

Votorantim S.A.

**Consolidated financial
statements
and independent auditor's
report
2021**



(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. (the "Company") and its subsidiaries, which comprise the consolidated balance sheet as at December 31, 2021 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 significant accounting policies and other explanatory information.

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, 2021, and their financial performance and their cash flows for the year then ended, in accordance with accounting practices adopted in Brazil and with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

Basis for opinion

We conducted our audit in accordance with Brazilian and International Standards on Auditing. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the 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.

Other matters

Statements of Value Added

The consolidated Statement of Value Added for the year ended December 31, 2021, prepared under the responsibility of the Company's management and presented as supplementary information for IFRS purposes, was submitted to audit procedures performed in conjunction with the audit of the Company's consolidated financial statements. For the purposes of forming our opinion, we evaluated whether this statement is reconciled with the financial statements and accounting records, as applicable, and if its form and content are in accordance with the criteria defined in Technical Pronouncement CPC 09 - "Statement of Value Added". In our opinion, this Statement of Value Added has been properly prepared in all material respects, in accordance with the criteria established in the Technical Pronouncement, and is consistent with the consolidated financial statements taken as a whole.



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

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

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

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

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

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

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

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control of the Company and its subsidiaries.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or



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

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether these financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

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

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

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

Curitiba, March 29, 2022

PricewaterhouseCoopers
PricewaterhouseCoopers
Auditores Independentes Ltda.
CRC 2SP000160/O-5

DocuSigned by:
Carlos Eduardo Guaraná Mendonça
Signed By: CARLOS EDUARDO GUARANA MENDONÇA-40137163649
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Consolidated balance sheet
Ended December 31

All amounts in millions of reais unless otherwise stated

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(A free translation of the original in Portuguese)

	Note	2021	2020
Assets			
Current assets			
Cash and cash equivalents	9	13,680	9,783
Financial investments	10	3,132	5,678
Derivative financial instruments	6.1.1 (a)	106	221
Derivative financial instruments - put option	6.1.1 (b)	4,704	
Trade receivables	11	3,679	3,209
Inventory	12	7,167	4,724
Taxes recoverable	14	2,709	2,033
Dividends receivable	15	305	176
Electric power futures contracts	16	845	49
Other assets		944	538
		37,271	26,411
Assets classified as held-for-sale	34	1,281	25
		38,552	26,436
Non-current assets			
Long-term receivables			
Financial investments	10		20
Financial instruments - shares	13	2,801	2,590
Derivative financial instruments	6.1.1 (a)	847	1,945
Derivative financial instruments - put option	6.1.1 (b)		252
Taxes recoverable	14	2,033	2,966
Related parties	15	225	196
Deferred income tax and social contribution	23 (b)	2,696	2,731
Judicial deposits	24 (b)	214	193
Electric power futures contracts	16	2,962	9
Securitization of receivables		211	149
Other assets		705	701
		12,694	11,752
Investments	17	13,691	12,698
Advance for investment property	1.1 (aa)	58	
Property, plant and equipment	18 (a)	35,078	30,105
Intangible assets	19 (a)	16,703	14,594
Right to use assets arising from leases	21 (a)	1,492	797
Biological assets		90	96
		79,806	70,042
Total assets		118,358	96,478

Consolidated balance sheet

Ended December 31

All amounts in millions of reais unless otherwise stated

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	Note	2021	2020
Liabilities and equity			
Current assets			
Borrowing	20 (a)	603	1,407
Derivative financial instruments	6.1.1 (a)	556	511
Lease liabilities	21 (b)	330	235
Confirming payables	22	3,405	2,380
Trade payables		6,914	5,404
Salaries and payroll charges		1,377	1,174
Taxes payable		1,627	760
Advances from clients		188	182
Dividends payable	15	1,624	44
Use of public assets - UBP	25	175	97
Financial instruments - firm commitment	16	800	75
Deferred revenue - silver streaming		185	141
Other liabilities		1,529	924
		19,313	13,334
Liabilities related to assets held-for-sale	34	1,163	2
		20,476	13,336
Non-current assets			
Borrowing	20 (a)	24,401	23,658
Derivative financial instruments	6.1.1 (a)	526	2,412
Lease liabilities	21 (b)	1,221	623
Deferred income tax and social contribution	23 (b)	3,824	2,373
Related parties	15	75	11
Provision	24 (a)	3,751	3,586
Use of public assets - UBP	25	1,692	1,400
Pension plan and post-employment health care benefits	26	563	524
Financial instruments - firm commitment	16	3,063	210
Deferred revenue - silver streaming		637	722
Other liabilities		841	827
		40,594	36,346
Total liabilities		61,070	49,682
Equity			
Share capital		28,656	28,656
Revenue reserves		14,741	8,806
Carrying value adjustments	27 (c)	6,517	4,879
Total equity attributable to the owners of the Company		49,914	42,341
Non-controlling interests		7,374	4,455
Total equity		57,288	46,796
Total liabilities and equity		118,358	96,478

	Note	2021	2020
Continuing operations			
Net revenue from products sold and services rendered	28	49,008	35,383
Cost of products sold and services rendered	29	(37,934)	(28,424)
Gross profit		11,074	6,959
Operating expenses (income)			
Selling	29	(901)	(889)
General and administrative	29	(2,841)	(2,503)
Other operating income (expenses), net	30	605	(2,294)
		(3,137)	(5,686)
Operating profit before equity results and finance results		7,937	1,273
Results from equity investments			
Equity in the results of investees	17 (c)	585	727
Realization of other comprehensive income on disposal of investments		20	
		605	727
Finance results, net			
	31		
Finance income		908	660
Finance costs		(3,014)	(2,979)
Result of derivative financial instruments		4,386	(121)
Foreign exchange losses, net		(505)	(1,027)
		1,775	(3,467)
Profit (loss) before income tax and social contribution		10,317	(1,467)
Income tax and social contribution			
	23 (a)		
Current		(1,801)	(900)
Deferred		(1,631)	(686)
Profit (loss) from continuing operations		6,885	(3,053)
Discontinued operations			
	34		
Profit (loss) on discontinued operations		235	(12)
Profit (loss) for the period attributable to the owners of the Company		7,120	(3,065)
Profit (loss) attributable to the owners of the Company		6,400	(1,636)
Profit (loss) attributable to non-controlling interests		720	(1,429)
Profit (loss) for the period		7,120	(3,065)
Weighted average number of shares - thousands (to the owners of the Company)		18,278,789	18,278,789
Basic and diluted earnings (loss) per thousand shares, in reais		350.13	(89.50)
From continuing operations			
Basic and diluted earnings (loss) per thousand shares, in reais		337.27	(88.84)
From discontinued operations			
Basic and diluted earnings (loss) per thousand shares, in reais		12.86	(0.66)

	Note	2021	2020
Net income (loss) for the year		7,120	(3,065)
Other components of comprehensive income to be subsequently reclassified to profit or loss			
Attributable to the owners of the Company	27 (c)		
Foreign exchange variations		621	3,062
Hedge accounting for net investments abroad, net of taxes		(12)	(289)
Hedge accounting for the operations of subsidiaries		601	(636)
Fair value of assets available for sale of unconsolidated investments		(3)	(25)
Realization of comprehensive income in the sale of shareholding		(265)	(173)
Adjustment to fair value of shares, net of taxes		144	712
Inflation adjustments for hyperinflationary economies		583	426
Participation in other comprehensive results of investees		(58)	(2)
Attributable to non-controlling			
Foreign exchange variations of investees		88	961
Hedge accounting for the operations of subsidiaries		47	
Effect of dilution of equity interest - acquisition of investee			(3)
Participation in other comprehensive results of investees			(7)
		1,746	4,026
Other components of comprehensive income that will not be reclassified to profit or loss			
Attributable to the owners of the Company	27 (c)		
Remeasurement of retirement benefits, net of taxes		37	(169)
Credit risk of debts measured at fair value		(9)	25
Attributable to non-controlling			
Remeasurement of retirement benefits, net of tax		12	
Other components of comprehensive income for the period		1,786	3,882
Of operations			
Continued operations		8,671	829
Discontinued operations		235	(12)
		8,906	817
Comprehensive income attributable to			
Owners of the Company		8,039	1,295
Non-controlling interests		867	(478)
		8,906	817

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				Retained (loss)	Carrying value	Total	Non-controlling	Total equity
	Note	Share capital	Tax incentives	Legal	Profit retention	earnings	adjustments		interests	
At January 1, 2020		28,656	10	1,032	10,123		1,948	41,769	5,138	46,907
Loss for the year						(1,636)		(1,636)	(1,429)	(3,065)
Other components of comprehensive income							2,931	2,931	951	3,882
Comprehensive income for the year						(1,636)	2,931	1,295	(478)	817
Distribution of dividends					(800)			(800)	(205)	(1,005)
Effect of liquidation of related parties on the spin-off of investees					37			37		37
Reversal of deliberate dividends and interest on equity					40			40		40
Loss absorption					(1,636)	1,636				
					(2,359)			(723)	(205)	(928)
At December 31, 2020		28,656	10	1,032	7,764		4,879	42,341	4,455	46,796
At January 1, 2021		28,656	10	1,032	7,764		4,879	42,341	4,455	46,796
Profit for the year						6,400		6,400	720	7,120
Other components of comprehensive income							1,638	1,638	147	1,785
Comprehensive income for the year						6,400	1,638	8,038	867	8,905
Distribution of dividends					(1,016)			(1,016)	(176)	(1,192)
Effect in the dilution on interest in investee - McInnis	1.1 (o)				1,513			1,513	1,314	2,827
Gain in the dilution on interest in investee - CBA					214			214	914	1,128
Net gain on sale of shares of investee - CBA					344			344		344
Mandatory minimum dividends						(1,520)		(1,520)		(1,520)
Constitution of reserves				320	4,560	(4,880)				
Total contributions and distributions to shareholders				320	5,615	(6,400)		(465)	2,052	1,587
At December 31, 2021		28,656	10	1,352	13,379		6,517	49,914	7,374	57,288

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

	Note	2021	2020
Cash flow from operating activities			
Profit (loss) before income tax and social contribution		10,317	(1,467)
Profit (loss) of discontinued operations		235	(12)
Adjustments to items that do not represent changes in cash and cash equivalents			
Depreciation, amortization and depletion	29	3,637	3,293
Depreciation, amortization and depletion - discontinued operations	29	90	
Equity in the results of investees	17 (a)	(585)	(727)
Interest, indexation and foreign exchange variations		1,851	2,071
Provisions (reversal) for the impairment of fixed and intangible assets	30	(559)	2,778
Provisions for the impairment of investments	30	827	
Loss on sales of fixed and intangible assets, net		104	74
Adjustment to fair value of loans and financing	20 (b)	(53)	95
Constitution of provisions, net		602	202
Derivative financial instruments		66	252
Electric power future contracts	16	(171)	54
Net revenue on sale of investments	30	(629)	(427)
Net gain from financial instrument - put option	6.1.1 (b)	(4,452)	403
Gain on purchase of investee	30	(243)	(366)
PIS and COFINS credit recognition on the ICMS calculation basis			(168)
Provision (reversal) for estimated loss from doubtful accounts, net			(44)
Renegotiation of hydrological risk	19	(448)	
Loss on debt renegotiation		382	17
		10,971	6,028
Decrease (increase) in assets			
Financial investments		2,910	(1,040)
Derivative financial instruments		(840)	(239)
Trade accounts receivable		(592)	73
Inventory		(2,425)	45
Taxes to recover		62	754
Related parties		(25)	33
Judicial deposits		(30)	125
Other accounts receivable and other assets		38	(64)
Increase (decrease) in liabilities			
Trade payables		1,642	(111)
Salaries and social charges		230	250
Use of public assets		158	(8)
Taxes payable		352	(230)
Advances from customers		50	57
Confirming payables			729
Other obligations and other liabilities		280	(242)
Cash provided by operating activities		13,755	6,160
Interest paid on borrowing and use of public assets		(1,425)	(1,320)
Income tax and social contribution paid		(1,163)	(407)
Net cash provided by operating activities		11,167	4,433

	Note	2021	2020
Cash flow from investment activities			
Proceeds from disposals of fixed and intangible assets		840	242
Net cash received on sale of shares		910	
Sale of financial instruments - shares		1,615	1,462
Acquisition of financial instruments - shares		(1,368)	
Dividends received		471	172
Acquisitions of property, plant and equipment	18	(5,346)	(3,516)
Advance for acquisition of investment properties		(58)	
Increase (reduction) in biological assets			(7)
Acquisitions of investments		(593)	(222)
Increase in intangible assets	19	(666)	(22)
Net cash used in investment activities		(4,195)	(1,891)
Cash flow from financing activities			
New borrowing	20 (b)	4,414	11,772
Repayment of borrowing	20 (b)	(6,779)	(10,846)
Repayment of leasing contracts		(363)	(251)
Derivative financial instruments		42	55
Funding by public offering of investee shares		657	
Dividends paid		(1,132)	(1,041)
Net cash used in financing activities		(3,161)	(311)
Increase (decrease) in cash and cash equivalents		3,811	2,231
Effect of companies excluded from consolidation		(133)	7
Effect of fluctuations in exchange rates		219	1,283
Cash and cash equivalents at the beginning of the year		9,783	6,262
Cash and cash equivalents at end of the year		13,680	9,783
Non-cash transactions			
Acquisition of investments with issuance of shares	1.1 (o)	2,827	

	Note	2021	2020
Revenue			
Sales of products and services		56,586	40,489
Estimated loss on doubtful accounts	11	68	(31)
Other operating income, net	30	46	484
		56,700	40,942
Inputs acquired from third parties			
Raw materials and other production inputs		(31,948)	(22,915)
Materials, energy, outsourced services and others		(887)	(821)
Impairment of assets	30	559	(2,778)
Gross value added		24,424	14,428
Depreciation, amortization and depletion			
	18, 19 and 21	(3,637)	(3,293)
Net value added generated by the Company		20,787	11,135
Value added received through transfers			
Equity in the results of investees	17	585	727
Finance income and foreign exchange losses		9,464	6,026
		10,049	6,753
Total value added to distribute		30,836	17,888
Distribution of value added			
Personnel and payroll charges			
Direct remuneration		3,373	2,873
Social charges		1,151	1,122
Benefits		737	709
		5,261	4,704
Taxes and contributions			
Federal		4,645	2,909
State		4,089	2,798
Municipal		23	18
Deferred taxes		1,631	686
		10,388	6,411
Third-party capital remuneration			
Finance costs and foreign exchange losses		7,689	9,493
Rentals		378	345
		8,067	9,838
Own capital remuneration			
Non-controlling interests		720	(1,429)
Dividends		(2,712)	(1,005)
Reinvested profits (offset losses)		8,877	(619)
Loss on discontinued operations		235	(12)
		7,120	(3,065)
Value added distributed		30,836	17,888

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, and to invest in other companies in order to further its objectives.

The Company, through its subsidiaries and associates, operates in the following segments: building materials, finance, aluminum, clean and renewable energy, metals and mining, agrobusiness, long steel, real estate and infrastructure.

1.1 Main events that occurred during the year of 2021

(a) Prepayment of export credit note – Nexa

During the first half of 2021, the subsidiary Nexa Resources S.A. ("Nexa") prepaid the outstanding principal and accrued interest of an Export Credit Note in Brazil in the amounts of Brazilian Reais ("R\$") 495 and R\$ 16, respectively.

On June 28, 2021, the subsidiary Nexa prepaid the outstanding principal of a Credit Line in the amount of United States Dollars ("USD") 43 million (R\$ 234).

(b) Sale of Suzano shares – VSA

On January 23, 2021, VSA sold 25,000,000 common shares in Suzano S.A. ("Suzano") held by the Company, totaling a net gain of R\$ 415. After the sale, VSA held 25,180,059 common shares, corresponding to approximately 1.9% of Suzano's total and voting capital.

(c) Dividend distribution – Nexa

On February 11, 2021, the Board of Directors of Nexa approved the distribution of total dividends to shareholders of approximately USD 35 million (R\$ 121), which was paid on March 12, 2021.

During the year ended December 31, 2021, the indirect subsidiary Pollarix S.A. ("Pollarix") declared dividends of R\$ 132 to minority interests held by Votorantim Geração de Energia S.A., an intercompany.

(d) Use of a Committed Credit Facility by St. Marys Cements Inc. ("St. Marys")

During 2021, to face the period of seasonality in the northern hemisphere, the indirect subsidiary St. Marys made an additional withdrawal from the revolving credit line Committed Credit Facility. As of December 31, 2021, the amount used under this credit facility totaled the equivalent of USD 46 million, considering the exchange rate on the withdrawal dates for amounts withdrawn in Canadian dollars. The amount of USD 244 million remained at the disposal of the Company's subsidiaries for further withdrawals.

(e) Incident at the collecting substation of the jointly controlled company VTRM Energia Participações S.A. ("VTRM")

On February 12, 2021, an incident at the collecting substation that links the companies in the Ventos do Araripe III complex, formed by wind farms belonging to the jointly controlled VTRM, caused the remaining power transformer to be disconnected from this substation. This caused a complete interruption in the flow of power generation from the complex, since the other transformer was out of operation due to an accident in June 2020. The park returned to commercial operation on April 29, 2021, the final date of the repair of the transformer that had been out of operation since June 2020. In the interim, while there is only one transformer, the generation of the park will be limited.

Concerning the second incident, VTRM Management contacted the manufacturer of the transformer and the main companies in the sector to obtain an opinion on the feasibility of the transformer's repair or need for replacement, and, due to a favorable opinion on the likelihood of successful repair, proceeded with its repair.

The interruption in the flow of power generation from the complex should be reflected in the provision for annual reimbursement that the companies calculate on a monthly basis due to the effective generation of energy, with a consequent reduction in the net revenue of the companies, until the situation is normalized. This impact has been minimized due to the insurance policy that the subsidiaries have for the main risks associated with the assets, including damage to transformers, with coverage for material damages and loss of profits.

During 2021, the subsidiary Votorantim Geração de Energia S.A. (“VGE”) discussed with the insurer the assumptions involved in calculating the indemnity for claims and submitted its claim for evaluation.

With regard to the first claim, the insurer signaled in August 2021 that the total indemnity amount will be around R\$53 (R\$ 5 for material damages and R\$ 48 for loss of profits).

On December 28, 2021, R\$ 5 was received through the subsidiary of VTRM, Ventos de Santo Augusto, and R\$ 46 through the subsidiary VTRM, there is still an outstanding amount of R\$ 2, which will be paid in the first quarter of 2022.

(f) Issue of Certificates of Real Estate Receivables (“CRI”) – Votorantim Cimentos S.A. (“VCSA”)

On February 15, 2021, through RB Capital Companhia de Securitização, the subsidiary VCSA and the indirect subsidiary Votorantim Cimentos N/NE S.A (“VCNNE”) issued Certificates of Real Estate Receivables (“CRI”) in the Brazilian capital market, amounting to R\$ 400, maturing in 2033. The subsidiary VCSA and the indirect subsidiary VCNNE contracted a forward derivative financial instrument (swap) which aims to exchange the exposure of the floating IPCA + rate to floating rate CDI +.

(g) 12th issue of debentures by VCSA

In 2021, the subsidiary VCSA and indirect subsidiary VCNNE amortized their debentures maturing in 2023 and 2024, amounting to R\$ 1,570, with emphasis on: (i) VCSA fully amortized its 2nd public issue of debentures in the amount of R\$ 800; (ii) VCSA partially amortized its 6th and 8th public issuances of debentures in the amount of R\$ 207 and R\$ 113, respectively; and (iii) VCNNE fully amortized its 1st public issue of debentures in the amount of R\$ 450.

On the other hand, the subsidiary VCSA raised the aggregate amount of R\$950 through its 12th and 13th public issuances of debentures, with restricted placement efforts, maturing in 2026 and 2028, respectively.

(h) Approval of dividend distribution – VCSA

At the Extraordinary General Meetings of the subsidiary VCSA, held on February 25, 2021 and August 18, 2021, the shareholders approved the distribution of dividends in amount of R\$ 345 and R\$ 316, respectively, totaling R\$ 661. All of these dividends were paid in the period together with the mandatory minimum dividends for the year ended December 31, 2020 in the amount of R\$ 85.

Additionally, on December 13, 2021, the Board of Directors of subsidiary VCSA approved the distribution of dividends in the amount of R\$ 535, from retained earnings reserves, which were paid to shareholders in February 2022.

(i) Acquisition of shares in Tinka Resources Limited (“Tinka”) – Nexa

On March 17, 2021, the subsidiary Nexa acquired 29,895,754 common shares of Tinka, a company involved in the acquisition and exploration of minerals from properties located in Peru, in a private transaction at a price of Canadian Dollars (“CAD”) 0.26 per share. As a result, Nexa owns 8.8% of the issued and outstanding common shares of Tinka, which owns 100% of the Ayawilca zinc-silver project in Peru.

