, consolidated
Current											
Cash and cash equivalents, financial investments and derivative financial instruments	3,011	3,070	649	104	102	3,770		10,706	62		10,768
Trade receivables	675	714	404	185	449	92	(323)	2,196			2,196
Inventory	1,668	1,190	928	342		1		4,129			4,129
Taxes recoverable	359	382	640	71	8	423		1,883	85		1,968
Dividends receivable	9		6		69	178	(181)	81			81
Financial instruments - firm commitment											
Other assets	248	204	41	45	50	58	(25)	621			621
	5,970	5,560	2,668	747	678	4,522	(529)	19,616	147		19,763
Non-current assets											
Long-term receivables											
Financial investments and derivative financial instruments	205	60	95					360			360
Financial instruments - Suzano						2,749		2,749			2,749
Derivative financial instruments - put option						655		655			655
Taxes recoverable	1,906	430	738	22		381		3,477			3,477
Related parties	24	19	28			266	(108)	229			229
Deferred income tax and social contribution	381	1,079	841	168	14	592	239	3,314	27		3,341
Judicial deposits	183	29	115	2		16		345			345
Financial instruments - firm commitment					29			29			29
Other assets	444	112	18	60		68	24	726			726
	3,143	1,729	1,835	252	43	4,727	155	11,884	27		11,911
Investments	1,007		204		2,464	34,391	(26,340)	11,726	5,378	(5,384)	11,720
Property, plant and equipment	12,877	7,845	4,721	1,107	35	563		27,148			27,148
Intangible assets	6,458	7,055	492	33	550	211	(1,516)	13,283			13,283
Right-of-use assets	537	119	16	111	10	20		813			813
Biological assets			1	5		79		85			85
	24,022	16,748	7,269	1,508	3,102	39,991	(27,701)	64,939	5,405	(5,384)	64,960
Total assets	29,992	22,308	9,937	2,255	3,780	44,513	(28,230)	84,555	5,552	(5,384)	84,723

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

All amounts in millions of reais unless otherwise stated

											2019
Liabilities and equity	Votorantim Cimentos	Nexa Resources	CBA	Long steels (*)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Eliminations	Total, consolidated
Current liabilities											
Borrowing	540	134	126	133		21		954			954
Lease liabilities	101	66	9	18	3	13		210			210
Derivative financial instruments	15	33	21					69			69
Confirming payable	552	334	335	194				1,415			1,415
Trade payables	2,045	1,669	407	194	396	16	(298)	4,429			4,429
Salaries and payroll charges	356	233	123	39	20	65		836			836
Taxes payable	235	39	42	90	10	8		424			424
Advances from customers	25	10	20	39	1	7		102			102
Dividends payable	156	27	14		77	39	(193)	120			120
Use of public assets	35	7	45					87			87
Related parties											
Financial instruments - firm commitment	10		17		54			81			81
Deferred revenue - performance obligation					32			32			32
Deferred revenue - silver streaming		106						106			106
Other	393	187	50	24		184		838			838
	4,463	2,845	1,209	731	593	353	(491)	9,703			9,703
Liabilities related to assets held-for-sale	2							2			2
	4,465	2,845	1,209	731	593	353	(491)	9,705			9,705
Non-current liabilities											
Borrowing	9,840	5,947	2,030			984		18,801			18,801
Lease liabilities	445	72	7	93	6	8		631			631
Derivative financial instruments	110	55	218					383			383
Deferred income tax and social contribution	568	1,083		18	43	207		1,919	168		2,087
Related parties	122	4	30		1	21	(128)	50			50
Provision	1,183	1,002	684	103	1	164		3,137			3,137
Use of public assets	483	87	580			1		1,151			1,151
Pension plan	227			140				367			367
Financial instruments - firm commitment	45		77					122			122
Deferred revenue - performance obligation											
Deferred revenue - silver streaming		621						621			621
Other	230	263	43	93	10	120		759		2	761
	13,253	9,134	3,669	447	61	1,505	(128)	27,941	168	2	28,111
Total liabilities	17,718	11,979	4,878	1,178	654	1,858	(619)	37,646	168	2	37,816
Equity											
Total equity attributable to owners of the Company	11,629	8,526	4,874	805	3,126	42,655	(29,852)	41,763	5,384	(5,378)	41,769
Non-controlling interests	645	1,803	185	272			2,241	5,146		(8)	5,138
Total equity	12,274	10,329	5,059	1,077	3,126	42,655	(27,611)	46,909	5,384	(5,386)	46,907
Total liabilities and equity	29,992	22,308	9,937	2,255	3,780	44,513	(28,230)	84,555	5,552	(5,384)	84,723

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

All amounts in millions of reais unless otherwise stated

(c) Statement of income – business segments

											2019
	Votorantim Cimentos	Nexa Resources	CBA	Long steels (*)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Eliminations	Total, consolidated
Continuing operations											
Net revenue from products sold and services rendered	13,027	9,200	5,264	2,133	4,229	75	(3,021) (**)	30,907			30,907
Cost of products sold and services rendered	(10,689)	(7,669)	(4,606)	(1,715)	(4,103)	(51)	3,021 (**)	(25,812)			(25,812)
Gross profit	**2,338**	**1,531**	**658**	**418**	**126**	**24**		**5,095**			**5,095**
Operating income (expenses)											
Selling	(714)	(99)	(36)	(21)		(3)		(873)			(873)
General and administrative	(914)	(803)	(214)	(155)	(94)	(302)		(2,482)	(14)		(2,496)
Other operating income (expenses), net	686	(1,073)	(178)	110	(56)	6,503		5,992			5,992
	(942)	**(1,975)**	**(428)**	**(66)**	**(150)**	**6,198**		**2,637**	**(14)**		**2,623**
Profit (loss) before equity results and finance results	**1,396**	**(444)**	**230**	**352**	**(24)**	**6,222**		**7,732**	**(14)**		**7,718**
Result from equity investments											
Equity in the results of investees	189	(3)	14		356	933	(575) (**)	914	797	(792)	919
Realization of other comprehensive income on disposal of investments	108							108			108
	297	**(3)**	**14**		**356**	**933**	**(575)**	**1,022**	**797**	**(792)**	**1,027**
Finance results, net											
Finance income	547	122	313	25	99	283	(127) (**)	1,262	7		1,269
Finance costs	(1,240)	(487)	(447)	(145)	(116)	(206)	127 (**)	(2,514)			(2,514)
Results of derivative financial instruments	(77)	12	(68)			(102)		(235)			(235)
Foreign exchange gains (losses), net	(42)	(49)	(46)	(52)		52		(137)			(137)
	(812)	**(402)**	**(248)**	**(172)**	**(17)**	**27**		**(1,624)**	**7**		**(1,617)**
Profit (loss) before income tax and social contribution	**881**	**(849)**	**(4)**	**180**	**315**	**7,182**	**(575)**	**7,130**	**790**	**(792)**	**7,128**
Income tax and social contribution											
Current	(290)	(171)	(42)	(87)	(14)	(857)		(1,461)			(1,461)
Deferred	(5)	411	11	14	25	(1,163)	(**)	(707)	2		(705)
Profit (loss) for the year from continuing operations	**586**	**(609)**	**(35)**	**107**	**326**	**5,162**	**(575)**	**4,962**	**792**	**(792)**	**4,962**
Discontinued operations											
Loss from discontinued operations	(37)							(37)			(37)
Profit (loss) for the year attributable to the owners	**549**	**(609)**	**(35)**	**107**	**326**	**5,162**	**(575)**	**4,925**	**792**	**(792)**	**4,925**
Profit (loss) attributable to the owners of the Company	479	(486)	(64)	55	326	5,108	(248) (**)	5,170	792	(792)	5,170
Profit (loss) attributable to non-controlling interests	70	(123)	29	52			(273) (**)	(245)			(245)
Profit (loss) for the year	**549**	**(609)**	**(35)**	**107**	**326**	**5,108**	**(521)**	**4,925**	**792**	**(792)**	**4,925**

(*) Relates to long steel operations abroad (Argentina and Colombia).
(**) Relates substantially to the net revenue from electric energy operations to CBA and VCSA.