On April 16, 2021, the subsidiary Nexa acquired another 654,758 common shares of Tinka. As a result, after the operations carried out in March and April 2021, the subsidiary Nexa holds a total of approximately 9% of the issued and outstanding common shares of Tinka.

(j) Assets Retirement Obligation (“ARO”) remeasurement – Companhia Brasileira de Alumínio (“CBA”)

In March 2021, the subsidiary CBA updated its environmental obligations for the demobilization of assets, amounting to R\$ 73 for the Niquelândia unit, and concomitantly constituted impairment on this increase in fixed assets.

(k) Temporary suspension of the Extreme North Mine of Vazante – Nexa

In March 2021, during a regular inspection of the Extreme North mine in Vazante, operated by the subsidiary Nexa, above-normal ground displacements were identified in the area around the mine's main access and escape route. The Extreme North mine requires aquifer dehydration for its operations, which leads to depressurization and can cause local disturbances in the rock mass surrounding the mine. As a preventive measure, activities in this area were temporarily suspended.

The subsidiary Nexa, supported by external experts, began a detailed analysis of the geological and geotechnical conditions to ensure the safety of its workers and the resumption of operating activities at the Extreme North mine.

In August 2021, the mine's main access and escape route and the development of new mine areas were re-established. Thus, production at the Extreme North mine is expected to resume during the first quarter of 2022.

(l) GSF (Generation Scale Factor) – VCNNE, CBA, VGE and Nexa

As disclosed in the consolidated financial statements for the year ended December 31, 2020 (Note 1.1 (t)), the Company follows the regulatory process of Law No. 14.052, published on September 9, 2020, which establishes new conditions for the renegotiation of the hydrological risk of electricity generation, providing for the compensation of generators by extending the term of concession of their grants due to the occurrence of non-hydrological risks that negatively influenced the GSF after 2012.

In the first quarter of 2021, the indirect subsidiary VCNNE recognized credit with a gross amount of R\$ 58 and deferred taxes of R\$ 20 related to the renegotiation of the hydrological risk of electricity generation, by extending the concession period for the use of the public asset of the Pedra do Cavalo plant in 7 years.

The subsidiary CBA also recognized this credit, on March 31, 2021, with a total amount of R\$ 142 and deferred taxes of R\$ 48, by extending the concession period for the use of the public assets listed below:

Power Plant	Dead line of extension (in days)	Value
UHE Sobragi	567	34
UHE Piraju	1,783	37
UHE Ourinhos	1,941	20
UHE Salto do Rio Verdinho	2,555	51

The approval made by the Board of Directors did not extend to the Canoas, Machadinho, Barra Grande and Campos Novos plants, since they are not fully managed by the Company, but through consortia or other entities. All had their extension deadlines already approved by National Electric Energy Agency (“ANEEL”).

Power Plant	Approval resolution	Dead line of extension (in days)
Canoas 1	2,919	1,460
Canoas 2	2,919	1,467
Machadinho	2,932	1,180
Barra Grande	2,932	1,757
Campos Novos	2,932	1,318

With this, what is lacking is the deliberation by the governance bodies of each one by all of its consortium members and other shareholders, who must agree on their portions of right levied on the renegotiation before the effective approval.

For the subsidiary VGE, on March 1, 2021, the calculations of the extension of the grants of the plants that adhere to the renegotiation of the hydrological risk of the Free Contracting Environment (ACL) were presented and forwarded to ANEEL for analysis and approval, which should take place in up to 30 days (expected March 30, 2021). However, such approval did not take place within this period because of funds claimed by some plants with ANEEL, so that new conditions for the renegotiation of hydrological risk related to the Regulated Contracting Environment (ACR) were included. As a consequence, ANEEL requested that the GSF values be recalculated for a new round of analysis and approval.

Pursuant to Ratification Resolutions No. 2,919 of August 3, 2021 and No. 2,932 of September 14, 2021, ANEEL ratified the term of grant extension of the hydroelectric plants participating in the Energy Reallocation Mechanism ("MRE") related to the ACL, according to Electric Energy Trading Chamber ("CCEE") calculations, including the Paraibuna and Porto Primavera plants (whose concessions are held by Companhia Energética de São Paulo-CESP, a subsidiary of VTRM) and Igarapava, Amador Aguiar I and Picada (whose concessions are linked to the investees, LDRSPE Geração de Energia e Participações Ltda., LDOSPE Geração de Energia e Participações Ltda. and LDQSPE Geração de Energia e Participações Ltda., subsidiaries of Pollarix).

As for the first two plants mentioned, the Board of Directors of CESP approved in March 2021: (i) the agreement with the terms proposed in Official Letter 36/2021, so that an amendment to the Concession Agreement 3/2004 could be signed, to forecast the provisional extension of six months of the concession of the Paraibuna HPP; (ii) adherence to the renegotiation of the hydrological risk for the two Paraibuna and Porto Primavera plants and the consequent extension of the concession due to the compensation provided for in the terms of Law 14,052/2020. The accounting recognition was carried out in the third quarter of 2021, after approval by ANEEL of the amounts and terms of extension of the concessions.

Regarding the Igarapava, Amador Aguiar I and Picada plants, approval of the adherence to the hydrological risk renegotiation – GSF, took place on September 24, 2021 by the governance bodies of the investee Pollarix.

Additionally, through Ratification Resolution No. 2,932 of September 14, 2021, ANEEL ratified the term of extension of the concession of the hydroelectric plants related to the ACR, among which are the Barra Grande plants, in which the indirect investee CBA Energia holds 15% of participation, and Campos Novos, in which the indirect investees Pollarix and CBA Energia hold a 20.98% and 23.78% interest, respectively.

The subject will be deliberated by the governance bodies, all the consortium members and other shareholders, who must agree on their portions of right levied on the renegotiation, as disclosed by ANEEL.

Considering the innovation brought about by the renegotiation of the hydrological risk and the absence of a CPC Pronouncement (Accounting Pronouncements Committee), Interpretation or Guidance that applies specifically to the topic, the Company's Management exercised its judgment in the development and application of an accounting policy, as provided for in CPC 23 – Policies Accounting, Change in Estimate and Error Correction, using by analogy the precepts of CPC-04 (R1) – Intangible Assets, considering that it is essentially an intangible asset related to the right of grant arising from compensation for costs incurred in fiscal years above. Additionally, considering also by analogy paragraph 44 of the aforementioned CPC - 04 (R1), the asset constituted by the renegotiation of the non-hydrological risk was recognized at fair value, considering the Company's best estimate, based on the parameters determined by the regulation of ANEEL, as well as the values of compensation calculated by the CCEE.

The amounts were transformed by ANEEL into an extension of the concession term, which will be amortized using the straight-line method until the end of the concession term, adjusted with the extension as from the renegotiation.

The table below shows the amounts involved and the concession extension period for each plant:

	Investees	GSF Value	Impairment GSF (i)	% Reflected on VGE	Equity method impact	Extension period	End date of grant
Plants							
Porto Primavera	CESP Companhia Energética de São Paulo	739	(299)	20.00%	88	7 years	April 13, 2056
Paraibuna	CESP Companhia Energética de São Paulo	43		20.00%	9	15 months	June 3, 2022
Igarapava	L.D.R.S.P.E. Empreendimentos e Participações Ltda	13		66.67%	9	2 years and 7 months	September 9, 2031
Amador Aguiar I	L.D.O.S.P.E. Empreendimentos e Participações Ltda	17		66.67%	11	6 years	November 25, 2042
Picada	L.D.Q.S.P.E. Empreendimentos e Participações Ltda	24		66.67%	16	5 years	March 30, 2041
Campos Novos	L.D.Q.S.P.E. Empreendimentos e Participações Ltda	157		20.98%	33	3 years and 5 months	January 6, 2039
Baesa	L.D.Q.S.P.E. Empreendimentos e Participações Ltda	179		23.79%	43	4 years and 9 months	March 6, 2041
Total		1,172	(299)		208		

(i) In possession of the calculations approved by ANEEL for Porto Primavera, CESP updated the impairment test on hydrological risk (GSF), in order to analyze the ability to recover the book value of the intangible asset in its future operations, considering the future cash flow from operations and the indemnity amount at the end of the concession, and identified the need to set up a provision for impairment of the GSF, in the amount of R\$ 299, recognized in CESP's income.

(m) Approval and payment of dividends by Votorantim Geração de Energia S.A. ("VGE")

On April 30, 2021, the Management's proposal was approved for the subsidiary VGE to pay dividends for the year ended December 31, 2020, in the amount of R\$ 200, of which R\$ 101 was the mandatory minimum dividend and R\$ 99 was an additional dividend, to be paid in national currency to the Company, of which R\$ 100 was paid on April 13, 2021, R\$ 70 was paid on December 17, 2021. The remaining amount will be paid according to cash availability.

(n) Restructuring of financial obligations – Acerías Paz del Río ("APDR")

In April 2021, the subsidiary APDR carried out a resettlement of its financial obligations, settling the principal balance of outstanding loans with Citibank in the amount of Colombian Peso ("COP") 86 billions (R\$ 133) and contracting new loans with Davivienda banks in the amount of COP 25 billions (R\$ 39) and Itaú, in the amount of COP 21 billions (R\$ 33), resulting in a reduction of COP 40 billions (R\$ 62).

(o) Business combination with McInnis Cement Inc ("McInnis") – VCSA

In April 2021, the indirect subsidiary St. Marys concluded a business combination with the acquisition of the entire issued share capital of McInnis, for a total amount of USD 553 million (R\$ 2,989).

McInnis is a company that manufactures, distributes and sells cement in the eastern Great Lakes region of Canada and on the northeast coast of the United States. Its business assets include a modern plant in Port-Daniel-Gascons in Quebec, Canada, with an annual production capacity of 2.2 million tons of cement, as well as a deepwater terminal, adjacent to the plant, and a distribution network that has 10 terminals (marine, rail and road).

This transaction complements St. Marys in the region, enabling expansion of operations and strengthening strategic positioning through increased cement production capacity, operational efficiencies and an improved distribution network.

The effect of this combination is shown below:

Consideration transferred	
Cash paid on acquisition of McInnis	11
Price adjustment (working capital and net debt)	117
Promissory notes to be paid in 2025	34
Issue of shares	2,827
Total consideration	2,989

As a result, St. Marys issued 170,000 shares in consideration transferred in exchange for control of the acquired McInnis, representing a 17% stake in St. Marys. The fair value of the shares issued was based on a weighted average resulting from the assessment of discounted cash flow and market value.

This transaction resulted in the dilution of the interest held indirectly by VCSA in St. Marys, and, consequently, in the recognition of the interest of non-controlling shareholders and an increase in the equity valuation adjustment attributable to the controlling shareholders. The effect of this dilution can be summarized as follows:

Consideration paid to non-controlling interests, representing 17% of St. Marys' carrying amount immediately prior to the transaction	(833)
Consideration received representing 83% of the additional net assets consolidated as a result of McInnis' acquisition	2,346
Excess of consideration received, recognized in other comprehensive income	1,513
Carrying amount attributable to non-controlling shareholders	1,314
Total shares issued by St. Marys to the non-controlling shareholders	2,827

The provisional amounts of assets and liabilities recognized as a result of the acquisition are:

Recognized amounts of identifiable assets and assumed liabilities	
Cash and cash equivalents	31
Trade receivables	257
Inventory	218
Prepaid expenses and other assets	23
Deferred taxes and other (i)	588
PP&E	3,152
Intangible assets	285
Right of use on lease agreements	788
Borrowing	(733)
Lease liabilities	(788)
Trade payables	(324)
Other finance liabilities	(265)
Acquired identifiable net assets	3,232
Gain on acquisition of investments	(243)
Total assets and liabilities	2,989

The price paid for the acquisition totaled R\$ 2,827 and, upon application of the acquisition method in accordance with International Financial Reporting Standard ("IFRS") 3 / CPC 15 (R1) – "Business Combination", the net assets and liabilities acquired totaled R\$ 3,232, generating a gain on bargain purchase in the amount of R\$ 243, recorded under "Other operating income (expenses), net" (Note 30).

As indicated in CPC 15 (R1) / IFRS 3 – "Business Combination", the Company has 12 months to fulfill the purchase price allocation ("PPA") of the acquired assets and liabilities and complete the initial accounting for the acquisition. The fair value balances above are presented as provisional until the PPA works are completed.

(p) Loan agreement with National Bank for Economic and Social Development ("BNDES") – Nexa

In July 2020, the subsidiary Nexa contracted a loan approved by BNDES and, during the second quarter of 2021, it made disbursements of the following amounts:

- (i) On May 28, 2021, the amount of R\$ 160 (approximately USD 31 million) was used;
- (ii) On June 18, 2021, the amount of R\$101 (approximately USD 20 million) was used.

Of the total R\$ 750 approved by BNDES, the subsidiary Nexa has already used R\$ 736 (approximately USD 140 million).

This contract is guaranteed by Nexa Recursos Minerais S.A. ("Nexa BR") and Nexa and was contracted at a cost of Long Term Rates ("TLP") + 3.39%, maturing in 2040. The resources are being used to finance the Aripuanã project.

(q) Public Offering of Shares – CBA

On June 29, 2021, the subsidiary CBA announced its initial public offering and began trading its shares on the São Paulo Stock Exchange, under the ticker name "CBAV3".

On July 15, 2021, CBA announced the closing of its primary distribution public offering with the issuance of 62,500,000 common shares at a price of R\$ 11.20 per share, and as a result CBA's net equity increased by R\$ 657, net of transaction costs. As a result of this issue, the interest was diluted from 100% to 89.51%, resulting in a gain of R\$ 214 in VSA.

On July 15, 2021, the Company also negotiated a secondary distribution public offering of 62,500,000 of the shares held in CBA, with a net gain of R\$ 270.

On August 17, 2021, the Company sold a supplementary lot of 18,750,000 shares held in CBA at the price of R\$ 11.20 per share, with a net gain of R\$ 74.

With the sales carried out on July 15 and August 17, 2021, VSA reduced its interest in CBA, with the Company now holding 75.87% of the subsidiary's capital.

The gains from this transaction, at the time of R\$ 558, were realized in the context of transactions between the controller and minority shareholders. As a result, in line with the Company's accounting policy, they were recognized in retained earnings in shareholders' equity (Note 27).

(r) Capital increase in the investee Janssen Capital B.V. – Janssen

During 2021, the Company carried out a capital increase in the subsidiary Janssen, in the amount of R\$ 1,978, in order to guarantee the management of the Company's assets.

(s) Loan settlement – Nexa

On July 9, 2021, indirect subsidiary Nexa Peru prepaid the outstanding principal amount of a bank loan of R\$ 477 (approximately USD 91 million) and accrued interest of R\$ 13 (approximately USD 2 million). The cross-currency swap contracted associated with this debt was also closed generating a loss of USD 12 million. Consequently, the total value of this transaction was USD 105 million.

As this debt is being accounted for using the fair value option, all market-to-market effects and related credit risk will be reversed, with no impact on income.

On July 28, 2021, the subsidiary Nexa prepaid the outstanding principal and accrued interest of a loan in the amounts of USD 80 million and USD 211 thousand, respectively.

(t) Amendment of loan agreement by Votorantim Cimentos EAA Inversiones S.L. ("VCEAA")

On July 27, 2021, the indirect subsidiary VCEAA entered into an amendment to the loan agreement signed on 2020, to postpone the maturity from November 2025 to July 2026 and reduce the cost, in addition to increasing the contracted amount by EURO ("EUR") 35 million (R\$ 215).

(u) Loan contracting by Corporacion Noroeste – VCEAA

In July 2021, the indirect subsidiaries VCEAA and Votorantim Cementos España ("VCE"), signed two loan agreements in the amounts of EUR 40 million (R\$ 246) and EUR 50 million (R\$ 307), respectively, both maturing in July 2026. However, in December 2021, the indirect subsidiary VCEAA signed an amendment to postpone the maturity of the contract in the amount of EUR 40 million (R\$ 246) from July 2026 to January 2027.

(v) Acquisition of Superior Materials ("Superior"), Valley View Industries ("Valley View") e A.G. Cementos Balboa, S.A.U. ("Cementos Balboa"). – VCSA

(v.1) In July 2021, indirect subsidiary St. Marys completed the purchase of the remaining 50% interest in Superior Materials, a precast concrete company located in Detroit-Michigan, for a total amount of USD 38.5 million (R\$ 197). With the completion of the transaction, St. Marys now holds 100% of Superior's interest.

The effect of this acquisition can be summarized as follows:

Consideration transferred	
Cash paid on acquisition of Superior	197
Interest held previously	74
Gain on measurement	126
Total consideration	397
Amounts recognized of identifiable assets and assumed liabilities	
Cash and cash equivalents	20
Accounts receivable	113
Inventories	27
Prepaid expenses and other assets	5
Property, plant and equipment	155
Intangible assets	129
Right of use on lease agreements	46
Accounts payables and other liabilities	(96)
Lease liabilities	(46)
Net identifiable assets acquired	353
Goodwill	44
	397

Goodwill is attributable to the workforce and profitability of the acquired business.

(v.2) In August 2021, indirect subsidiary St. Marys acquired Valley View, an Illinois-based aggregates company, for a total amount of USD 46 million (R\$ 235). Valley View operates its aggregates business through five operating units, all located in the state of Illinois. It produces aggregates, agricultural limestone, gravel, shale and other products for the construction and road sectors and for the agricultural market. With this acquisition, Valley View's aggregates business will now be managed by VCNA Prairie LLC.

The effect of this acquisition can be summarized as follows:

Purchase consideration	
Cash paid on acquisition of Valley View	231
Price adjustment (working capital and net debt)	4
Total purchase consideration	235
Recognized values of identifiable assets and liabilities assumed	
Accounts receivable	9
Inventories	9
Property, plant and equipment	76
Intangible assets	105
Accounts payables and other liabilities	(2)
Net identifiable assets acquired	197
Goodwill	38
Total assets and liabilities	235

Goodwill is attributable to the workforce and profitability of the acquired business.

(v.3) In October 2021, indirect subsidiary VCEEA, acquired 100% of the share capital of Cementos Balboa.

Cementos Balboa has a modern integrated cement plant located in southwest Spain, with an annual production capacity of 1.2 million tons of cement. This acquisition is in line with Votorantim Cimentos' growth and positioning strategy, and represents an important step towards increasing competitiveness, accelerating the decarbonization program and strengthening its presence in the Iberian Peninsula. With this acquisition, the production capacity installed in Spain increases to 4.3 million tons of cement per year, through the operation of five integrated cement plants.

Details on the consideration transferred and the provisional amounts of assets and liabilities recognized as a result of the acquisition are as follows:

Purchase consideration	
Cash paid on acquisition of Balboa	
Fixed price	641
Acquisition of CO2 emission rights (i)	194
Total purchase consideration	835
Recognized values of identifiable assets and liabilities assumed	
Cash and cash equivalents	21
Accounts receivable	26
Inventories	75
Prepaid expenses and other assets	10
Deferred taxes	11
Property, plant and equipment	492
Intangible assets	94
Emission right of CO2	220
Right of use on lease agreements	2
Deferred taxes	(146)
Lease liabilities	(3)
Accounts payables and other liabilities	(108)
Net identifiable assets acquired	694
Goodwill	141
Total assets and liabilities	835

- (i) As indicated in CPC 15 (R1) / IFRS 3 – “Business Combination”, the indirect subsidiary has 12 months to fulfill the purchase price allocation ("PPA") of the acquired assets and liabilities and complete the initial accounting for the acquisition.

The goodwill arising from this business acquisition is essentially a "technical" goodwill that results from the recognition of the deferred tax liability arising from increases in the fair value of the net assets acquired.

(w) Conclusion of the Wind Farms acquisition process – CBA

On August 30, 2021, the subsidiary CBA concluded the process of acquisition of the wind energy self-production assets Ventos de Santo Anselmo Energias Renováveis S.A. (“Ventos de Santo Anselmo”) and Ventos de Santo Isidoro Energias Renováveis S.A (“Ventos of Saint Isidore”).

The wind farms are part of the Ventos do Piauí I and II complex, located between the states of Pernambuco and Piauí, with 171.6 MW of installed capacity, equivalent to 74.4 average MW of assured energy.

The energy supply will be destined for the Itapissuma and Aluminum Plants, which are expected to start in 2023. With the conclusion of the operation, the subsidiary reinforces its investments in the diversification of the renewable energy matrix. The total acquisition price by CBA is R\$ 60, of which R\$ 47 is a direct purchase by subsidiary CBA, and R\$ 13 is a purchase made by the indirect subsidiary CBA Itapissuma Ltda, with annual installments to be paid between 2023 and 2027. These amounts were initially recognized at fair value and subsequently measured at amortized cost using the effective interest rate method.