All amounts in millions of reais unless otherwise stated

											2018
	Votorantim Cimentos	Nexa Resources	CBA	Long steels (*)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Eliminations	Total, consolidated
Continuing operations											
Net revenue from products sold and services rendered	12,610	9,066	5,417	2,112	4,456	47	(2,777) (**)	30,931			30,931
Cost of products sold and services rendered	(10,224)	(6,904)	(4,468)	(1,893)	(4,283)	(34)	2,777 (**)	(25,029)			(25,029)
Gross profit	**2,386**	**2,162**	**949**	**219**	**173**	**13**		**5,902**			**5,902**
Operating income (expenses)											
Selling	(613)	(69)	(36)	(25)		(12)		(755)			(755)
General and administrative	(810)	(553)	(197)	(133)	(94)	(337)		(2,124)	(13)		(2,137)
Other operating income (expenses), net	596	(345)	(35)	231	345	(89)	(111) (**)	592			592
	(827)	**(967)**	**(268)**	**73**	**251**	**(438)**	**(111)**	**(2,287)**	**(13)**		**(2,300)**
Operating Profit (loss) before equity results and finance results	**1,559**	**1,195**	**681**	**292**	**424**	**(425)**	**(111)**	**3,615**	**(13)**		**3,602**
Result from equity investments											
Equity in the results of investees	120		(27)		343	1,323	(645) (**)	1,114	530	(526)	1,118
						820		820			820
Realização de resultados abrangentes na alienação de investimentos	4							4			4
	124		**(27)**		**343**	**2,143**	**(645)**	**1,938**	**530**	**(526)**	**1,942**
Finance results, net											
Finance income	647	233	152	11	108	230	(132) (**)	1,249	8		1,257
Finance costs	(1,250)	(417)	(395)	(152)	(154)	(293)	132 (**)	(2,529)			(2,529)
Results of derivative financial instruments	34	(9)		8		175		208			208
Foreign exchange gains (losses), net	(319)	(538)	(283)	(33)		(217)	414 (**)	(976)			(976)
	(888)	**(731)**	**(526)**	**(166)**	**(46)**	**(105)**	**414**	**(2,048)**	**8**		**(2,040)**
Profit (loss) before income tax and social contribution	**795**	**464**	**128**	**126**	**721**	**1,613**	**(342)**	**3,505**	**525**	**(526)**	**3,504**
Income tax and social contribution											
Current	(127)	(251)	(26)	(70)	(23)	42		(455)			(455)
Deferred	(600)	107	(48)	87	(116)	63	(51) (**)	(558)	2		(556)
Profit (loss) for the from continuing operations	**68**	**320**	**54**	**143**	**582**	**1,718**	**(393)**	**2,492**	**527**	**(526)**	**2,493**
Discontinued operations											
Loss from discontinued operations	(58)					(125)		(183)			(183)
Profit (loss) for the year attributable to the owners	**10**	**320**	**54**	**143**	**582**	**1,593**	**(393)**	**2,309**	**527**	**(526)**	**2,310**
Profit (loss) attributable to the owners of the Company	(46)	274	43	97	582	1,645	(493) (**)	2,102	526	(526)	2,102
Profit attributable to non-controlling interests	56	46	11	46			48 (**)	207	1		208
Profit (loss) for the year	**10**	**320**	**54**	**143**	**582**	**1,645**	**(445)**	**2,309**	**527**	**(526)**	**2,310**

(*) Relates to long steel operations abroad (Argentina and Colombia).
(**) Relates substantially to the net revenue from electric energy operations to CBA and VCSA.

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(d) EBITDA ajustado –Adjusted EBITDA - business segments

	Votorantim Cimentos	Nexa Resources	CBA	Long steel (*)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Total, consolidated
										2019
Net revenue from products sold and services rendered	13,027	9,200	5,264	2,133	4,229	75	(3,021) (**)	30,907		30,907
Cost of products sold and services rendered	(10,689)	(7,669)	(4,606)	(1,715)	(4,103)	(51)	3,021 (**)	(25,812)		(25,812)
Gross profit	**2,338**	**1,531**	**658**	**418**	**126**	**24**		**5,095**		**5,095**
Operating income (expenses)										
Selling	(714)	(99)	(36)	(21)		(3)		(873)		(873)
General and administrative	(914)	(803)	(214)	(155)	(94)	(302)		(2,482)	(14)	(2,496)
Other operating income (expenses), net	686	(1,073)	(178)	110	(56)	6,503		5,992		5,992
	(942)	**(1,975)**	**(428)**	**(66)**	**(150)**	**6,198**		**2,637**	**(14)**	**2,623**
Profit (loss) before equity results and finance results	**1,396**	**(444)**	**230**	**352**	**(24)**	**6,222**		**7,732**	**(14)**	**7,718**
Plus:										
Depreciation, amortization and depletion - continuing operations	1,222	1,245	463	104	5	28		3,067		3,067
EBITDA	**2,618**	**801**	**693**	**456**	**(19)**	**6,250**		**10,799**	**(14)**	**10,785**
Plus:										
Dividends received	65				69		(69)	65	540	605
Exceptional items										
Gain on sale of investments, net						(6,719)		(6,719)		(6,719)
Reversal for impairment - fixed assets	14	564	145					723		723
Other	(39)		24			267		252		252
Adjusted EBITDA	**2,658**	**1,365**	**862**	**456**	**50**	**(202)**	**(69)**	**5,120**	**526**	**5,646**

(*) Relates to long steel operations abroad (Argentina and Colombia).
(**) Relates substantially to the net revenue from electric energy operations to CBA and VCSA.

All amounts in millions of reais unless otherwise stated

										2018
	Votorantim Cimentos	Nexa Resources	CBA	Long steel (*)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Total, consolidated
Net revenue from products sold and services rendered	12,610	9,066	5,417	2,112	4,456	47	(2,777) (**)	30,931		30,931
Cost of products sold and services rendered	(10,224)	(6,904)	(4,468)	(1,893)	(4,283)	(34)	2,777 (**)	(25,029)		(25,029)
Gross profit	**2,386**	**2,162**	**949**	**219**	**173**	**13**		**5,902**		**5,902**
Operating income (expenses)										
Selling	(613)	(69)	(36)	(25)		(12)		(755)		(755)
General and administrative	(810)	(553)	(197)	(133)	(94)	(337)		(2,124)	(13)	(2,137)
Other operating income (expenses), net	596	(345)	(35)	231	345	(89)	(111)	592		592
	(827)	**(967)**	**(268)**	**73**	**251**	**(438)**	**(111)**	**(2,287)**	**(13)**	**(2,300)**
Profit (loss) before equity results and finance results	**1,559**	**1,195**	**681**	**292**	**424**	**(425)**	**(111)**	**3,615**	**(13)**	**3,602**
Plus:										
Depreciation, amortization and depletion - continuing operations	1,038	974	303	91	27	22		2,455		2,455
EBITDA	**2,597**	**2,169**	**984**	**383**	**451**	**(403)**	**(111)**	**6,070**	**(13)**	**6,057**
Plus:										
Dividends received	46				8	896	(8)	942	143	1,085
Exceptional items										
Gain on sale of investments, net	4	(1)	(111)			(133)	111	(130)		(130)
Reversal for impairment - fixed assets	(8)	12	(41)			13		(24)		(24)
Fair value of biological assets										
Gain by adjustment to fair value of VTRM´s operation					(302)			(302)		(302)
Other	(15)					337		322		322
Adjusted EBITDA	**2,624**	**2,180**	**832**	**383**	**157**	**710**	**(8)**	**6,878**	**130**	**7,008**