Additionally, the subsidiary CBA and VTRM signed an agreement for energy supply by CBA for a period of 10 years, with an option to repurchase the said assets at the end of the term of the supply agreement. The repurchase option of the said assets, provided for in the contract, can be exercised unilaterally by VTRM.

(x) New Revolving Credit Facility – VCSA

To replace the revolving credit facility (Global Revolving Credit Facility) contracted in August 2018 in the amount of USD 500 million and maturing in August 2023, in September 2021, the subsidiary VCSA and its subsidiaries contracted a new revolving credit line with a syndicate of banks in the amount of USD 250 million maturing in September 2026, characterized as Sustainability-Linked, in line with its long-term sustainability commitments.

The revolving credit facility is available for withdrawal at any time.

(y) Water crisis in Brazil

The Company has been following closely the water crisis currently experienced by Brazil, which has significantly impacted the levels of reservoirs in the country's hydroelectric plants, consequently impacting the market energy prices experienced by energy consumers. The Company has evaluated the topic and so far has not identified any relevant effect that could affect the contracts it has with its counterparties.

(z) Sale of properties – VSA

On August 12, 2021, the Company signed a sale agreement for some properties located in Minas Gerais. The price agreed between the parties was R\$ 452, and the cost of writing off property, plant and equipment was R\$ 209, recognized net in other operating income (expenses) (Note 30).

(aa) Acquisition of the corporate tower of Alto das Nações - Altre Empreendimentos e Investimentos Imobiliários Ltda. (“Altre”)

In September 17, 2021, the subsidiary Altre signed an agreement to purchase the “Alto das Nações” corporate tower with PNU Nações Unidas Desenvolvimento Imobiliário S.A., a wholly-owned subsidiary of WTorre. The building is part of the future Alto das Nações multipurpose real estate complex, located in Marginal Pinheiros, São Paulo. The purpose of this acquisition is to enable the expansion of the Company’s activities. In order to complete the purchase, the Company made an advance in the amount of R\$ 58, recorded under “Advance for investment property”. The payment of the residual installments will be carried out in accordance with the completion of the works, scheduled for 2025.

(bb) Issuance of the Aripuanã Project operating license – Nexa

In October 07, 2021, the subsidiary Nexa obtained the operating license for the Aripuanã greenfield project. This license was issued by the Environmental Secretariat of the state of Mato Grosso (“SEMA”).

Aripuanã is an underground polymetallic mine containing zinc, lead and copper.

Installation of facilities and equipment testing was completed in 2021, and commercial production is scheduled to start in the third quarter of 2022.

(cc) Early settlement of borrowing under the terms of Law 4.131/1962 - VCSA

The subsidiary VCSA entered into two loan agreements, under the terms of Law 4,131/1962, in amount of USD 100 million (R\$ 515), with maturity in 2026 (both contracts include interest rate and currency swaps, derivative financial instruments, which aim both to exchange exposure to floating LIBOR rate and fixed rates to floating CDI rates and to exchange currency from US dollar to Brazilian real).

The indirect subsidiary VCNNE made the total repayment of the borrowing under the terms of Law 4,131/1962, in amount of USD 75 million (R\$ 409), with maturing in 2024. Consequently, the swap contract associated with this borrowing was also terminated.

(dd) Committed Credit Facility – St. Marys

In October, 2021, the indirect subsidiary St. Marys made a new payment of the available committed credit facility, in the amount of USD 55 million.

The approximate amount of USD 218 million remains available for new withdrawals.

(ee) Civil class action – VCSA

On October 27, 2021, the subsidiary VCSA became aware, through news in the media, of a civil class action filed by the Federal Public Prosecution Office of São Paulo (MPF-SP), related to the decision issued by the Administrative Council for Economic Defense (CADE) due to alleged anti-competitive practices in relation to the administrative proceeding that ended in October 2015. As stated in the “Significant Event Notice” disclosed, the VCSA has not yet been served in this action.

Finally, the direct subsidiary VCSA used several assumptions to estimate the amounts and percentages of the orders allocated to it, however the Company cannot guarantee that such assumptions will prevail, including considering the current stage of the processes and even the solidarity requests made by the public ministries, as described above, estimating the updated amount to R\$5,587 of the possible contingency for both ACPs on December 31, 2021.

It should be noted that this estimate does not represent any agreement by the subsidiary VCSA with the requests made by the Public Prosecutor's Office, but a mere estimate for purposes of reporting possible contingencies. The subsidiary VCSA classified the probability of loss of the ACPs as possible and, therefore, there are no amounts provisioned.

(ff) Acquisition of 80% of Alux of Brasil Indústria e Comércio Ltda. ("Alux") – CBA

On November 3, 2021, the subsidiary CBA signed the agreement for the acquisition of 80% of the capital stock of Alux, for the price of R\$ 133, which is subject to adjustments at closing, in the form of a purchase and sale agreement. The conclusion of the transaction was conditioned to the fulfillment of the usual obligations and conditions precedent, and the approval by CADE was obtained as detailed in Note 36 (d).

Alux, located in Nova Odessa-SP, is one of the main suppliers of secondary aluminum in the country, with an installed capacity of 46 thousand tons per year. As one of the largest suppliers of secondary aluminum alloys in Brazil, Alux will allow the subsidiary CBA to enter a new market segment, which aims to expand its production capacity of recycled aluminum, starting to operate with greater relevance in this market.

This transaction is in line with the subsidiary CBA's purpose of providing aluminum solutions that transform lives, in addition to reinforcing the subsidiary's Environmental, social and corporate governance ("ESG") strategy, since the operation also encourages the circular economy and contributes for the production of aluminum with a lower carbon footprint.

(gg) Acquisition of interest in Tellus III Holding S/A Company ("Tellus") - Altre

On November 30, 2021, the subsidiary Altre concluded the acquisition of all shares in Tellus, whose purpose is to invest in commercial, retail, residential and/or industrial real estate segments. The purchase price agreed between the parties was fully paid by Altre to the sellers. The subsidiary Altre recognized the amount of R\$ 59 related to the capital gain related to the indirect acquisition of the Atlas Officer Park ("AOP") building.

Reconciliation of added value paid	11/30/2021
Amount paid to the selling parties	125
(-) Equity's carrying amount of Tellus III	74
(+) Judicial measure on withholding income tax	8
Amount of added value allocated	59

The added value was recognized as the difference between the amount paid in the transaction and the book value of Tellus' shareholders' equity, and is recognized in accordance with the application of the acquisition method provided for in CPC 15 (R1) - Business Combination. The amount was recorded under "inventories" in the consolidated balances and allocated under "investments" at Altre. AOP is a commercial development located in the Vila Leopoldina neighborhood, in the city of São Paulo - SP, consisting of 4 towers totaling 36 thousand m², which was about 90% occupancy in December 2021.

The subsidiary Altre hired an independent entity to prepare an appraisal report on the fair value of the assets and liabilities acquired and to allocate the amount paid in the acquisition, scheduled for completion in 2022.

The following table shows the transaction amounts:

Composition of the acquisition price	11/30/2021
Amount paid to the selling parties	125
Judicial measure on withholding income tax	10
(-) Compensation of dividends receivable by Tellus III	(2)
Payment of advance payment for future capital increase	37
Total amount of acquisition	170

With the acquisition of this interest, subsidiary Altre obtained control of Jaguatirica Empreendimentos Imobiliários SPE S.A (“Jaguatirica”), owner of the Atlas Office Park project, which became part of the consolidated financial statements of the subsidiary Altre. The table below shows the balances included in the consolidation:

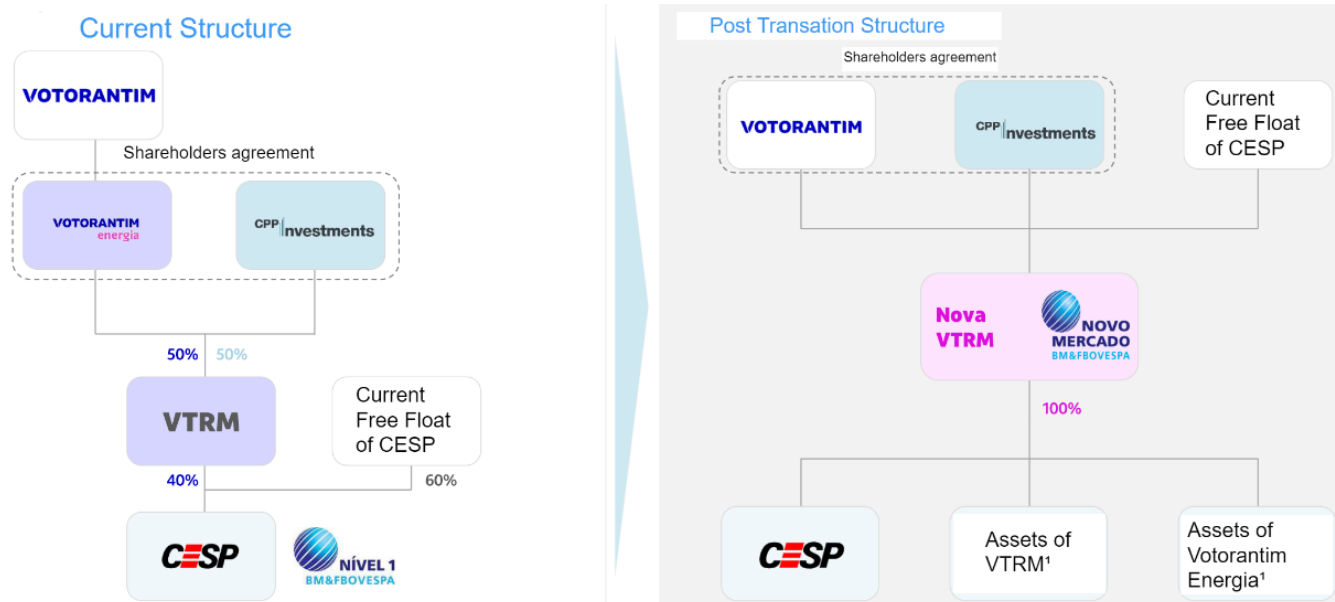
Jaguatirica Empreendimentos Imobiliários	11/30/2021
Financial investments	1
Trade receivables	12
Inventory of properties for sale	194
Other assets	10
Property, plant and equipment	1
Intangible assets	5
Taxes payable	1
Other liabilities	1
Deferred income tax and social contribution	4
Assets and liabilities, net	218

(hh) Corporate restructuring resulting from the Operations VTRM and CESP - VGE

On October 18, 2021, the Company and the Canada Pension Plan Investment Board (CPP Investments) announced their intention to consolidate energy assets in Brazil, which will have shares listed on B3’s Novo Mercado.

As part of the reorganization process, the companies of the Votorantim group: CBA, Votorantim Cimentos and Nexa Resources will assume the management of their energy self-production assets that are currently under the administration of Votorantim Energia, and will include several steps. Below is a breakdown of the steps taken throughout 2021.

The table below shows how this corporate restructuring transaction will take place:



The consolidation is intended to take place through two main transactions and will comprise several steps, which we detail below.

(ii1) VTRM Transaction:

a) Creation of CESP's independent Committee

On October 21, 2021, CESP's Board of Directors approved the creation of a special independent Committee ("Committee") which, in compliance with the guidelines provided for in the Guidance Opinion of the Securities Commission nº 35, has the function of negotiating the transaction of corporate reorganization proposed in a non-binding manner by VSA and CPP Investments for the merger of all shares issued by CESP into VTRM.

The Committee is composed of: (a) an administrator chosen by the majority of the Board of Directors; (b) a director elected by the non-controlling shareholders; and (c) a third party, administrator or not, chosen jointly by the other two members. The resolutions already issued by the Committee are described in Note 36 – Subsequent Events.

b) VTRM IPO and Listing on the Novo Mercado

On December 10, 2021, VTRM submitted an application for registration as a publicly-held company category "A" with the CVM ("Open Public Offering") and for listing on the Novo Mercado of B3 ("Listing on the Novo Mercado"), noting that the effective listing and trading of "Nova VTRM" shares on the Novo Mercado will depend on the conclusion of the CESP Transaction.

c) Proposal for the merger of CESP Shares into VTRM

In order to allow CESP's minority shareholders to participate in the "New VTRM", a proposal for the merger of shares was presented to the independent special Committee, with the intention of merging all the shares issued by CESP by VTRM, and consequent attribution, to the other shareholders of CESP, of these new shares.

d) Approvals

The corporate reorganization is not subject to the approval of any other governmental authority, either in Brazil or abroad, with the exception of the prior approval of the Economic Defense Administration Council ("CADE"), which was obtained on December 9, 2021, and the antitrust authorities of the European Union and Turkey.

e) Other transaction steps

The next steps of the transaction, which will take place throughout 2022, will be as follows:

e.1) VGE reverse incorporation – already consummated. See detail in Note 36 of Subsequent Events.

e.2) Capital contribution from CPP Investments

e.3) Redemption of CESP Preferred Shares

Further details on these items were detailed in Note 36 – Subsequent Events.

(ii) Extension of the concessions for Barra, França, Fumaça, Porto Raso and Serraria Hydroelectric Power Plants – CBA

In October 1st, 2021, the subsidiary CBA was granted, in a Dispatch in the Official Gazette of the Union, an extension for 27 years of the grants for the following hydroelectric power plants: Barra, França, Fumaça, Porto Raso and Serraria.

The annual amount, adjusted for the remaining period of twenty-seven years of the Grants, referring to the base date of December 2019, will be paid in favor of the reasonable tariff as Use of Public Property as shown in the table below:

Power plant	Annual value UBP adjusted for the remaining term of the grant (27 years)
UHE Barra	R\$ 3.5
UHE França	R\$ 2.9
UHE Fumaça	R\$ 3.8
UHE Porto Raso	R\$ 1.8
UHE Serraria	R\$ 1.2

(jj) Reclassification of investee Acerías Paz del Rio – “APDR” – to discontinued operations

In November 2021, the Company entered into an agreement for the sale of all the shares of the investee APDR with Trinity Capital S.A.S. and Structure S.A.S. Investment Bank. As a result, the investment was reclassified to the item “Assets held for sale” in the amount of R\$ 100. The Company recorded a provision for loss related to the sale of the investment in the amount of R\$ 827, recorded in the item “Other operating income, net”, as per Note 30. In accordance with CPC 31 – “Non-current assets held for sale and discontinued operations”, the assets and liabilities of the subsidiary were reclassified to a specific line in the balance sheet, as per Note 34.

The details of the impacts of the operation are shown in the following table:

Impairment of investment	Value
Carrying amount of investment	927
(-) Estimated revenue from the sale	100
Provision for loss	(827)
Deferred income tax and social contribution	281
Effect on the result, net	(546)

(kk) Acquisition of shares of CCR S.A. (“CCR”)

In November 2021, the Company acquired the equivalent of 5.8% of the total capital of CCR. In compliance with accounting rules, this acquisition is now recognized at fair value, as a financial instrument, in accordance with CPC 48 / IFRS 9 – “Financial instruments”.

(ll) Derivative financial instruments – Put option

In 2018, the Company acquired a minority interest of 15% in the combined long steel business of ArcelorMittal Brasil S.A. (“AMA”). In compliance with accounting rules, the investment was recognized as a financial instrument measured at fair value through profit or loss, in accordance with CPC 48 / IFRS 9 – “Financial instruments”. As a result of the terms established in the contract, this financial instrument was reclassified to short-term in the last quarter of 2021. The change in the fair value of this operation in the year ended December 31, 2021 resulted in a gain of R\$ 4,452 (December 31, 2021). In December 2020, a loss of R\$ 403 was recorded under “Financial result, net” - Note 31. The gain recorded in 2021 is justified by the better results obtained in the long steel operation of AMB.

(mm) Start of the cement factory project at Cementos Artigas S.A. (“Artigas”) – VCSA

Artigas, a subsidiary of the subsidiary VCSA, started a project to unify its industrial activities in Uruguay. The initiative involves the integration of its industrial facilities, until then divided between a mill and a distribution center located in Montevideo and the main plant in the city of Minas. The project consists of the relocation of the current grinding operations and cement distribution center from the Montevideo plant to the Minas plant, resulting in a unified production line that is much more efficient and sustainable. In addition, as a result of this unification, a new vertical cement mill, a modern silo and a distribution center will be installed at the plant. Artigas will invest approximately USD 40 million in this project, which is expected to start operating in 2022. As at December 31, 2021, the total amount of investments made was USD 17.2 million (R\$ 96).

(nn) Effects of the pandemic caused by the novel Coronavirus (COVID-19)

Given the emergence of the pandemic related to the novel Coronavirus, which has caused widespread impacts on public health and the economy of Brazil and the rest of the world, the Company has been taking preventive and risk mitigation measures according to the guidelines established by national and international health authorities, aiming to minimize impacts on the health and safety of its employees, family, partners and communities, as well as the continuity of all its operations. These measures are in accordance with the laws in force in the countries in which the Company operates and its internal regulations.

The extent of the impacts of COVID-19 will depend on the duration of the pandemic, possible restrictions imposed by governments, and other possible developments in the countries in which the Company and its subsidiaries operate.

The Company and its subsidiaries constantly evaluate and implement action plans together with customers, suppliers, and other stakeholders involved, according to the current scenario and the best possible projections.

In this scenario, the Company and its subsidiaries have been monitoring the effects on the main critical accounting estimates and judgments, as well as other balances with the potential to generate uncertainties and impacts on the financial information disclosed.

Since the consolidated financial statements for the year ended December 31, 2021, we have not identified any additional impact to those disclosed in the annual financial statements, concerning to the following topics:

- (i) Reduction in the recoverable value of non-financial assets;
- (ii) Recoverability of deferred tax assets;
- (iii) Compliance with obligations contained in debt contracts;
- (iv) Compliance with obligations assumed with customers and suppliers;
- (v) Risk matrix for calculating the allowance for loan losses;
- (vi) Inventory loss estimate due to low turnover and change in realizable value.

Additionally, the Company has a solid liquidity position. In addition, the subsidiaries VCSA and CBA have revolving credit facilities available in the amount of USD 413 million (R\$ 2,245) and USD 100 million (R\$ 544), respectively, on December 31, 2021. This position provides the Company with conditions to mitigate the impacts of this adverse scenario, even if these impacts are not fully known.

Considering the analysis of the information and data mentioned above, until the time of the issuance of these interim consolidated financial statements, the Company and its subsidiaries have not identified other relevant impacts to be disclosed and do not have visibility of impacts or accounting evidence arising from the pandemic caused by COVID-19 that imply changes in accounting policies, in the main estimates established and in the critical accounting judgments mentioned above.

2 Presentation of the condensed consolidated interim financial statements

2.1 Basis of preparation

(a) Condensed consolidated interim financial statements

The consolidated financial statements have been prepared and are being presented in accordance with the accounting practices adopted in Brazil, in effect on December 31, 2021, which includes the pronouncements issued by the Accounting Pronouncements Committee ("CPCs") and in accordance with the International Financial Reporting Standards (International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board (IASB)) and interpretation of ("IFRIC") and evidence all relevant information specific to the financial statements and are consistent with those used by Management in its management.

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 of the financial statements

The Board of Directors approved the consolidated financial statements for issue on March 29, 2022.

2.1.1 Restatement of comparative figures

In accordance with IFRS 5 / CPC 31 - "Non-current assets held for sale and discontinued operations", the Company reclassified the long steel operation in Colombia from the headings of "Continuing operations" to "Discontinued operations", consequently, the balances of income suffered changes in the amounts previously presented in the financial statements as at December 31, 2020. The effects of these reclassifications are presented below:

	2020		
	As originally stated	Reclassification of Acerías Paz Del Rio	Restated
Continuing operations			
Net revenue from products sold and services rendered	36,667	(1,284)	35,383
Cost of products sold and services rendered	(29,620)	1,196	(28,424)
Gross profit	7,047	(88)	6,959
Operating expenses (income)			
Selling	(900)	11	(889)
General and administrative	(2,626)	123	(2,503)
Other operating expenses, net	(2,182)	(112)	(2,294)
	(5,708)	22	(5,686)
Operating before equity results and finance results	1,339	(66)	1,273
Results from equity investments			
Equity in the results of investees	727		727
	727		727
Finance results, net			
Finance income	680	(20)	660
Finance costs	(3,075)	96	(2,979)
Income from derivative financial instruments	(121)		(121)
Foreign exchange, net	(1,024)	(3)	(1,027)
	(3,540)	73	(3,467)
Loss before income tax and social contribution	(1,474)	7	(1,467)
Income tax and social contribution			
Current	(901)	1	(900)
Deferred	(691)	5	(686)
Loss for the continuing operations	(3,066)	13	(3,053)
Discontinued operations			
Profit (loss) for the discontinued operations	1	(13)	(12)
Loss for the attributable to the owners	(3,065)		(3,065)
Loss attributable to the owners of the Company	(1,636)		(1,636)
Loss attributable to non-controlling interests	(1,429)		(1,429)
Loss for the year	(3,065)		(3,065)
Weighted average number of shares - thousands (to the owners of the Company)	18,278,789		18,278,789
Basic and diluted loss per thousand shares, in reais	(89.50)		(89.50)
From continuing operations			
Basic and diluted loss per thousand shares, in reais	(89.55)	0.70	(88.84)
From discontinued operations			
Basic and diluted earning (loss) per thousand shares, in reais	0.05	(0.70)	(0.66)

2.2 Consolidation

(a) Subsidiaries

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

Unrealized balances and gains on transactions between Company companies are eliminated. Unrealized losses are also eliminated, unless the transaction provides evidence of a loss (impairment) of the transferred asset. In the acquisition, the accounting policies of the subsidiaries are changed when 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 29, 2022.

(b) Transactions with non-controlling interests

The Company treats transactions with non-controlling shareholders as transactions with owners of the Company's assets. For purchases of non-controlling interests, the difference between any consideration paid and the acquired portion of the carrying amount of the subsidiary's net assets is recorded in equity. Gains or losses arising from the sale of non-controlling interests are also recorded directly in equity, in the "Retained earnings" account.

(c) Loss of control of subsidiaries

When the Company ceases to have control, any retained interest in the entity is remeasured to its fair value, with the change in book value recognized in the income statement. The amounts previously recognized in equity value adjustments are reclassified to the result.

(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.

2.3 Foreign currency conversion

(a) Functional and presentation currency of the financial statements

The functional currency of the Company is the Brazilian Real ("R\$" or "BRL").

(b) Transactions and balances

Foreign currency transactions are translated into reais. When items are remeasured, the exchange rates prevailing at the dates of the transactions or the dates of valuation are used. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year 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 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	US Dollar	Cement
Votorantim Cimentos EAA Inversões, S.L. - "VCEAA"	Spain	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.	Luxemburgo	US Dollar	Holding
Votorantim Cimentos International S.A. - "VCI"	Luxemburgo	US Dollar	Holding
Votorantim FinCo GmbH	Luxemburgo	US Dollar	Trading
Janssen Capital B.V.	Netherlands	US Dollar	Holding

3 Changes in accounting policies and disclosures

3.1 New standards issued and amendments to the accounting standards adopted by the Company and its subsidiaries

The following changes to standards issued by the International Accounting Standards Board (IASB) were adopted for the first time for the year beginning January 1, 2021:

- (i) Classification of liabilities between current and non-current: changes to IAS 1 / CPC 26 "Presentation of the Financial Statements";
- (ii) Gains on the sale of inventories produced while the asset is not ready for use: changes to IAS 16 / CPC 27 "Property, plant and equipment";
- (iii) Initial adoption of IFRS in subsidiaries: changes to IFRS 1 / CPC 37 "Initial adoption of international accounting standards";
- (iv) Borrowing costs in the derecognition test of financial liabilities: changes to IFRS 9 / CPC 48 "Financial instruments";
- (v) Lease incentives: amendments to IFRS 16 / CPC 06 "Leases";
- (vi) Cost of fulfilling onerous contracts: changes to IAS 37 / CPC 25 "Provision, contingent liabilities and contingent assets, and";
- (vii) Concessions related to COVID-19: amendments to IFRS 17 "Insurance contracts";
- (viii) Reform of Interbank offered rates (IBORs): amendments to IFRS 9 / CPC 48 "Financial instruments", IAS 39 / CPC 38 "Financial instruments - recognition and measurement, IFRS 7 / CPC 40" Financial instruments: disclosure ", IFRS 4 / CPC 11 "Insurance contracts" and IFRS 16 / CPC 06 "Leases".

The Company analyzed the amendments to the accounting standards mentioned above and did not identify any impacts on its operating and accounting policies.

3.2 New standards issued and amendments to accounting standards not yet adopted by the Company and its subsidiaries

The following changes to standards issued by the International Accounting Standards Board (IASB) will be adopted for the first time in periods beginning after January 1, 2022:

- (i) Review of technical pronouncements by the Accounting Pronouncements Committee, No. 19/2021 with amendments to the Technical Pronouncements: CPC 37 (R1) / IFRS 1 - First-time Adoption of International Accounting Standards, CPC 48 / IFRS 9 - Financial Instruments, CPC 27 / IAS 16 - Fixed Assets, CPC 25 / IAS 37 - Provisions, Contingent Liabilities and Contingent Assets and CPC 15 (R1) / IFRS 3 - Business Combinations, as a

result of the annual changes related to the 2018-2020 improvement cycle; Fixed Assets – sales before intended use; Onerous Contract - contract fulfillment costs; and References to the Conceptual Framework.

The Company analyzed the amendments to the accounting standards mentioned above and did not identify any impacts on its operating and accounting policies to be adopted retrospectively or at the beginning of the year 2022.

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 receivables (Note 11);
- (iii) Electric power futures contracts (Note 16);
- (iv) Property, plant and equipment (Note 18);
- (v) Intangible assets (Note 19);
- (vi) Lease liabilities (Nota 21);
- (vii) Current and deferred income and social contribution taxes (Note 23);
- (viii) Provision (Note 24);
- (ix) Pension plan (Note 26).

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, and those relating to environmental protection. Violations of the environmental regulations in force expose the violator(s) to significant fines and monetary penalties, and may require technical measures or investments to ensure compliance with the mandatory emissions levels.

The Company and its subsidiaries carry out periodic studies to identify any potentially affected areas and records, based on the best estimates of costs, and the amounts expected to be disbursed for the investigation, treatment and cleaning of the potentially affected areas. The Company and its subsidiaries believe they are in compliance with all of the applicable environmental standards in the countries in which they operate.

6 Financial risk management

6.1 Financial risk factors

The activities of the Company and its subsidiaries expose them to a variety of financial risks, namely: (a) market risk (including currency, commodity price and interest rate risk), (b) credit risk and (c) liquidity risk.

A significant portion of the products sold by the Company and its subsidiaries, such as aluminum, nickel and zinc are commodities, with prices pegged to international indexes and denominated in 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, interest or commodities 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 a foreign currency at the closing date of the balance sheets:

	Note	2021	2020
Assets denominated in foreign currency			
Cash and cash equivalents	9	9,569	7,992
Financial investments	10	1,612	1,209
Derivative financial instruments		239	382
Trade receivables		2,337	1,875
Related parties		107	105
		13,864	11,563
Liabilities denominated in foreign currency			
Borrowing (i)	20	20,527	18,755
Derivative financial instruments		314	1,173
Lease liabilities		1,409	634
Confirming payables		2,922	1,840
Trade payables		3,524	2,917
Deferred revenue - silver streaming		822	863
		29,518	26,182
Net exposure		(15,654)	(14,619)

(i) Funding costs are not considered in these amounts.

(ii) Hedge of net investments in foreign operations

Hedge of net investment in operations abroad is accounted for similarly to cash flow hedge.

Any gain or loss on the hedging instrument related to the effective portion of the hedge is recognized in equity, under "Carrying value adjustments". The gain or loss related to the ineffective portion is immediately recognized in profit or loss. Accumulated gains and losses in shareholders' equity are included in profit or loss for the period when the investment abroad is made or sold.

The investments presented in the following table were designated as hedged objects and the debt portion of the Company and its subsidiaries CBA, Votorantim Cimentos International S.A. ("VCI") and St. Marys, denominated in euros and dollars.

2021			
Investment		Debt	
Nexa Resources Cajamarquilla S.A.	510	CBA	499
St. Marys	2,790	St. Marys	2,790
	3,300		3,289

2020			
Investment		Debt	
Nexa Resources Cajamarquilla S.A.	822	CBA	747
St. Marys	1,245	St. Marys	1,245
Votorantim Cimentos EAA Inversões, S.L. (i)	2,598	Votorantim Cimentos International S.A. (i)	2,598
	4,665		4,590

(i) After the hedge relationship was rebalanced on December 31, 2020, the debts in EUR held by VCI were fully settled and the hedge accounting in question was ended.

The Company and its subsidiaries document and evaluate the effectiveness of the investment hedge operations prospectively, as required by CPC 48 / IFRS 9 - "Financial instruments".

(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 or 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 a 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 S&P Global Ratings. 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, criteria approved by the Board of Directors.

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 VSA Financial Policy.

(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, and these amounts may not be reconciled with the amounts disclosed in the balance sheet.

	Up to one year	From one to three years	From three to five years	From five to ten years	From ten years	Total
At December 31, 2021						
Borrowing (i)	1,826	2,331	10,400	14,869	6,235	35,661
Derivative financial instruments	556	272	123	102	29	1,082
Lease liabilities	371	235	277	637	31	1,551
Confirming payables	3,405					3,405
Trade payables	6,914					6,914
Dividends payable	1,624					1,624
Related parties		75				75
Use of public assets	128	181	326	829	1,960	3,424
	14,824	3,094	11,126	16,437	8,255	53,736
At December 31, 2020						
Borrowing	2,258	1,869	11,654	13,418	5,998	35,197
Derivative financial instruments	514	334	635	1,269	171	2,923
Lease liabilities	253	208	169	173	55	858
Confirming payables	2,380					2,380
Trade payables	5,404					5,404
Dividends payable	44					44
Related parties		11				11
Use of public assets	100	177	312	828	1,213	2,630
	10,953	2,599	12,770	15,688	7,437	49,447

(i) For "borrowing" balances, financial charges are projected until the final maturity of the contracts. These figures do not consider an adjustment to the fair value of the operations contracted in Law No. 4131/1962.

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 fair value of financial instruments that are not traded on active markets is determined using valuation techniques. The Company and its subsidiaries use their judgment to choose between different methods and to define assumptions that are mainly based on the market conditions existing at the balance sheet date.

The method for recognizing the resulting gain or loss depends on whether the derivative is designated or not as a hedge instrument in cases of adoption of hedge accounting.

This being the case, the method depends on the nature of the item being hedged. The Company and its subsidiaries adopt hedge accounting and designate certain derivatives 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. There is also the quotation period hedge, which seeks to equalize the periods between the purchase of concentrate and the sale of the final product of the non-integrated plants, in order to mitigate exposures. 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 derivatives are recognized in the income for the year.

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

The following are the derivative financial instruments and the objects protected by them:

Programs	Principal Value			2020	2021								Fair value by maturity				
	2021	2020	As per unit		Total (net between assets and liabilities)	Inventory	Net revenue from products sold and services rendered	Cost of products sold and services rendered	Changes in fair value			Gain (loss) Realized	Total (net between assets and liabilities)	2021	2022	2023	2024+
									Other operating income, net	Finance results, net	Other comprehensive income						
Hedges for sale of zinc at a fixed price																	
Zinc forward	8,787	15,695	ton	10					32			23	19	19			
				10					32			23	19	19			
Hedges for mismatches of quotational period																	
Zinc forward	215,809	204,394	ton	11	6	54	(211)	10		3	(70)	(57)	(57)				
				11	6	54	(211)	10		3	(70)	(57)	(57)				
Hedges for sale of zinc at a fixed price																	
Zinc forward	3		BRL														
Operating margin hedging																	
Aluminum forward	57,200	203,130	ton	(350)		(859)					193	(798)	(218)	(217)			
Collars		5	USD millions								(1)		(1)				
USD forward	120	337	USD millions	52		15					(63)	1	3	3			
				(298)		(844)					129	(797)	(216)	(215)			
Foreign exchange risk																	
Turkish Lira Term (EUR/TRY)		1	EUR millions	(1)						1							
Turkish Lira Term (USD/TRY)	4		USD millions	(2)						2							
				(3)						3							
Interest rates risk																	
LIBOR floating rate vs. CDI floating rate swaps	200	225	USD millions	190						77		71	196	(85)	(59)	340	
IPCA floating rate vs. CDI floating rate swaps	1,236	760	BRL	37						(39)		12	(14)	(62)	(55)	(42)	
USD vs. CDI floating rate swaps	100	50	USD millions	15						4		(12)	31	(48)	(36)	(31)	
CDI floating rate swaps vs. USD floating swaps		1	BRL	(690)							688	(3)	1				
IPCA floating rate vs. USD floating rate swaps	160	160	BRL	(52)						(55)	52	12	(67)	(6)	(7)	(7)	
BRL vs. USD rate swaps		477	BRL	(2)						(41)		(40)	(3)				
Swap floating rate vs. CDI fixed rate	2		BRL														
				(502)						(54)	740	40	144	(201)	(158)	(79)	
Hedge of operational contracts																	
USD forward	50		USD millions							4		4					
IPCA floating rate vs. USD floating rate swaps	823	823	USD millions	25						(19)	(25)		(19)		21	5	
				25						(15)	(25)	4	(19)		21	5	
				(757)	6	(790)	(211)	42	(66)	847	(800)	(129)	(454)	(137)	(75)	537	

In December 31, 2021, derivative transactions net of taxes recognized in "Equity valuation adjustment" totaled R\$ 719.

(b) Derivative financial instruments – Put-option

In 2018, the Company acquired a minority interest of 15% in the combined long steel business of ArcelorMittal Brasil S.A. (“AMB”). In compliance with accounting rules, the investment was recognized as a financial instrument measured at fair value through profit or loss, in accordance with CPC 48 / IFRS 9 – “Financial instruments”. As a result of the terms established in the contract, this financial instrument was reclassified to short-term in the last quarter of 2021. The change in the fair value of this operation in the year ended December 31, 2021 resulted in a gain of R\$ 4,452 (December 31, 2021). December 2020, loss of R\$ 403 was recorded under “Financial result, net” - Note 31. The gain recorded in 2021 is justified by the better results obtained in the long steel operation of AMB.

6.1.2 Estimated fair value

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

Financial assets - considering the nature and terms, the amounts recorded are close to the realizable values.

Financial liabilities - are subject to interest at the usual market rates. The market value was calculated based on the present value of the future cash disbursement, using interest rates currently available for issuing debts with similar maturities and terms.

Electric power future contracts - The fair value of these financial instruments is estimated based, in part, on price quotes published in active markets, insofar as such observable market data exist, and, in part, by the use of valuation techniques, which consider: (i) prices established in the purchase and sale operations; (ii) supply risk margin and (iii) projected market price in the availability period. Whenever the fair value at initial recognition for these contracts differs from the transaction price, a gain or loss of fair value is recognized in Other operating income (expenses), net.

The Company and its subsidiaries disclose the fair value measurements by the following hierarchy:

Level 1 - quoted prices (not adjusted) in active markets for identical assets and liabilities;

Level 2 - information, in addition to quoted prices, included in level 1 that are adopted by the market for the asset or liability, either directly (as prices) or indirectly (derived from prices), and;

Level 3 - inserts for assets or liabilities that are not based on data adopted by the market (that is, unobservable insertions).

As at December 31, 2021, financial assets measured at fair value and financial liabilities disclosed at fair value were classified in levels 1 and 2 of hierarchy, as given below:

	Note	Fair value measured based on		2021	
		Prices quoted in an active market (Level 1)	Valuation supported by observable prices		Fair value
			(Level 2)		
Assets					
Cash and cash equivalents	9	8,636	5,044	13,680	
Financial investments	10	844	2,288	3,132	
Derivative financial instruments (i)	6.1.1 (a)		953	953	
Derivative financial instruments - put option			4,704	4,704	
Financial instruments - shares	13	23	2,778	2,801	
		9,503	15,767	25,270	
Liabilities					
Borrowing (i)	20	16,326	10,156	26,482	
Derivative financial instruments (i)	6.1.1 (a)		1,082	1,082	
To rent	21		1,551	1,551	
Confirming payables			3,405	3,405	
		16,326	16,194	32,520	

	Note	Fair value measured based on		12/31/2020	
		Prices quoted in an active market (Level 1)	Valuation supported by observable prices		Fair value
			(Level 2)		
Assets					
Cash and cash equivalents	9	4,418	5,365	9,783	
Financial investments	10	1,279	4,419	5,698	
Derivative financial instruments (i)	6.1.1 (a)		2,166	2,166	
Derivative financial instruments - put option			252	252	
Financial instruments - shares	13		2,590	2,590	
		5,697	14,792	20,489	
Liabilities					
Borrowing (i)	20	16,633	13,377	30,010	
Derivative financial instruments (i)	6.1.1 (a)		2,923	2,923	
To rent	21		858	858	
Confirming payables			2,380	2,380	
		16,633	19,538	36,171	

- (i) The fair value of these financial instruments takes into account the credit risk of the Company and its subsidiaries, and the value of the change in the fair value of the financial liability that is attributable to changes in credit risk is recorded in equity in other comprehensive income. If the classification of credit risk in other comprehensive income creates or increases the accounting mismatch in the result, the entity must present all gains or losses in the income for the year. The accumulated amount of changes in credit risk remains in other comprehensive income until the settlement of the financial instrument, when they are reclassified to retained earnings, without affecting the income.

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 exposed to the fluctuation in the US Dollar, Euro, Turkish Lira, New Peruvian Sun, Argentine Peso and Bolivian interest rates, CDI, IPCA, TJLP, LIBOR, 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, 2021 are described below:

Scenario I - Considers a shock to the market curves and quotations at December 31, 2021, according to the base scenario defined by management as at March 31, 2022;

Scenario II - Considers a shock of + or - 25% in the market curves at December 31, 2021;

Scenario III - Considers a shock of + or - 50% in the market curves at December 31, 2021.

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Risk factors	Cash and cash equivalents and financial investments (i)	Borrowing and related parties (i)	Derivative financial instruments/As per unit	Changes from 2021	Impacts on profit (loss)					Impacts on comprehensive income					
					Scenario I		Scenarios II & III			Scenario I		Scenarios II & III			
					Results of scenario I	-25%	-50%	+25%	+50%	Results of scenario I	-25%	-50%	+25%	+50%	
Foreign exchange rates															
USD	9,521	18,606	2,301	USD millions	-1.4%	33	572	1,145	(572)	(1,145)	138	2,384	4,768	(2,384)	(4,768)
EUR	752	1,174			0.1%		(12)	(25)	12	25		118	236	(118)	(236)
MAD	227				2.1%	5	(57)	(113)	57	113					
BOB	58	635			-3.1%						18	144	289	(144)	(289)
TRY	46	17	4	USD millions	-7.0%	(1)	(15)	(37)	12	22					
CAD	27	113			-0.5%		23	46	(23)	(46)		(1)	(3)	1	3
UYU	38	121			-1.4%						1	21	42	(21)	(42)
TND	229				-2.2%	(5)	(57)	(114)	57	114					
ARS	136				-12.4%						(17)	(34)	(68)	34	68
NAD	8				-3.3%							(2)	(4)	2	4
PEN	139	10			-2.4%	(3)	(31)	(62)	31	62		(2)	(3)	2	3
	11,180	20,677	2,305			29	423	840	(426)	(855)	140	2,628	5,257	(2,628)	(5,257)
Interest rates															
BRL - CDI	5,544	2,063	2,910	BRL	191 bps	139	228	529	(170)	(295)		2	5	(2)	(4)
BRL - IPCA		2,307	6,726	BRL	-456 bps	105	(73)	(133)	86	187					
BRL - TJLP		128			44 bps		2	3	(2)	(3)					
USD - LIBOR		1,775	1,176	USD millions	2 bps	6	(11)	(23)	11	23					
Dollar coupon			1,326	USD millions	17 bps	63	(198)	(395)	198	395	(1,088)	122	245	(122)	(245)
	5,544	6,273	12,137			313	(52)	(19)	123	307	(1088)	124	250	(124)	(249)
Price of commodities															
Zinc			224,596	ton	-18.7%	187	132	265	(132)	(265)	(37)	(26)	(52)	26	52
Aluminium			57,200	ton	7.8%						(32)	158	316	(158)	(316)
			281,796			187	132	265	(132)	(265)	(69)	132	264	(132)	(264)
Firm Commitment - electric energy															
Purchase and sale contracts - fair value			(44)					1	1	2					
			(44)					1	1	2					

- (i) The balances presented do not reconcile with the explanatory notes, since the analysis performed covered all the most significant currencies and the interest rates include only 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

These are financial instruments that meet the criteria of contractual terms, 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

These are 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.

	Note	2021	2020
Assets			
At amortized cost			
Trade receivables		3,679	2,352
Related parties	15	225	196
		3,904	2,548
Fair value through profit or loss			
Cash and cash equivalents (i)	9	13,680	9,783
Financial investments	10	3,132	5,698
Trade receivables			857
Derivative financial instruments	6.1.1 (a)	847	1,154
Derivative financial instruments - <i>put option</i>	6.1.1 (b)	4,704	252
Electric power futures contracts		3,807	58
		26,170	17,802
Fair value through other comprehensive income			
Financial instruments - shares	13	2,801	2,590
Derivative financial instruments	6.1.1 (a)	106	1,012
		2,907	3,602
Liabilities			
At amortized cost			
Borrowing	20 (a)	23,337	23,676
Trade payables		6,914	5,404
Lease liabilities	21 (b)	1,551	858
Related parties	15	75	11
Confirming payables	22	3,405	2,380
Use of public assets	25	1,867	1,497
		37,149	33,826
Fair value through profit or loss			
Borrowing	20 (a)	1,667	1,389
Derivative financial instruments	6.1.1 (a)	556	511
Electric power futures contracts		3,863	285
		6,086	2,185
Fair value through other comprehensive income			
Derivative financial instruments	6.1.1 (a)	526	2,412
		526	2,412

- (i) In practice, fair value and amortized cost are equivalent, considering, by definition, the characteristics of cash equivalents.