(*) Relates to long steel operations abroad (Argentina and Colombia).
(**) Relates substantially to the net revenue from electric energy operations to CBA and VCSA.

37 Subsequent events

(a) Acquisition of a manufacturing unit

In August 2019, the subsidiary CBA announced the signing of the share purchase and sale agreement with the purpose of fully acquiring the shares of Arconic Industria e Comércio de Metais Ltda, a unit located in Pernambuco, in the Northeast of Brazil, which will complement the CBA's laminated product line. The effective control of the operations was transferred to CBA in February 2020. The price paid for the acquisition totaled R$ 225 and a gain by an advantageous purchase of R$ 139 in the application of the acquisition method provided for in CPC15 for the accounting record of the operation.

(b) Option to purchase Piauí II and III

In January 2020, the indirect subsidiary VTRM exercised its option to purchase Piauí II and III, for the development of new wind farms in the Northeast region of Brazil, with an investment of approximately R$ 2,000. The construction of the parks is scheduled to begin in 2021, with start-up between 2022 and 2023.

Each of the complexes will consist of five wind farms located in the region in Serra do Inácio. Ventos do Piauí II will have 100% of its structure distributed between 3 Piauí municipalities (Curral Novo, Paulistana and Betânia do Piauí) and the Ventos do Piauí III complex will have wind turbines installed in Curral Novo (Piauí), Araripina and Ouricuri (Pernambuco). Together, the new complexes will have an installed generation capacity of 411.6 MW and will make the indirect subsidiary VTRM responsible for approximately 1.0 GW of installed generation capacity in that region.

(c) Amendment to the loan agreement pursuant to Law No. 4,131 / 1962 by VCSA

On January 30, 2020, the subsidiary VCSA renegotiated the contractual terms of the loan under Law No. 4,131 / 1962, contracted in March 2018, in the total amount of USD 100 million. The Company extended the final maturity from 2023 to 2025 and renegotiated the cost of the swap (derivative financial instrument) from 112.00% to 107.00% of the CDI.

The swap linked to the operation, contracted jointly with the same financial institution as the loan, aims at both the exchange of exposure to the floating rate LIBOR to the floating rate CDI, as well as the exchange of currency from dollar to real (debt in dollar + swap to real in% CDI).

(d) Distribution of dividends by the subsidiary Nexa

On February 13, 2020, the Board of Directors of the subsidiary Nexa approved, subject to ratification by the shareholders of the subsidiary Nexa, in accordance with the laws of Luxembourg, distribution of dividends to the shareholders of the subsidiary Nexa, registered on March 16, 2020, approximately USD 50 million to be paid on March 30, 2020.

(e) Export financing

In February 2020, the subsidiary CBA signed a loan agreement (NCE - Export Credit Note) aimed at financing its exports in the amount of R $ 250 with maturity on February 14, 2029. It is noteworthy that the loan is characterized as “Green Financing” based on the guidelines of the Green Loan Principles. The operation has a swap contract (derivative financial instrument - hedge accounting), which aims to exchange exposure to the floating rate CDI in reais for a fixed rate in US dollars, resulting in a final cost of 4.25% per year.

(f) Dividend resolution - VSA

On January 20, 2020, the Company resolved to its parent company Hejoassu Administração S.A., the amount of R$ 401 corresponding to dividends related to the portion of the balance of the “Profit Reserves” account, accumulated from previous years. The amount was paid in full by February 10, 2020.