8 Credit quality of financial assets

The ratings resulting from local and global ratings were extracted from rating agencies (S&P Global Ratings, Moody's and Fitch Ratings). For presentation, the nomenclature standard of S&P Global Ratings and Fitch Ratings and the classification as established in the Financial Policies were considered.

	2021			2020		
	Local rating	Global rating	Total	Local rating	Global rating	Total
Cash and cash equivalents						
AAA	5,061		5,061	1,575		1,575
AA+	165		165	309		309
AA	680		680	158		158
AA-		140	140	46	136	182
A+	200	3,396	3,596		2,092	2,092
A	137	2,309	2,446		2,216	2,216
A-		1,105	1,105		1,790	1,790
BBB+		219	219		687	687
BBB		27	27		300	300
BBB-		37	37		292	292
BB		15	15		13	13
BB-		34	34		10	10
B		61	61		60	60
B-					1	1
CCC+					2	2
CCC					30	30
CCC-		1	1			
Unrated (i)	14	79	93		66	66
	6,257	7,423	13,680	2,088	7,695	9,783
Financial investments						
AAA	1,397		1,397	3,639		3,639
AA+	10		10	26		26
AA	227		227	317		317
AA-				487		487
A+				20	29	49
A		22	22		131	131
A-		70	70			
B		3	3			
CCC+		92	92		4	4
CCC-		18	18			
Unrated (ii)		1,293	1,293		1,045	1,045
	1,634	1,498	3,132	4,489	1,209	5,698
Derivative financial instruments						
AAA	756		756	1,688		1,688
AA-				323		323
AA	9		9			
A+		144	144		10	10
A-		42	42		145	145
B		2	2			
	765	188	953	2,011	155	2,166
Financial instruments - shares						
AAA	2,801		2,801	2,590		2,590
	11,457	9,109	20,566	11,178	9,059	20,237

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

(ii) Refer to amounts invested in liquid assets traded abroad that are not classified by rating agencies.

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, and which are readily convertible into a known amount of cash and 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. Foreign currency cash equivalents are mainly composed of financial instruments in local currency of the company and its investees.

	2021	2020
Local currency		
Cash and banks	26	27
Bank Deposit Certificates - CDBs	2,437	798
Repurchase agreements - public securities	1,424	955
Repurchase agreements - private securities		11
Financial Treasury Bills - LFTs	224	
	4,111	1,791
Foreign currency		
Cash and banks	6,962	3,409
Time deposits	2,607	4,583
	9,569	7,992
	13,680	9,783

10 Financial investments

Accounting policy

Financial investments have, for the most part, immediate liquidity, however, they are classified as financial investments based on the original maturities, considering the expected destination of the funds. Investments in national currency comprise government bonds or financial institutions, indexed to the interbank deposit rate.

Investments denominated in foreign currency are mainly composed of fixed income financial instruments in local currency (time deposits). There are also investments that have immediate liquidity considering the expected allocation of funds by the Investment Policy. Such investments comprise sovereign bonds and ETFs (Exchange Traded Funds) with low risk concentration in specific assets, following restrictions defined in the Investment Policy to safeguard liquidity and mitigate risk of capital loss.

(a) Breakdown

	2021	2020
Fair value through profit or loss		
Local currency		
Bank Deposit Certificates - CDBs	183	2,583
Financial Treasury Bills - LFTs	608	1,169
Financial bills - Private securities		290
Repurchase agreements - Public securities	236	110
Investment fund quotas	493	337
	1,520	4,489
Foreign currency		
Assets traded on the market (i)	1,400	1,046
Time deposits	212	163
	1,612	1,209
	3,132	5,698
Current	3,132	5,678
Non-current		20
	3,132	5,698

(i) Balance refers to assets traded on the market, being investments with a low concentration of risk in specific assets.

11 Trade receivables

Accounting policy

Trade receivables correspond to the amounts referring to the sale of goods or provision of services in the normal course of the activities of the Company and its subsidiaries.

They are initially recognized at fair value and subsequently measured at amortized cost using the effective interest rate method less the estimated loss on allowance for loan losses. Accounts receivable from customers in the foreign market are updated based on the exchange rates in effect on the balance sheet date.

(a) Breakdown

	2021	2020
Trade receivables - Brazil	1,445	1,475
Trade receivables - foreign customers	2,349	1,892
Related parties	39	64
	3,833	3,431
Allowance for doubtful accounts	(154)	(222)
	3,679	3,209

(b) Breakdown by currency

	2021	2020
Brazilian real	1,581	1,334
U.S. dollar	1,489	1,213
Euro		181
Colombian peso	309	131
Turkish lira	97	71
Uruguayan peso	66	62
Moroccan dirham		61
Argentine peso	83	55
Other	54	101
	3,679	3,209

(c) Changes in estimated loss for doubtful accounts

	2021	2020
Opening balance	(222)	(191)
Additions, net		(44)
Receivables written off as uncollectible (i)	69	21
Effect of subsidiaries excluded from consolidation	(5)	(2)
Foreign exchange variations	4	(6)
Closing balance	(154)	(222)

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

(d) Aging of trade receivables

	2021	2020
Current	3,473	2,945
Up to three months past due	137	166
Three to six months past due	20	14
Over six months past due	203	306
	3,833	3,431

12 Inventory

Accounting policy

Presented at the lower of cost and net realizable value. The cost is determined using the weighted average cost method. The costs of finished products and products in preparation comprise raw materials, direct labor and other direct and indirect production costs (based on normal operational capacity). The raw materials from biological assets (e.g: trees from a plantation, plants, fruit trees, cattle, etc.) are measured at fair value, less selling expenses at the point of harvest, when they are transferred from non-active assets current to the inventory group.

The subsidiaries, at least once a year, carry out the physical inventory of the goods included in their inventory. Inventory adjustments are recorded under "Cost of goods sold and services provided".

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

(a) Breakdown

	2021	2020
Finished products	1,609	949
Semi-finished products	2,021	1,705
Raw materials	1,610	858
Auxiliary materials and consumables	1,588	1,249
Imports in transit	402	319
Other	415	114
Provision for inventory losses	(478)	(470)
	7,167	4,724

(b) Changes in the estimate of inventory losses

	2021					2020	
	Finished products	Semi-finished products	Raw materials	Auxiliary materials and consumables	Other	Total	Total
Balance at the beginning of the year	(17)	(57)	(17)	(246)	(133)	(470)	(393)
Addition	(51)	(103)	(46)	(158)	(34)	(392)	(229)
Disposal		12		17	17	46	
Reversal	52	74	56	142	2	326	219
Effect of subsidiaries included in consolidation	3	11		26	(15)	25	
Exchange variation		(1)		(6)	(6)	(13)	(67)
Balance at the end of the year	(13)	(64)	(7)	(225)	(169)	(478)	(470)

13 Financial Instruments - Shares

Accounting policy

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

The value of financial instruments refers, substantially, to the portion of the Company's shares held by Suzano S.A. and CCR S.A..

	2021			2020	
	Suzano	CCR	Tinka	Total	Suzano
Balance at beginning of period	2,590			2,590	2,749
Acquisition (i)		1,348	37	1,385	
Change in fair value	141	78		219	1,079
Realization of fair value	(999)		(17)	(1,016)	
Sale of shares	(377)			(377)	(1,238)
Balance at the end of the period	1,355	1,426	20	2,801	2,590

(i) Refers to the acquisition of shares in CCR, as described in Note 1.1 (kk).

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 the object of future recovery.

	2021	2020
Corporate Income Tax ("IRPJ") and Social Contribution on Net Income ("CSLL")	2,343	1,725
Social Contribution on Revenue ("COFINS")	892	1,561
State Value-added Tax on Sales and Services ("ICMS")	661	719
Value-added Tax ("VAT") (foreign companies)	263	252
Social Integration Program ("PIS")	233	368
State Value Added Tax on property, plant and equipment ("ICMS")	80	68
Withholding Income Tax ("IRRF")	43	59
Excise Tax ("IPI")	43	32
Social Security Credit	20	20
Service Tax ("ISS")	2	11
Other	162	184
	4,742	4,999
Current	2,709	2,033
Non-current	2,033	2,966
	4,742	4,999

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	
	2021	2020	2021	2020	2021	2020
Related companies and joint ventures						
Cementos Avellaneda S.A.	3	3				
Banco Votorantim S.A.			298	36		
Citrosuco S.A. Agroindústria					80	126
Citrosuco GmbH					72	67
Supermix Concreto S.A.	24	22				
VTRM Energia Participações S.A	2	3	7	140	47	
Superior Building Materials LL		24				
Outros	10	12			26	3
	39	64	305	176	225	196
Current	39	64	305	176		
Non-current					225	196
	39	64	305	176	225	196

Liabilities	Trade payables		Dividends payable		Non-current liabilities	
	2021	2020	2021	2020	2021	2020
Parent company						
Hejoassu Administração S.A.			1520			
Related companies and joint ventures						
Superior Materials Holdings, LLC		11				
Cementos Avellaneda S.A.		1				
Others	8	6			75	11
	8	18	1,520		75	11
Non-controlling interests						
Current	8	18	104	44		
Non-current			1,624	44	75	11
	8	18	1,624	44	75	11

Profit and loss	Sales (purchases), net		Finance income (expenses), net	
	2021	2020	2021	2020
Related companies and joint ventures				
Cementos Especiales De Las Islas, S.A.		39	22	
Cementos Granadilla S.L.		26	20	
Citrosuco S.A. Agroindústria		29	20	
Midway Group, LLC		45	32	
Supermix Concreto S.A.		315	235	
Superior Materials Holdings, LLC		79	112	
Others		55	21	(15)
		588	462	(15)
				(4)

16 Electric power future contracts

The subsidiary 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 Votener’s own use or delivering self-produced energy, in accordance with the productive demands of the Company’s subsidiaries and, therefore, meets the definition of a financial instrument.

Another part of these transactions refers to energy purchases and sales that are not used in the production process of Votorantim companies and are traded in an active market, therefore, it meets the definition of a financial instruments, due to the fact that transactions are settled in energy, and promptly convertible into cash. Such contracts are accounted for as derivatives under IFRS 9 / CPC 48 and are recognized in the balance sheet of their subsidiaries at fair value, on the date the derivative is entered into, and are revalued at fair value on the balance sheet date.

The operations carried out by the indirect subsidiary Votener until 2023 in the Free Contracting Environment (“ACL”) were recognized at their fair value on the closing date of each operation. In 2021, the realization of the fair value of these operations, resulting from the physical settlement of the energy purchase and sale contracts, resulted in a gain of R\$ 11 (R\$ 83 in loss in 2020). These amounts were accounted for under “Other operating income (expenses), net”. The A-0/2014 contracts, which were traded in the Regulated Contracting Environment (“ACR”), were fully settled in December 2019.

The values quoted above have the following composition:

	ACL			Total	2021	2020
	Votorantim Cimentos	CBA (i)	Votorantim Energia			
Realization	(2)	28	(11)	15	15	105
Recognition		156		156	156	(159)
	(2)	184	(11)	171	171	(54)

The table below shows the composition of equity balances:

	ACL			Total	
	CBA	VGE	Votorantim Cimentos	2021	2020
Assets					
Current		845		845	49
Non-current		2,962		2,962	9
		3,807		3,807	58
Liabilities					
Current	(11)	(767)	(22)	(800)	(75)
Non-current	(24)	(2,993)	(46)	(3,063)	(210)
	(35)	(3,760)	(68)	(3,863)	(285)

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 and subsidiaries.

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, and 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.

(a) Breakdown

	Information on December 31, 2021		Equivalence result			Balance
	Equity	Net income (loss) for the semester	2021	2020	2021	2020
Investments accounted for under the equity method - Associates						
Cementos Avellaneda S.A.	1,380	247	2	(28)	825	717
Alunorte - Alumina do Norte S.A.	3,775	430	13	(1)	115	107
IMIX Empreendimentos Imobiliários Ltda.	14	6	1	2	3	3
Mineração Rio do Norte S.A.	900	(6)	(1)	(2)	90	92
Supermix Concreto S.A.	283	73	18	5	71	63
Jaguatirica Empreendimento Imobiliário SPE S.A.	226	7	11	6		112
Cementos Especiales de las Islas S.A.	239	54	27	20	120	113
Others			(13)		100	92
Joint ventures						
Citrosuco GmbH	5,973	368	135	249	4,043	3,628
Banco Votorantim S.A.	13,020	672	817	719	6,510	5,871
Citrosuco S.A. Agroindústria	(1,928)	(906)	(469)	(602)	(713)	(357)
Juntos Somos Mais Fidelização S.A.	88	(32)	(15)	(4)	40	8
VTRM Energia Participações S.A.	4,457	59	25	308	2,361	2,076
Others			34	55	126	173
			585	727	13,691	12,698

The balances of goodwill and surplus value are shown below, which are included in investment balances:

	Goodwill		Added value	
	2021	2020	2021	2020
Citrosuco GmbH	162	145	894	879
Citrosuco S.A. Agroindústria	194	194	57	73
Cementos Avellaneda S.A.	149	193		
Jaguatirica Empreendimento Imobiliário SPE S.A.				5
VTRM Energia Participações S.A.			132	136

Main consolidated companies	Percentage of total and voting capital		Headquarters	Main activity	
	2021	2020			
Subsidiaries					
Acerbrag S.A.	100.00	100.00	Argentina	Steel	
Votorantim FinCO GmbH	100.00	100.00	Austria	Trading	
Janssen Capital B.V.	100.00	100.00	Netherlands	Holding	
Companhia Brasileira de Alumínio	75.87	100.00	Brazil	Aluminum	
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	100.00	Brazil	Holding	
Nexa Recursos Minerais S.A.	64.67	64.67	Brazil	Zinc	
Votorantim Cement North America Inc.	100.00	100.00	Canada	Holding	
Acerías Paz del Río S.A.		91.20	Colombia	Steel	
Votorantim Cimentos EAA Inversiones, S.L.	100.00	100.00	Spain	Holding	
St. Marys Cement Inc.	83.00	100.00	USA	Cement	
St. Helen Holding II B.V.		100.00	Cayman Islands	Holding	
Hailstone Ltd.		100.00	British Virgin Islands	Holding	
Nexa Resources S.A.	64.67	64.67	Luxembourg	Holding	
Votorantim Cimentos International S.A.	100.00		Luxembourg	Holding	
Votorantim RE	100.00	100.00	Luxembourg	Insurance	
Compañía Minera Atacocha S.A.A.	58.85	58.85	Peru	Mining	
Nexa Resources Perú S.A.A.	51.77	51.77	Peru	Mining	
Nexa Resources Cajamarquilla S.A.	64.61	64.61	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	
Exclusive investment funds					
Fundo de Investimento Pentágono VC Multimercado – Crédito Priv	100.00	100.00	Brazil	Finance	
Fundo de Investimento Pentágono CBA Multimercado – Crédito Pr	100.00	100.00	Brazil	Finance	
Odesa Multimercado Crédito Privado	94.19	94.19	Brazil	Finance	
Odesa Multimercado Crédito Privado Fundo de investimento VC	100.00	100.00	Brazil	Finance	
Odesa Multimercado Crédito Privado Fundo de investimento VM	100.00	100.00	Brazil	Finance	
Investing entity	Percentage of total capital		Headquarters	Main activity	
	2021	2020			
Main non-consolidated companies					
Associates					
Alunorte - Alumina do Norte S.A.	Companhia Brasileira de Alumínio	3.03	3.03	Brazil	Mining
Mineração Rio do Norte S.A.	Companhia Brasileira de Alumínio	10.00	10.00	Brazil	Mining
Cementos Avellaneda S.A.	Votorantim Cimentos International S.A.	49.00	49.00	Argentina	Cement
IMIX Empreendimentos Imobiliários Ltda.	Silcar Empreendimentos e Participações Ltda.	25.00	25.00	Brazil	Mining
Supermix Concreto S.A.	Silcar Empreendimentos e Participações Ltda.	25.00	25.00	Brazil	Concrete
Cementos Especiales de las Islas S.A.	Votorantim Cimentos International S.A.	50.00	50.00	Spain	Cement
Joint ventures					
Banco Votorantim S.A.	Votorantim S.A.	50.00	50.00	Brazil	Finance
Citrosuco GmbH	Votorantim S.A.	50.00	50.00	Austria	Agribusiness
Citrosuco S.A. Agroindústria	Votorantim S.A.	50.00	50.00	Brazil	Agribusiness
Juntos Somos Mais Fidelização S.A.	Votorantim Cimentos S.A.	45.00	45.00	Brazil	Services
Hutton Transport Ltda.	St. Marys	25.00	25.00	Canada	Transportation
Midway Group, LLC.	St. Marys	50.00	50.00	USA	Cement
RMC Leasing, LLC.	St. Marys	50.00	50.00	USA	Equipment leasing
VTRM Energia Participações S.A.	Votorantim Geração de Energia S.A.	50.00	50.00	Brazil	Electric power

(b) Information about the companies' investes

The following is a summary of selected financial information of the principal associates and joint ventures as at December 31, 2021:

	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.	696	1,814	651	478	1,381	2,458	679	(87)	247	49%
Alunorte - Alumina do Norte S.A.	11,109		3,385	3,949	3,775	10,899	1,261	(578)	430	3%
IMIX Empreendimentos Imobiliários Ltda.	7	7			14	7	7		6	25%
Mineração Rio do Norte S.A.	622	2,876	921	1,677	900	1,555	174	(193)	(6)	10%
Supermix Concreto S.A.	369	419	294	211	283	1,939	99	(5)	73	25%
Cementos Especiales de las Islas S.A.	107	183	40	11	239	407	(23)	2	54	50%
Controladas em conjunto (Joint ventures)										
Citrosuco GmbH	6,426	1,078	1,143	387	5,974	4,572	275	150	368	50%
Banco Votorantim S.A. (i)	45,124	68,729	72,412	30,689	10,752	5,299	6,678		1,473	50%
Citrosuco S.A. Agroindústria	3,603	5,081	4,369	6,243	(1,928)	3,953	(628)	(291)	(906)	50%
Juntos Somos Mais Fidelização S.A.	137	47	95		89	87	(45)	2	(32)	45%
VTRM Energia Participações S.A.	555	4,749	28	818	4,457		(6)	15	59	50%
Hutton Transport Ltda.	35	32	11	16	40	78	14	(1)	12	25%
Midway Group, LLC.	39	27	15		51	142	19		19	50%
RMC Leasing LLC	4	26			30					50%

(i) As at December 31, 2021 and December 31, 2020, the investment included an adjustment to fair value in the amount of R\$ 495.

(c) Changes in investees

	2021	2020
Opening balance for the year	12,698	11,720
Equity in the results of investees	585	727
Foreign exchange variations	187	734
Increase	165	10
Dividends and interest on equity	(600)	(264)
Fair value of available-for-sale asset		(31)
Effect of acquisition of control of investee	(226)	
Cash flow hedge	377	(115)
VendaAmirys	246	192
Actuarial benefits	259	(272)
Others		(3)
Closing balance for the year	13,691	12,698

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.

(a) Breakdown and changes

										2021	2020
	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	2,396	12,753	43,573	1,739	282	4,464	1,247	742	574	67,770	57,552
Accumulated depreciation	(72)	(6,242)	(28,297)	(1,272)	(227)		(745)	(461)	(349)	(37,665)	(30,404)
Net opening balance for the year	2,324	6,511	15,276	467	55	4,464	502	281	225	30,105	27,148
Additions	46	16	134	1	1	4,790	351		7	5,346	3,516
Disposals	(241)	(14)	(553)	(6)		(2)			(3)	(819)	(136)
Depreciation	(5)	(527)	(1,878)	(113)	(14)		(43)	(34)	(41)	(2,655)	(2,467)
Depreciation		(7)	(78)				(5)			(90)	
Foreign exchange variation	28	125	103	25		49	20	15	136	501	2,664
Effect of subsidiaries included in (excluded from) consolidation (i)	(146)	1,779	1,215	81	4	(66)	(51)	3		2,819	514
Reversal (constitution) for impairment	(41)	(27)	590	1		5	72		(41)	559	(879)
Revision of estimated cash flow							(266)			(266)	96
Reclassification to assets classified as held-for-sale	(1)		(9)							(10)	(34)
Write-off by corporate transaction	(1)		(2)						(2)	(5)	(7)
Adjustments to operations in countries with a hyperinflationary economy											75
Transfers (ii)	37	411	1,637	150	2	(2,690)		25	21	(407)	(385)
Closing balance for the year	2,000	8,267	16,435	606	48	6,550	580	290	302	35,078	30,105
Cost	2,078	16,677	48,139	1,967	325	6,550	1,269	837	651	78,493	67,770
Accumulated depreciation	(78)	(8,410)	(31,704)	(1,361)	(277)		(689)	(547)	(349)	(43,415)	(37,665)
Net closing balance for the period	2,000	8,267	16,435	606	48	6,550	580	290	302	35,078	30,105
Average annual depreciation rates - %	1	4	9	20	10		5	9			

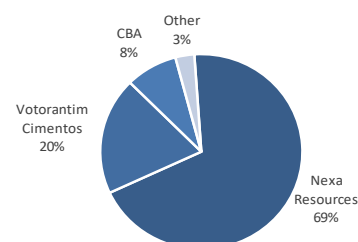
(i) Refers to the business combination operation of indirect subsidiary St. Marys, as described in Notes 1.1 (o) and 1.1 (v).

(ii) Transfers include the reclassification of “works in progress” in the group of property, plant, and equipment to “software”, “rights over natural resources” and other in the property, plant and equipment group.

(b) Construction in progress

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

Segment	2021	2020
Nexa Resources	4,532	2,741
Votorantim Cimentos	1,274	1,021
CBA	546	475
Long steel	42	97
Votorantim Energia	31	22
Other	125	108
	6,550	4,464



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

Nexa Resources	2021	2020
Expansion and modernization projects	3,410	2,006
<i>Sustaining</i>	859	605
Security, health and environment projects	213	112
Information technology	19	16
Other	31	2
	4,532	2,741

Votorantim Cimentos	2021	2020
<i>Sustaining</i>	613	357
Cement grinding - Pecém - Brazil	325	135
Modernization industry	77	31
<i>New production line in Sobral - CE</i>	75	63
Hardware and software	70	72
Geology and mining rights	55	35
New lines of co-processing	15	41
Environment and security	2	182
Other	42	105
	1,274	1,021

CBA	2021	2020
Rondon projects	172	115
Furnace refurbishment	100	66
Alumina factory project	53	13
Casting Projects	25	28
Plastic transformation projects	23	24
Security, health and environment projects	20	33
Mining projects	11	13
Projects oven rooms	9	121
Revitalization and adequacy of the plant	2	1
Other	131	61
	546	475

	2021	2020
Long steel		
<i>Sustaining</i>	34	86
Security projects, health and environment projects - Colombia	5	8
Other	3	3
	42	97
Energy		
Corumba - GO projects		21
Information technology	31	1
	31	22

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

Costs associated with software maintenance are amortized over their useful lives.

(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 (present value of cash flow from future payments).

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.

(a) Breakdown and changes

										2021	2020
	Rights over natural resources	Goodwill	Asset retirement obligation	Use of public assets	Contracts, customer relationships and agreements	Hydrological risk renegotiation (ii)	Software	Rights over trademarks and patents	Other	Total	Total
Opening balance for the year											
Cost	13,078	6,579	535	540	403		770	86	1,639	23,630	19,391
Accumulated amortization	(7,022)		(208)	(236)	(318)		(563)	(57)	(632)	(9,036)	(6,108)
Net opening balance for the year	6,056	6,579	327	304	85		207	29	1,007	14,594	13,283
Additions	179	257	4	222		448	4			1,114	22
Disposals	(1)	(11)					(2)		(2)	(16)	(25)
Amortization and depletion	(474)		(23)	(18)	(35)	(14)	(79)	(1)	(13)	(657)	(550)
Foreign exchange variation	430	382	10		3		2		62	889	3,369
Effect of subsidiaries included in consolidation (i)	245	(26)	93		257		1		37	607	6
Impairment											(1,898)
Changes in the interest rate			(32)							(32)	(13)
Reclassification of assets classified as held for sale	(1)		(5)							(6)	
Transfers (iii)	65						56		89	210	400
Closing balance for the year	6,499	7,181	374	508	310	434	189	28	1,180	16,703	14,594
Cost	15,468	7,181	611	776	711	448	847	88	1,212	27,342	23,630
Accumulated amortization	(8,969)		(237)	(268)	(401)	(14)	(658)	(60)	(32)	(10,639)	(9,036)
Net closing balance for the year	6,499	7,181	374	508	310	434	189	28	1,180	16,703	14,594
Average annual amortization and depletion rates - %	6		5	7	7		20				

(i) Refers to the business combination operation of indirect subsidiary St. Marys, as described in Notes 1.1 (o) and 1.1 (v).

(j) As a result of the application of Law No. 14,052/2020, the Company and its subsidiaries recognized an increase in the gross amount of R\$ 448 referring to the renegotiation of risk hydrological power generation, through the extension of the term of the concession right of the plants, as detailed in note 1.1 (l).

(k) (Transfers include the reclassification of "Works in progress" in the group of property, plant and equipment to "Softwares", "Rights over natural resources" and "Other" in the group of intangible assets.

(b) Goodwill on acquisitions

Accounting policy

The Company and its subsidiaries use the acquisition method to account for transactions classified as a business combination. The consideration transferred for the acquisition of a subsidiary is the fair value of the assets transferred, liabilities incurred and equity instruments. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration agreement when applicable. Acquisition-related costs are recorded in the income statement for the year as incurred. Identifiable assets acquired and liabilities assumed in a business combination are initially measured at fair values on the acquisition date. The Company and its subsidiaries recognize the non-controlling interest in the acquiree, both at fair value and at the proportional portion of the non-controlling interest in the fair value of the acquiree's net assets. The non-controlling interest to be recognized is determined on each acquisition.

	2021	2020
Votorantim Cimentos		
North America	2,494	2,163
Europe, Asia and Africa	1,953	1,831
Latin America	13	13
Brazil		
Cimento Vencemos do Amazonas Ltda.	64	64
Engemix S.A.	76	76
	4,600	4,147
Nexa Resources		
Latin America		
Nexa Resources Perú S.A.A.	1,735	1,616
Nexa Resources Cajamarquilla S.A.	516	481
Brazil		
Campos Novos Energia S.A.	26	26
Pollarix S.A.	1	1
	2,278	2,124
Long steels		
Latin America		
Acergroup S.A.	149	149
Acerholding S.A.	5	5
Acerbrag S.A.	1	1
	155	155
CBA		
Brazil		
Campos Novos Energia S.A.	31	31
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
	131	131

Holding and other

Latin America		
Votorantim Andina S.A.	16	16
Fazenda Bodoquena Ltda.	1	1
Jaguatirica Empreendimento Imobiliário SPE S.A.		5
	17	22
	7,181	6,579

(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.

The calculations of the value in use are based on cash flow projections, before the calculation of income tax and social contribution, and based on the financial budgets approved by Management for the projected period for the next five years. The amounts referring to cash flows, for the period exceeding five years, were extrapolated based on the estimated growth rates. The growth rate does not exceed the long-term average for the sector.

	Discount rate	
	2021	2020
Cement	5.80% to 15.20%	6.50% to 15.80%
CBA	7.96%	9.19%
Nexa Resources (i)	6.22% to 7.33%	7.22% to 7.82%
Long steels	9.25% to 18.89%	9.66% to 20.03%
Holding and other	9.35% to 10.80%	9.34% to 11.14%

- (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).

20 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.

(a) Breakdown and fair value

Type	Average annual charges	Current		Non-current		Total		Fair value	
		2021	2020	2021	2020	2021	2020	2021	2020
Local currency									
Debentures	116.19% CDI / IPCA + 4,08%	93	53	2,561	2,511	2,654	2,564	2,608	3,214
Export credit notes (i)	117.61% CDI	7	267	252	1,825	259	2,092	266	2,827
BNDES	TJLP + 2.76% / 1.86% Pré BRL / SELIC + 3.10% / IPCA + 5.31%	129	66	1,305	1,037	1,434	1,103	1,216	1,829
Development promotion agency	IPCA + 1.54%	9	1	69	34	78	35	79	47
FINAME	3.74% Pré BRL	9	10	4	14	13	24	12	25
Syndicated loan/bilateral agreements			38		553		591		591
Others	6.83% Pré BRL / TJLP + 0.86%	11	18	28	13	39	31	34	34
National Total		258	453	4,219	5,987	4,477	6,440	4,215	8,567
Foreign currency									
Eurobonds - USD	6.05% Pré USD	228	231	13,801	13,315	14,029	13,546	15,980	16,225
Export credit notes	LIBOR + 1.54% / 4.71% Pré USD	18	4	2,604	697	2,622	701	2,267	725
Loans - Law 4.131/1962 (ii)	LIBOR + 0.98% / 1.90% Pré USD	2	2	1,665	1,387	1,667	1,389	1,667	1,389
Eurobonds - BOB	5.38% Pré BOB	1	1	437	407	438	408	346	408
Syndicated loan/bilateral agreements	LIBOR + 0.99% / 5.55% Pré BOB / 9.33% Pré UYU / 14.65% Pré TRY / 1.43% Pré CAD / 1.65% EUR / 2.17 EURIBOR	81	90	1,655	1,320	1,736	1,410	1,762	1,535
Export prepayments			209		312		521		530
Working capital	IBR + 2.54% / 6.16% Pré COP / 0.98% Pré PEN	8	368	2	29	10	397	220	368
Development promotion agency			40		181		221		229
Other	5.90% Pré BOB / 0.98% Pré CAD	7	9	18	23	25	32	25	34
Foreign Total		345	954	20,182	17,671	20,527	18,625	22,267	21,443
Total		603	1,407	24,401	23,658	25,004	25,065	26,482	30,010
Current portion of long-term borrowing		237	488						
Interest on borrowing		351	358						
Short-term borrowing		15	561						
		603	1,407						

- (i) Some loan contracts are in the form of Export Credit Notes, which aim to finance export-related operations, and have linked swap contracts (derivative financial instrument), which aim to exchange exposure to the floating rate CDI in reais for a fixed rate in the US dollars, with the exchange of currency from reais to dollars.
- (ii) Loans related to Law 4131/1962 have swaps (derivative financial instruments) aimed at both the exchange of floating rates in LIBOR and pre-fixed to floating rates in CDI, as well as the exchange of currency, dollar to real. These swaps were contracted with the financial institution in conjunction with the loan (dollar-denominated debt + swap to reais in % of CDI). The terms and conditions of the loan and derivative are configured as a matched operation, so that economically the resulting is a debt in % of the CDI in reais. The difference in measurement between the two instruments (loan at amortized cost x derivative at fair value) generates an “accounting mismatch” in the result and to eliminate this effect, contracts made as of August 2015, were designated as “fair value”, the effect of this designation being the measurement of debt at fair value through profit or loss as per Note 25.
- (iii) The Company and its subsidiaries revised the methodology for calculating the fair value of debts for disclosure purposes, which started to use as a reference the individual credit risk rate of the Company and its subsidiaries, and no longer the rate consolidated benchmark, with the exception of the fair values of the bonds, which were calculated using as a reference unit prices published in the secondary market in all quarters.

Key:

BNDES	– National Bank for Economic and Social Development.
BRL	– Brazilian currency (Real).
BOB	– Bolivian.
CAD	– Canadian Dollar.
CDI	– Interbank Deposit Certificate.
CDOR	– Canadian Dollar Offered Rate.
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.
PEN	– Peruvian Sol.
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.
TND	– Tunisian Dinar.
TRY	– Turkish Lira.
USD	– US Dollar.
UYU	– Uruguayan Peso.

(b) Changes

	2021	2020
Opening balance for the year	25,065	19,755
New borrowing	4,414	11,772
Interest	1,395	1,314
Addition of borrowing fees, net of amortization	16	10
Fair value adjustment	(53)	26
Foreign exchange variation	1,387	4,345
Payments - interest	(1,410)	(1,263)
Payments - principal	(6,779)	(10,846)
Effect of subsidiary included in consolidation (i)	523	
Reclassification to liabilities related to assets held for sale		(55)
Adjustment through other comprehensive income (ii)	404	
Gain on debt renegotiation	42	6
Other		1
Closing balance for the year	25,004	25,065

(i) Refers to the business combination operation of indirect subsidiary St. Marys, as described in Notes 1.1 (o) and 1.1 (v).

(ii) Refers to the curve value of the combined financial instruments designated as hedge accounting.

(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.

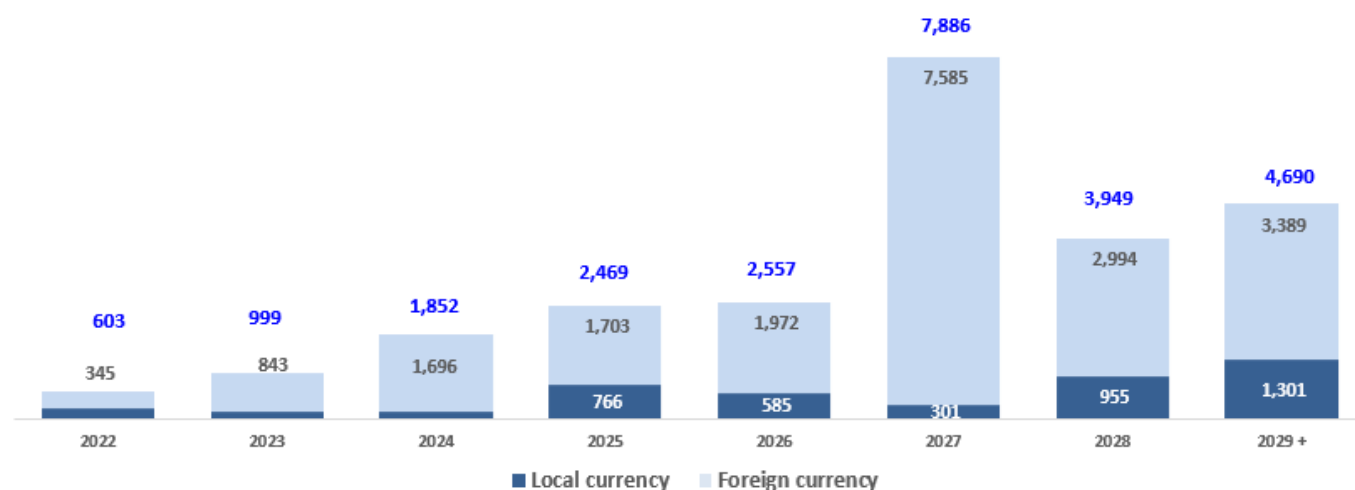
The main funding operations carried out during the year were as follows:

Date	Company	Type	Currency	Principal	Principal BRL	Maturity	Cost
Feb-21	St Marys Cement Inc.	Syndicated loan/bilateral agreements	CAD	(25)	(107)	2024	CDOR 03M + 0.99%
Mar-21	Votorantim Cimentos S.A.	Debentures	BRL	(450)	(450)	2026	CDI + 1.45%
Mar-21	Votorantim Cimentos N/NE S.A.	Debentures CRI	BRL	(136)	(136)	2033	IPCA + 4.4657%
Mar-21	Votorantim Cimentos S.A.	Debentures CRI	BRL	(264)	(264)	2033	IPCA + 4.4657%
Apr-21	St Marys Cement Inc.	Syndicated loan/bilateral agreements	CAD	(60)	(265)	2024	CDOR 03M + 0.99%
Apr-21	St Marys Cement Inc.	Syndicated loan/bilateral agreements	USD	(80)	(432)	2024	LIBOR 03M + 0.99%
May-21	Mineração Dardanelos Ltda	BNDES	BRL	(160)	(160)	2040	IPCA + 5.52%
Jun-21	Mineração Dardanelos Ltda	BNDES	BRL	(101)	(101)	2040	IPCA + 5.52%
Jun-21	Votorantim Cimentos S.A.	Loans - Law 4.131/1962	USD	(50)	(267)	2026	CDI + 1.50%
Jul-21	Votorantim Cimentos S.A.	Loans - Law 4.131/1962	USD	(50)	(249)	2026	CDI + 1.50%
Jul-21	Votorantim Cimentos EAA Inversiones S.L.	Syndicated loan/bilateral agreements	EUR	(35)	(215)	2026	EURIBOR 03M + 1.65%
Aug-21	Votorantim Cimentos EAA Inversiones S.L.	Syndicated loan/bilateral agreements	EUR	(40)	(246)	2026	EURIBOR 06M + 1.70%
Aug-21	Votorantim Cimentos EAA Inversiones S.L.	Syndicated loan/bilateral agreements	EUR	(50)	(307)	2026	1.65% pré
Oct-21	Votorantim Cimentos S.A.	Debentures	BRL	(500)	(500)	2028	CDI + 1.55%
Dec-21	Companhia Brasileira de Alumínio	Debentures	BRL	(230)	(230)	2029	CDI + 1.55%

The main amortizations made during the year were as follows:

Date	Company	Type	Currency	Principal	Principal BRL	Maturity	Observation
Jan-21	Nexa Recursos Minerais S.A.	Export Credit Note	BRL	(250)	(250)	2022	Pre payment
Mar-21	Votorantim Cimentos N/NE S.A.	Debentures	BRL	(450)	(450)	2023	Pre payment
Mar-21	Votorantim Cimentos S.A.	Debentures	BRL	(120)	(120)	2025	Pre payment
Mar-21	Votorantim Cimentos S.A.	Debentures	BRL	(280)	(280)	2023	Pre payment
Apr-21	Acerías Paz Del Río, S.A.	Working capital	COP	(86,000)	(129)	2022	Pre payment
Apr-21	McInnis Cement Inc	Syndicated loan/bilateral agreements	CAD	(37)	(162)	2022	Pre payment
Apr-21	McInnis Cement Inc	Syndicated loan/bilateral agreements	USD	(106)	(570)	2022	Pre payment
May-21	Nexa Resources	Pre payment export	USD	(20)	(106)	2023	
May-21	St Marys Cement Inc.	Syndicated loan/bilateral agreements	CAD	(25)	(109)	2024	Pre payment
Jun-21	Nexa Recursos Minerais S.A.	Export Credit Note	BRL	(245)	(245)	2022	Pre payment
Jun-21	Votorantim Cimentos EAA Inversiones S.L.	Syndicated loan/bilateral agreements	EUR	(45)	(264)	2025	Pre payment
Jun-21	Votorantim Cimentos S.A.	Debentures	BRL	(267)	(267)	2023	Pre payment
Jun-21	Nexa Resources	Development promotion agency	USD	(43)	(212)	2026	Pre payment
Jul-21	Nexa Resources	Pre payment export	USD	(80)	(412)	2023	Pre payment
Jul-21	Nexa Resources Perú S.A.A.	Syndicated loan/bilateral agreements	BRL	(477)	(477)	2025	Pre payment
Jul-21	Votorantim Cimentos S.A.	Debentures	BRL	(253)	(253)	2023	Pre payment
Sep-21	St Marys Cement Inc.	Syndicated loan/bilateral agreements	CAD	(25)	(105)	2024	Pre payment
Oct-21	St Marys Cement Inc.	Syndicated loan/bilateral agreements	CAD	(25)	(114)	2024	Pre payment
Oct-21	St Marys Cement Inc.	Syndicated loan/bilateral agreements	USD	(35)	(198)	2024	Pre payment
Oct-21	Votorantim Cimentos N/NE S.A.		USD	(75)	(409)	2024	Pre payment
Oct-21	Votorantim Cimentos S.A.	Debentures	BRL	(113)	(113)	2025	Pre payment
44501	Votorantim Cimentos EAA Inversiones S.L.	Syndicated loan/bilateral agreements	EUR	(25)	(154)	2027	Pre payment
44501	Votorantim Cimentos Internacional	Eurobonds	USD	(29)	(165)	2041	Pre payment
Dec-21	Companhia Brasileira de Alumínio	Eurobonds	USD	(50)	(285)	2024	Pre payment
Dec-21	Votorantim Cimentos EAA Inversiones S.L.	Syndicated loan/bilateral agreements	EUR	(20)	(128)	2026	Pre payment

(d) Maturity



(e) Breakdown by currency

	Current		Non-current		Total	
	2021	2020	2021	2020	2021	2020
USD	248	488	18,237	15,892	18,485	16,380
Real	258	453	4,219	5,987	4,477	6,440
Euro	(2)	3	1,147	954	1,145	957
Boliviano	35	26	600	577	635	603
Colombian peso		364		19		383
Turkish lira	9	22	8	29	17	51
Other	55	51	190	200	245	251
	603	1,407	24,401	23,658	25,004	25,065

(f) Breakdown by index

	Current		Non-current		Total	
	2021	2020	2021	2020	2021	2020
Local currency						
CDI	93	321	1,791	3,796	1,884	4,117
TJLP	28	19	98	99	126	118
TLP	68	48	1,100	795	1,168	843
Fixed rate	18	54	11	575	29	629
SELIC	37	11	129	148	166	159
IPCA	14		1,090	574	1,104	574
	258	453	4,219	5,987	4,477	6,440
Foreign currency						
Fixed rate	340	565	17,559	14,621	17,899	15,186
LIBOR	2	252	1,772	2,077	1,774	2,329
Euribor	3	3	850	954	853	957
Other		134	1	19	1	153
	345	954	20,182	17,671	20,527	18,625
	603	1,407	24,401	23,658	25,004	25,065

(g) Collateral

On December 31, 2021, the Company guaranteed or provided guarantees for the following balance of loans and financing.

Company	2021	2020
Votorantim Cimentos Internacional S.A.	3,246	3,226
Companhia Brasileira de Alumínio	722	907
Other	12	13
	3,980	4,146

In addition to these guarantees, the Company provides a guarantee for the R\$ 1,293 debt balance of the joint venture VTRM (December 31, 2020, R\$ 1,344).

On December 31, 2021, the amount of R\$ 1,111 was guaranteed by fixed assets due to the chattel mortgage (December 31, 2020, R\$ 879).

(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 complied with all of these covenants, as applicable.

21 Lease

(a) Changes in rights of use - IFRS 16

							2021	2020
	Land and improvements	Property, buildings and commercial rooms	Machinery, equipment and facilities	IT equipment	Vehicles	Vessels	Total	Total
Opening balance for the year								
Cost	122	235	340	40	291	321	1,349	1,050
Accumulated amortization	(30)	(103)	(147)	(33)	(164)	(75)	(552)	(237)
Net opening balance for the year	92	132	193	7	127	246	797	813
Remeasurement of principal		(2)					(2)	(1)
New contracts	13	51	105	3	48	47	267	118
Amortization	(15)	(43)	(97)	(1)	(92)	(77)	(325)	(276)
Disposals					(5)		(5)	(3)
Renegotiation of contracts		(1)			1			(8)
Effect of subsidiaries excluded in consolidation (i)	214	(3)	34		53	518	816	1
Reclassification to assets held for sale		(25)	(101)				(126)	
Foreign exchange variation	5	2	6		7	50	70	154
Constitution for impairment								(1)
	309	111	140	9	139	784	1,492	797
Cost	377	247	409	41	388	1,050	2,512	1,349
Accumulated amortization	(68)	(136)	(269)	(32)	(249)	(266)	(1,020)	(552)
Net closing balance for the year	309	111	140	9	139	784	1,492	797

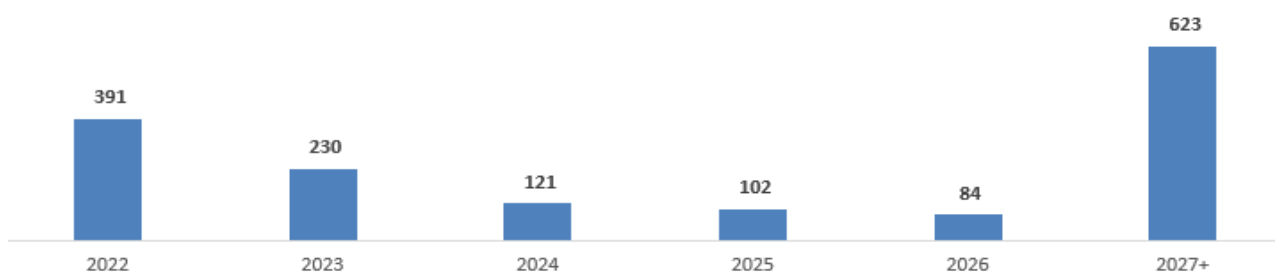
(i) Refers to the business combination operation of indirect subsidiary St. Marys, as described in Notes 1.1 (o) and 1.1 (v).

(b) Change in lease obligations - IFRS 16

	2021	2020
Opening balance for the year	858	841
Remeasurement of principal	(1)	7
New contracts	263	112
Amortization	(363)	(251)
Fair value adjustment	(18)	(7)
Renegotiation of contracts	2	(8)
Effect of subsidiaries included in consolidation (i)	820	1
Foreign exchange variation	(10)	163
Closing balance for the year	1,551	858
Current	330	235
Non-current	1,221	623
	1,551	858

(i) Refers to the business combination operation of the indirect subsidiary St. Marys, as described in Notes 1.1 (o) and 1.1 (v).

(c) Maturity profile



22 Confirming payables

The Company and its subsidiaries signed contracts with financial institutions, intending to allow suppliers in the domestic and foreign markets to anticipate their receipts. In these operations, suppliers transfer the right to receive the securities from the sale of goods to financial institutions.

Operations - Confirming payables	2021	2020
Domestic market	483	540
Foreign market	2,922	1,840
	3,405	2,380

23 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 the 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.

Income tax and current social contribution are shown net, by taxpayer entity, in liabilities when there are amounts to be paid, or in assets when the amounts paid in advance exceed the total due on the balance sheet 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.

(a) Reconciliation of Corporate Income Tax ("IRPJ") and Social Contribution on Net Income ("CSLL") expenses

The amounts of income tax and social contribution shown in the result for the periods ended on December 31 show the following reconciliation based on the Brazilian nominal rate:

	2021	2020
Profit (loss) before income tax and social contribution	10,317	(1,467)
Standard rates	34%	34%
Income tax and social contribution at standard rates	(3,508)	499
Adjustments for the calculation of income tax and social contribution at effective rates		
Credit referring to the non-levy of income tax and social contribution on undue payment (i)	252	
Equity	199	247
Difference related to the rate of companies abroad	181	(45)
Tax loss and negative basis without deferred tax constitution	(607)	(607)
Impairment of goodwill without deferred constitution		(351)
Impairment of fixed assets without deferred tax constitution (ii)	105	(524)
Recognition of deferred charges on exchange variation of fixed assets	(157)	(356)
Addition of Profit abroad IN 1520/14	(288)	(381)
IR credit non-external payment IN 1520/14	189	280
Deferred tax impairment	(42)	(98)
Permanent, net additions (exclusions)	244	(249)
IRPJ and CSLL calculated	(3,432)	(1,585)
Current	(1,801)	(900)
Deferred	(1,631)	(685)
IRPJ and CSLL on result	(3,432)	(1,585)
Effective rate - %	33%	-108%

- (i) During 2021, the subsidiary VCSA and the indirect subsidiary VCNNE recorded in accordance with accounting standards IAS 12/CPC 32 - "Taxes on income" and Technical Interpretation IFRIC 23/ICPC 22 - "Uncertainty on treatment of taxes on profit", provision of credits referring to the non-levy of IRPJ and CSLL on the amounts related to the SELIC rate received due to the repetition of tax overdue. VCSA clarifies that this provision refers only to the repetition of the tax overdue of actions that dealt with the exclusion of ICMS from the PIS and COFINS calculation basis. The decision of the Extraordinary Appeal (RE) judged by the Supreme Federal Court (STF) on September 24, 2021, has not yet become final and is pending a possible appeal. VCSA and VCNNE have filed lawsuits on the matter and considered it likely that these would have a favorable outcome.
- (j) In the third quarter of 2021, with the total liquidation of Votorantim Cement Corporation Limited, located in Hong Kong, the impairment cost previously recorded became tax deductible, on which the deferred income tax had not been constituted.

(b) Breakdown of deferred tax balances

	2021	2020
Tax credits on tax losses	2,437	1,843
Credit referring to the non-occurrence of IRCS on SELIC of undue payments (i)	252	
Tax credits on temporary differences		
Estimation for losses on investments, fixed and intangible assets	1,178	990
Tax, civil and labor provision	475	640
Tax benefit on goodwill	503	503
Deferred of gains on derivative instruments	282	814
Asset retirement obligation	181	228
Foreign exchange	25	318
Use of public assets	134	143
PPR - Provision for profit sharing	250	197
Estimation for inventory losses	117	118
Environmental liabilities	127	98
Provision for energy charges	67	57
Provision for social security obligations	111	57
Provision for loans	36	67
Financial instruments - firm commitment	19	77
Estimated asset disposals	14	14
Other tax credit	223	236
Tax debts on temporary differences		
Adjustment of useful lives of PP&E (depreciation)	(2,976)	(2,472)
Market value assets	(1,896)	(1,728)
Deferred of loss on derivative instruments	(1,122)	(88)
Adjustment to fair value - financial instruments	(358)	(623)
Goodwill amortization	(346)	(343)
Capitalized interest	(126)	(136)
Adjustment to present value	(121)	(151)
Fair value adjustments	(42)	(50)
Hydrological risk renegotiation (ii)	(133)	
Other tax debts	(439)	(451)
Net	(1,128)	358
Net deferred tax assets related to the same legal entity	2,696	2,731
Net deferred tax liabilities related to the same legal entity	(3,824)	(2,373)

(i) Refers to credit recognition, as described in Note 23 (a) (i).

(ii) Refers to the recognition of the renegotiation of the hydrological risk, according to the operation described in Note 1.1 (l).

(c) Effect of deferred income tax and social contribution on the result for the semester and on the result

	2021	2020
Opening balance for the year	358	1,254
Effects on the results for the year - continuing operations	(1,631)	(686)
Effect on other components of comprehensive income	(329)	(210)
Deferred income tax from subsidiary included in consolidation (i)	474	
Closing balance for the year	(1,128)	358

(i) It refers to the tax included in the consolidation for the business combination with McInnis, as described in Notes 1.1(o) and 1.1 (v).

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

	2021	Percentage
In 2022	18	1%
In 2023	12	0%
In 2024	77	3%
In 2025	167	7%
In 2026	586	24%
After 2027	1,577	65%
	2,437	100%

24 Provision

Accounting policy

The Company and its subsidiaries are 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 or disclosed, except when the Company and its subsidiaries consider their disclosure justified. The classification of losses between possible, probable and remote is based on Management's assessment, based on the opinion of its legal advisors.

Provision is measured at the present value of the expenditure expected to be required to settle the obligation using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in 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 it being impossible to return 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 is 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. These liabilities are recorded as provisions.

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.

(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 through having incurred an environmental cost which is not yet disbursed.

(a) Breakdown and changes

	2021					2020	
	Legal claims						
	Asset retirement obligation	Tax	Labor	Civil	Other	Total	Total
Opening balance for the year	2,185	766	311	264	60	3,586	3,137
Additions	356	153	210	52	53	824	512
Reversals	(10)	(96)	(125)	(34)	(23)	(288)	(319)
Judicial deposits, net of write-offs			3	(1)		2	(3)
Settlement in cash	(183)	(65)	(62)	(34)	(3)	(347)	(146)
Settlements with judicial deposits			(11)			(11)	(34)
Effect of subsidiaries included in consolidation (i)	30	(17)	(15)	(14)		(16)	
Present value adjustment	107					107	117
Monetary restatement	(5)	41	28	21	(1)	84	(19)
Foreign exchange variation	88		(1)	(2)	(2)	83	265
Revision of estimated cash flow	(273)					(273)	76
Closing balance for the year	2,295	782	338	252	84	3,751	3,586

(i) Refers to the business combination operation of the indirect subsidiary St. Marys, as described in Notes 1.1 (o) and 1.1 (v) and the sale of the investee APDR, as detailed in Note 1.1 (jj).

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

	2021			2020				
	Judicial deposits	Provision	Net amount	Outstanding judicial deposits (i)	Judicial deposits	Provision	Net amount	Outstanding judicial deposits (i)
Tax	(123)	905	782	172	(123)	889	766	145
Labor	(120)	458	338	23	(123)	434	311	22
Civil	(18)	270	252	4	(17)	281	264	3
Other	(1)	85	84	15	(1)	61	60	23
	(262)	1,718	1,456	214	(264)	1,665	1,401	193

(i) The Company and its subsidiaries have balances deposited in lawsuits classified by Management, following the indications of the legal advisors of the Company and its subsidiaries as of remote or possible loss, therefore, without the respective provision.

(c) Litigation in process with a likelihood of loss considered possible

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

	2021	2020
Tax	12,311	12,581
Civil	8,770	7,988
Environmental	606	527
Labor and social security	366	367
	22,053	21,463

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

The following are the main contingent liabilities related to tax proceedings in progress with the likelihood of possible loss, for which there is no provision recorded. In the table below we present an analysis of the relevance of these processes:

Nature	2021	2020
Tax assessment notice - "IRPJ/CSLL"	1,784	1,729
"IRPJ/CSLL" – Profits abroad	1,445	1,061
"ICMS" – Credit	837	833
Disallowances of "PIS/COFINS" credits	709	692
Disallowance of "IRPJ/CSLL" negative balance	571	385
Compensation for exploration for mineral resources ("CFEM")	501	385
Collection of ICMS due to divergences regarding the destination of the property	267	262
"ICMS" on electricity charges	234	226
"IRPJ/CSLL" – Transfer costs	195	191
Error in fiscal classification - Importation	191	186
"IRPJ/CSLL" – Deduction of expenses	7	78
Other lawsuits	5,570	6,553
	12,311	12,581

(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, 2020, the restated amount of the contingency was R\$ 580, of which R\$ 54 was assessed as probable and has a properly constituted provision, the amount of R\$ 224 was assessed as possible and the remainder as remote totaling the amount of R\$ 316.

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) supposedly incorrect amortization of goodwill.

In October 2018, the Company became aware of the lower court decision, which considered the challenge unfavorable. At the moment, the case awaits the judgment of the Voluntary Appeal by CARF. On December 31, 2021, the updated contingency amount was R\$ 1,562 and was assessed as possible.

(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 to R\$ 1,445 at December 31, 2021 (R\$ 1,061 as at December 31, 2020). 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\$ 836 as at December 31, 2021.

(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 at December 31, 2021 was R\$ 709. Currently, all the processes await administrative decisions.

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. On December 31, 2020, the amount of possible loss amounted to R\$ 501.

(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\$ 571 as at December 31, 2021.

Currently, the cases are awaiting 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, 2021 amounts to R\$ 180. 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, 2021, the amount in controversy of these discussions amounts to R\$ 234.

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.

(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 to the CAI, with the amount of R\$ 195 remaining under administrative discussion, restated up to December 31, 2021.

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 2021 amounts to R\$ 191.

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. As at December 31, 2021, the value of these assessments was R\$ 267.

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\$ 78. 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 awaited.

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

Nature	2021	2020
Public civil suit – Violation of the economic order	5,670	4,332
Administrative investigations carried out by the Secretariat of Economic Law	2,167	2,131
Other lawsuits	933	1,525
	8,770	7,988

(i) Civil class action – Violation of economic order

In January 2012, the State Public Ministry of Rio Grande do Norte (“MPE/RN”) filed a Public Civil Action (“ACP”) against the subsidiary VCSA, five other cement companies and entities representing the cement and concrete industry, for alleged violation of Brazilian competition law, based on a technical note from the Secretariat of Economic Law (“SDE”) of 2011.

MPE/RN made the following generic requests: (1) collective pain and suffering of R\$5,600 (corrected until January 2012), with solidarity between the defendants, to the National Fund for Diffuse Rights; (2) homogeneous individual property damage to consumers equivalent to 10% of the amounts paid for cement or concrete purchased by consumers of brands negotiated by the defendants between 2002 and 2006, for settlement and individual collection by each consumer; (3) a fine of 1% to 30% of the gross income of the last fiscal year, not less than the supposed benefits (art. 23, I, Law nº 8,884/1994); and (4) other requests, including: (4.i) prohibition, for a period of at least five years, from obtaining financing from governmental financial institutions or from participating in bidding processes by the federal, state or municipal, government entities or agencies; and (4.ii) determination not to grant federal taxes in installments and cancellation of tax incentives or public subsidies.

In September 2021, the preliminaries raised by the defendants were rejected. The production of expertise was also determined, establishing that the burden of proving the damage is on the MPE/RN. At the moment, the appeals against the decision that rejected the preliminaries are awaiting judgment. There has not yet been an appointment of a judicial expert.

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

In 2006, SDE initiated an investigation that culminated in the initiation of an administrative proceeding (“PA”) against several companies in the cement sector in Brazil, including the subsidiary VCSA, based on alleged anti-competitive practices, including the formation of a cartel with other companies to fix prices and quantities of products. In January 2011, a technical note was issued by SDE and after the investigation phase was completed, in July 2015, CADE reached the final terms of its decision, determining the following sanctions, among others, to the subsidiary VCSA: (1) fine of approximately BRL 1,564 (20% of gross annual sales in 2016, based on Law No. 12,529/11); (2) several structural penalties, in short: (2.i) sale of all its equity interests in other cement companies and concrete companies in Brazil, (2.ii) sale of 20% of its installed capacity of concreting services in the Brazil, in relevant markets where subsidiary VCSA has more than one concrete plant and (2.iii) sale of a specific cement asset, which, in CADE’s opinion, was directly related to the alleged anti-competitive practice; (3) other penalties which, in summary, include: (3.i) the prohibition of carrying out acts of concentration for a period of five years in the cement (among the convicted companies) and concrete (any act) markets and association (among the condemned companies) for greenfield projects in the cement, slag and concrete sectors; (3.ii) the prohibition of contracting with official financial institutions in the case of lines of credit subsidized by public programs or resources; (3.iii) recommendation to the Federal Revenue not to grant federal tax installments or cancel, in whole or in part, tax incentives or public subsidies already granted.

In October 2015, the subsidiary VCSA filed an ordinary action to annul (annulment action) the decision under the PA or, at least, to reduce the penalties applied. At the end of November 2015, an injunction was granted to suspend the effects of the decision in the PA, preventing CADE from demanding compliance with the obligations until judgment on the merits of the annulment action. CADE was summoned and presented its defense, while the subsidiary VCSA presented its reply in November 2016. Expert economic evidence was granted and, in May 2021, the judicial expert’s report was presented.

In November 2021, the parties presented their manifestation and technical opinion in relation to the expert report. At the moment, the decision of the court of first degree is awaited. The subsidiary VCSA classified the probability of loss in the annulment action as possible and, therefore, there are no amounts provisioned.

As at December 31, 2021, the updated amount of the possible contingency estimate (comprising exclusively of the fine) of the subsidiary VCSA was R\$2,167. The subsidiary VCSA emphasizes that this estimate does not represent any agreement with CADE's conviction and any of the penalties imposed in the PA, but a mere estimate for purposes of possible contingency reporting.

25 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:

Plants/Companies	Investor	Concession start date	Concession end date	Payment start date	Ownership interest	2021		2020		
						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%	157	695	60%	163	661
Salto do Rio Verdinho	Companhia Brasileira de Alumínio	aug-02	sep-37	oct-10	100%	6	31	100%	7	27
Itupararanga	Companhia Brasileira de Alumínio	nov-03	dec-23	jan-04	100%		1	100%		2
Piraju	Companhia Brasileira de Alumínio	dec-98	jan-34	feb-03	100%	1	8	100%	1	8
Ourinhos	Companhia Brasileira de Alumínio	jul-00	aug-35	sep-05	100%	1	7	100%	1	6
Baesa - Energética Barra Grande	Companhia Brasileira de Alumínio	jun-01	may-36	jun-07	15%	20	72	15%	11	54
Fumaça	Companhia Brasileira de Alumínio	jun-96	jun-16	(i)	100%	55	55			
França	Companhia Brasileira de Alumínio	jun-96	jun-16	(i)	100%	42	42			
Porto Raso	Companhia Brasileira de Alumínio	jun-96	jun-16	(i)	100%	27	27			
Serraria	Companhia Brasileira de Alumínio	jun-96	jun-16	(i)	100%	18	18			
Barra	Companhia Brasileira de Alumínio	jun-96	jun-16	(i)	100%	51	51			
Capim Branco I e Capim Branco II	Pollarix S.A.	aug-01	sep-36	oct-07	13%	2	16	13%	2	14
Picada	Pollarix S.A.	may-01	jun-36	jul-06	100%	27	111	100%	16	85
Enercan - Campos Novos Energia S.A	CBA Energia Participações S.A.	apr-00	may-35	jun-06	24%	3	11	24%	2	8
Enercan - Campos Novos Energia S.A	Pollarix S.A.	apr-00	may-35	jun-06	21%	3	9	21%	2	7
Pedra do Cavalo	Votorantim Cimentos N/NE S.A.	mar-02	apr-37	apr-06	100%	95	713	100%	99	625
						508	1,867		304	1,497
Current							175			97
Non-current						508	1,692		304	1,400
						508	1,867		304	1,497

(i) Concession extension process not concluded.

26 Pension plan and post-employment health care benefits

Accounting policy

The Company, through its subsidiaries abroad (VCNA, VCEAA, and Artigas) and in Brazil (VCNNE) and Votocel Investimentos Ltda. ("Votocel"), 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.

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

	2021	2020
Rights recorded in the balance sheet with:		
Pension plan benefits	215	139
Assets recorded in the balance sheet	215	139
Obligations recorded in the balance sheet with:		
Pension plan benefits	272	240
Post-employment healthcare benefits	291	284
Liabilities recorded in the balance sheet	563	524
Expenses recognized in the statement of income with:		
Pension plan benefits	7	40
Post-employment healthcare benefits	16	16
	23	56
Remeasurement with:		
Pension plan benefits - gross amount	(42)	(20)
Deferred income tax and social contribution	(23)	
Deferred income tax and social contribution	12	11
Pension plan benefits - net amount	(53)	(9)

(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:

	2021	2020
Present value of funded obligations	1,017	1,266
Fair value of plan assets	(1,079)	(1,238)
Deficit of funded plans	-	62
Present value of non-funded obligations	383	348
Total deficit of defined benefit pension plans	321	376
Impact of the minimum funding requirement/assets ceiling	27	9
Assets and liabilities in the balance sheet	348	385

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

	2021			2020		
	Present value of funded and unfunded obligations	Fair value of plan assets	Total	Impact of the minimum requirement of the funds/asset	Total	Total
Opening balance for the year	1,612	(1,237)	375	10	385	327
Current service cost	11		11		11	11
Finance cost (income)	38	(28)	10	1	11	30
Past service cost and curtailments	1		1		1	(3)
	50	(28)	22	1	23	38
Re-measurements:						
Return on assets, excluding the amount included as finance income		16	16		16	(62)
Losses (gains) arising from changes in demographic assumptions						(5)
Losses (gains) arising from changes in financial assumptions	(96)		(96)		(96)	108
Losses arising from experience	(2)		(1)		(1)	(19)
Changes in the asset ceiling, excluding the amount included as finance cost				17	17	(6)
	(98)	16	(81)	17	(64)	16
Foreign exchange gains (losses)	99	(82)	17		17	64
Contributions:						
Employer		6	6		6	(10)
Payments of the plans:						
Payment of benefits	(94)	75	(19)		(19)	(50)
	0	0	0	0	0	0
Closing balance for the year	1,569	(1,250)	320	28	348	385

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

	2021						2020				
	Brazil	Europe	North America	Uruguai	Total	Brazil	Europe	North America	South America	Colombia	Total
Present value of the obligation	202	16	798		1,016	48	17	869		357	1,291
Fair value of plan assets	(68)		(1,011)		(1,079)	(59)		(1,006)		(199)	(1,264)
	134	16	(213)		(63)	(11)	17	(137)		158	27
Present value of non-financial obligations		78	302	4	384		77	267	4		348
Impact of the minimum requirement of the funds/asset ceiling	27				27	10					10
	161	94	89	4	348	(1)	94	130	4	158	385

The actuarial assumptions used were as follows:

	2021						2020					
	Brazil	Europe	North America	South America	Total	Brazil	Europe	North America	South America	Colombia	Total	
Discount rate	8.55%	12.55%	2.50%	10.02%	8.41%	6.88%	8.40%	2.50%	12.28%	6.50%	7.31%	
Inflation rate	3.25%	9.93%	2.00%		5.06%	4.00%	3.90%	2.50%	0.00%	0.00%	2.60%	
Future salary increases	2.82%	8.00%	0.00%	0.00%	5.41%	2.77%	8.00%	2.50%	8.28%		4.31%	
Increases in future pension plans	3.25%				3.92%	4.00%				3.50%	3.75%	

(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.

27 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 and retained earnings 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) The 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, 2021 and December 31, 2020, the fully subscribed and paid-up capital of the Company was R\$ 28,656, consisting of 18,278,789 thousand common shares.

(b) Dividends

During the one-year period ended December 31, 2021, the Company decided to pay its parent company Hejoassu Administração S.A. the amount of BRL 1,016 corresponding to dividends related to part of the balance of the "Profit reserves" account accumulated until December 31, 2021 and also resolved on the mandatory minimum dividends for the year 2021, in the amount of BRL 1,520 as detailed in the chart below.

	2021	2020
Net income (loss) attributable to controlling shareholders	6,400	(1,636)
Legal reserve	(320)	
Dividend calculation basis	6,080	
Interim dividends	1,520	
Reversed dividends		(40)
Mandatory dividends distributed	1,016	800
Total distributions	1,016	760
Percentage of mandatory minimum dividend on net income for the year	25%	25%

(c) Carrying value adjustments

Note	Attributable to the owners of the Company								
	Currency translation of investees located	Hedge accounting for net investments abroad, net of taxes	Hedge accounting for the operations of subsidiaries, net of taxes	Fair value of available-for-sale financial assets	Shares fair value	Remeasurement of retirement benefits, net of taxes	Adjustment for hyperinflationary economies	Other comprehensive income	Total
At January 1, 2020	6,430	(4,992)	(15)	235	(121)	(187)	759	(161)	1,948
Currency translation of investees located abroad	3,062								3,062
Hedge accounting for net investments abroad, net of taxes		(289)							(289)
Hedge accounting for the operations of subsidiaries, net of taxes			(636)						(636)
Remeasurement of retirement benefits, net of taxes						(169)			(169)
Fair value of financial assets through other comprehensive income				(25)					(25)
Adjustment for hyperinflationary economies							426		426
Adjustment to the fair value of shares, net of taxes					712				712
Realization of other comprehensive results on the sale of investments					(173)				(173)
Participation in other comprehensive results of investees								(2)	(2)
Fair value - measurement of the credit risk of investees								25	25
At December 31, 2020	9,492	(5,281)	(651)	210	418	(356)	1,185	(138)	4,879
At January 1, 2021	9,492	(5,281)	(651)	210	418	(356)	1,185	(138)	4,879
Currency translation of investees located abroad	621								621
Hedge accounting for net investments abroad, net of taxes		(12)							(12)
Hedge accounting for the operations of subsidiaries, net of taxes			601						601
Adjust the fair value of the shares, net of the tax					144				144
Remeasurement of retirement benefits, net of taxes						37			37
Adjustment for hyperinflationary economies					(3)				(3)
Fair value - measurement of the credit risk of investees								583	583
Realization of other comprehensive results on the sale of investments								(9)	(9)
Participation in other comprehensive results of investees								(58)	(58)
At December 31, 2021	10,113	(5,293)	(50)	207	297	(319)	1,768	(205)	6,518

(d) Non-controlling interests

	2021	2020
Nexa Resources S.A.	2,788	2,604
St Marys Cement Inc.	1,544	
Companhia Brasileira de Alumínio	1,040	
Nexa CJM	731	717
Nexa Perú	435	332
Cementos Artigas S.A.	261	240
Yacuces, S.L.	162	130
Itacamba Cimento S.A.	130	100
Acerías Paz Del Rio S.A.		78
Other	283	254
	7,374	4,455

28 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 recognize revenue when: (i) the amount of revenue can be measured reliably; (ii) is 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 their 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 recognition of revenue results from the amounts to be billed to customers in accordance with the methodology and prices established in each contract, adjusted to the amounts of energy actually generated, when applicable. These adjustments result from the CCEE mechanism that verifies the net exposure of the subsidiary Votener (sales, generation, purchases and consumption), called energy balance.

The mechanisms explained above result in the recognition of gross revenue, at its fair value, presented net of any sales tax, to the extent that it is probable that economic benefits will flow to the indirect subsidiary Votener.

(a) Reconciliation of revenue

	2021	2020
Gross revenue		
Sales of products - domestic market	26,810	17,300
Sales of products - foreign market	26,009	19,571
Supply of electrical energy	3,131	3,140
Services provided	853	668
	56,803	40,679
Taxes on sales, services and other deductions	(7,795)	(5,296)
Net revenue	49,008	35,383

(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

	2021	2020
Brazil	23,905	17,508
United States	5,760	4,740
Peru	4,182	2,537
Argentina	2,668	1,491
Canada	2,549	1,789
Spain	1,117	789
Switzerland	902	540
Turkey	780	480
Morocco	702	546
Uruguay	585	513
Luxembourg	526	388
Bolívia	455	357
Tunisia	387	337
Japan	315	242
Singapore	309	399
Chile	307	259
Colombia	301	187
Taiwan	289	148
Austria	241	180
Italia	122	78
Equador	84	46
Belgium	74	157
Alemanha	59	185
Other countries	2,389	1,487
	49,008	35,383

(ii) Revenue by currency

	2021	2020
Real	22,867	17,052
US dollar	17,563	12,372
Canadian Dollar	2,545	1,788
Argentine pesos	2,119	1,186
Euro	1,174	922
Moroccan Dirham	701	546
Turkish lira	594	351
Uruguayan peso	545	470
Bolivian	432	355
Dinars tunisia	386	337
Other currencies	82	4
	49,008	35,383

29 Expenses by nature

	2021			Total
	Cost of products sold and services rendered	Selling	General and administrative	
Raw materials, inputs and consumables	24,301	32	6	24,339
Employee benefit expenses (a)	3,257	481	1,523	5,261
Depreciation, amortization and depletion	3,466	48	123	3,637
Transportation expenses	3,157	67	5	3,229
Outsourced services	1,928	83	797	2,808
Other expenses	1,825	190	387	2,402
	37,934	901	2,841	41,676

	2020			Total
	Cost of products sold and services rendered	Selling	General and administrative	
Raw materials, inputs and consumables	16,393	25	1	16,419
Employee benefit expenses (a)	3,072	436	1,196	4,704
Depreciation, amortization and depletion	3,114	47	132	3,293
Transportation expenses	2,518	48	2	2,568
Outsourced services	1,617	83	747	2,447
Other expenses	1,710	250	425	2,385
	28,424	889	2,503	31,816

(a) Employee benefit expenses

	2021	2020
Salaries and bonuses	3,373	2,873
Payroll charges	1,151	1,122
Benefits	737	709
	5,261	4,704

(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.

(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”.

30 Other operating expenses, net

	Note	2021	2020
Gain on investment sale	1.1 (b)	629	427
Loss on sale of fixed and intangible assets, net		(104)	(74)
Electric power futures contracts		171	(54)
Gain on purchase of investee		243	366
Tax benefits		551	175
Income from rentals and leasing		76	59
Net income from waste sale		32	60
Hedge gain		42	11
Tax recovery		219	174
Expenses on not activatable projects		(647)	(320)
Judicial provisions, net		(232)	(191)
Reversal (constitution) of impairment of property, plant and equipment and intangible assets	18, 19 and 21	559	(2,778)
Royalties on natural resources		(45)	(55)
Impairment of investments	1.1 (jj)	(827)	
Other expenses, net		(62)	(94)
		605	(2,294)

31 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 will 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 to 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 will be recognized in the statement of income in the year in which they arise.

	2021	2020
Finance income		
Interest on financial assets	70	211
Income from financial investments	299	211
Fair value of borrowing and financing	163	72
Monetary updating of assets	52	27
Reversal of monetary restatement of provision	144	75
Discounts obtained	33	18
Other finance income	147	46
	908	660
Finance costs		
Interest on borrowing	(1,546)	(1,386)
Capitalization of borrowing costs	110	7
Award paid in bond buyback (tender offer)	(70)	(190)
Monetary restatement of provision	(326)	(228)
Fair value of borrowing and financing	(127)	(167)
Borrowing fees	(48)	(58)
Interest and monetary restatement - Use of public assets	(227)	(324)
Adjustment to present value CPC 12	(161)	(135)
Commissions on financial operations	(82)	(147)
Debt renegotiation charges	(42)	(17)
Charges on discount transactions	(70)	(47)
Interest on silver streaming	(37)	(32)
"PIS/COFINS" on financial results	(76)	(38)
Income tax on remittances of interest abroad	(28)	(42)
Other finance costs	(284)	(175)
	(3,014)	(2,979)
Results of derivative financial instruments	4,386	(121)
	4,386	(121)
Foreign exchange variation, net	(505)	(1,027)
Finance results, net	1,775	(3,467)

32 Tax benefits

The Company 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.

33 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.

34 Assets and liabilities classified as held for sale

Accounting policy

Assets are classified as assets held for sale when their carrying amount is recovered, mainly through sale, and when the sale is considered highly probable.

The asset or group of assets to be classified as held for sale shall be measured on initial recognition at the lower of what its carrying amount would have been had it not been so classified and the fair value less costs to sell. If the asset or group of assets is acquired as part of a business combination, it must be measured at fair value less costs to sell. When the sale is expected to occur after one year, the entity shall measure the selling expenses at present value. Any increase in the present value of selling expenses that results from the passage of time must be presented in profit or loss as a financial expense.

Depreciation of assets held for trading ceases when a group of assets is designated as held for sale. The assets and liabilities of the group of discontinued assets are presented in single lines in assets and liabilities.

The breakdown by company of assets (related liabilities) held for sale is shown below:

	December 31, 2021	
	Assets	Liabilities
Acerias Paz del Rio	1,251	1,153
Votorantim Cimentos S.A.	25	10
Companhia Nexa Resources Peru S.A.A	5	0
	1,281	1,163

The result of subsidiary Acerias Paz del Rio, for the year ended December 31, 2021, in the amount of R\$235, was reclassified from "Continuing operations" to "Discontinued operations" according to the following table:

	2021
Continuing operations	
Net revenue from products sold and services rendered	1,995
Cost of products sold and services rendered	(1,520)
Gross profit	475
Operating expenses (income)	
Selling	(53)
General and administrative	(113)
Other operating income (expenses), net	70
	(96)
Operating profit before equity results and finance results	379
Finance results, net	
Finance income	25
Finance costs	(101)
	(76)
Profit before income tax and social contribution	303
Income tax and social contribution	
Current	(3)
Deferred	(65)
Profit from continuing operations	235

35 Supplementary information – Business segments

To provide a higher level of information, the Company opted to disclose financial information by business segments, considering the elimination of balances and transactions between companies in the same segment, before: (i) the eliminations between business segments; and (ii) the elimination of investments held by holding companies.

Additionally, the eliminations and reclassifications between the companies are highlighted, so that the net result corresponds to the consolidated financial information of the VSA, disclosed as supplementary information. This supplementary information is not intended to be in accordance and is not required by 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:

	Note	Industrial segments	
		2021	2020
Adjusted EBITDA			
Net income (loss) for the year		7,120	(3,066)
Plus (less):			
Continuing operations			
Equity in the results of investees		(460)	(715)
Net financial results		(1,803)	3,462
Income and social contribution taxes		3,326	1,593
Depreciation, amortization and depletion		3,637	3,180
EBITDA before other additions and exceptional items		11,820	4,454
Plus :			
Dividends received		189	142
Extraordinary items			
Discontinued operations		(235)	13
Gain on sale of investments, net		(629)	(427)
Impairment of property, plant, equipment and intangible assets		(36)	2,802
Provision for impairment of investments		827	
Net gain from the advantageous purchase of an investee		(243)	(366)
Other		(234)	119
Adjusted annualized EBITDA (A)		11,459	6,737
Net debt			
Borrowing	20	25,004	25,065
Lease liabilities		1,551	858
Cash and cash equivalents, financial investments and derivative financial instruments		(16,601)	(14,662)
Net debt (B)		9,954	11,261
Gearing ratio (B/A)		0.87	1.67

(b) Balance sheet - business segments

											2021
	Votorantim Cimentos	Nexa Resources	CBA	Long steels (*)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Eliminations	Total, consolidated
Assets											
Current											
Cash and cash equivalents, financial investments and derivative financial instruments	5,399	4,349	1,797	132	79	5,080		16,836	82		16,918
Derivative financial instruments - put option						4,704		4,704			4,704
Trade receivables	1,344	1,326	698	87	380	70	(226)	3,679			3,679
Inventory	2,862	2,079	1,592	366		268		7,167			7,167
Taxes recoverable	1,038	446	294	10	29	785		2,602	107		2,709
Dividends receivable			1		72	955	(1,020)	8	297		305
Electric power futures contracts					845			845			845
Other assets	285	185	72	86	4	356	(44)	944			944
	10,928	8,385	4,454	681	1,409	12,218	(1,290)	36,785	486		37,271
Assets classified as held-for-sale	25	5		1,151		100		1,281			1,281
	10,953	8,390	4,454	1,832	1,409	12,318	(1,290)	38,066	486		38,552
Non-current assets											
Long-term receivables											
Financial investments and derivative financial instruments	818	1	28					847			847
Financial instruments - Shares		21				2,780		2,801			2,801
Taxes recoverable	767	339	685	14	1	227		2,033			2,033
Related parties	4	25	57			152	(13)	225			225
Deferred income tax and social contribution	912	939	254	26		564		2,695	1		2,696
Judicial deposits	147	30	17			20		214			214
Electric power futures contracts					2,962			2,962			2,962
Other assets	691	40	50			115	20	916			916
	3,339	1,395	1,091	40	2,963	3,858	7	12,693	1		12,694
Investments	1,085	1	205		3,376	37,808	(28,607)	13,868	6,510	(6,687)	13,691
Advance for investment property						58		58			58
Property, plant and equipment	18,244	10,728	5,151	496	33	426		35,078			35,078
Intangible assets	9,706	6,995	998	6	27	4	(1,033)	16,703			16,703
Right to use assets arising from leases	1,352	71	43	12	2	12		1,492			1,492
Biological assets			1			89		90			90
	33,726	19,190	7,489	554	6,401	42,255	(29,633)	79,982	6,511	(6,687)	79,806
Total assets	44,679	27,580	11,943	2,386	7,810	54,573	(30,923)	118,048	6,997	(6,687)	118,358

(*) Relates to long steel operations in Argentina.

Notes to the consolidated financial statements
at December 31, 2021
All amounts in millions of reais unless otherwise stated

VOTORANTIM

	2021										
	Votorantim Cimentos	Nexa Resources	CBA	Long steels (*)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Eliminations	Total, consolidated
Liabilities and equity											
Current liabilities											
Borrowing	262	261	69			11		603			603
Lease liabilities	201	91	27	5	2	4		330			330
Derivative financial instruments	198	127	231					556			556
Confirming payable	1,546	1,301	558					3,405			3,405
Trade payables	3,606	2,298	656	204	377	19	(246)	6,914			6,914
Salaries and payroll charges	629	424	162	27	27	108		1,377			1,377
Taxes payable	349	360	78	111	9	603		1,510	117		1,627
Advances from customers	40	33	48	41	9	17		188			188
Dividends payable	844	100	142		74	1,520	(1,056)	1,624			1,624
Use of public assets	50	51	74					175			175
Electric power futures contracts	22		11		767			800			800
Deferred revenue - silver streaming		185						185			185
Other	1,103	209	73	4		139	(1)	1,527	2		1,529
	8,850	5,440	2,129	392	1,265	2,421	(1,303)	19,194	119		19,313
Liabilities related to assets held-for-sale	12			1,151				1,163			1,163
	8,862	5,440	2,129	1,543	1,265	2,421	(1,303)	20,357	119		20,476
Non-current liabilities											
Borrowing	12,132	9,222	3,037			10		24,401			24,401
Lease liabilities	1,167	19	18	7		10		1,221			1,221
Derivative financial instruments	415	1	110					526			526
Deferred income tax and social contribution	1,365	1,135	40	26	52	1,038		3,656	168		3,824
Related parties	23		62		2	3	(15)	75			75
Provision	1,292	1,444	820	5	2	188		3,751			3,751
Use of public assets	662	86	944					1,692			1,692
Pension plan	399			1		163		563			563
Electric power futures contracts	46		24		2,993			3,063			3,063
Deferred revenue - silver streaming		637						637			637
Other	433	220	43	2	25	107	11	841			841
	17,934	12,764	5,098	41	3,074	1,519	(4)	40,426	168		40,594
Total liabilities	26,796	18,204	7,227	1,584	4,339	3,940	(1,307)	60,783	287	(1,307)	61,070
Equity											
Total equity attributable to owners of the Company	15,587	7,523	4,501	499	3,471	50,633	(32,324)	49,890	6,710	(6,686)	49,914
Non-controlling interests	2,296	1,853	215	303			2,708	7,375		(1)	7,374
Total equity	17,883	9,376	4,716	802	3,471	50,633	(29,616)	57,265	6,710	(6,687)	57,288
Total liabilities and equity	44,679	27,580	11,943	2,386	7,810	54,573	(30,923)	118,048	6,997	(6,687)	118,358

(*) Relates to long steel operations in Argentina.

c) Statement of income – business segments

										2021	
	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	22,296	14,140	8,423	2,119	4,010	117	(2,097) (**)	49,008			49,008
Cost of products sold and services rendered	(17,084)	(10,616)	(6,799)	(1,516)	(3,960)	(56)	2,097 (**)	(37,934)			(37,934)
Gross profit	5,212	3,524	1,624	603	50	61		11,074			11,074
Operating income (expenses)											
Selling	(700)	(132)	(42)	(21)		(6)		(901)			(901)
General and administrative	(1,243)	(757)	(338)	(45)	(117)	(329)		(2,829)	(12)		(2,841)
Other operating income (expenses), net	365	(238)	98		(11)	391		605			605
	(1,578)	(1,127)	(282)	(66)	(128)	56		(3,125)	(12)		(3,137)
Operating profit (loss) before equity results and finance results	3,634	2,397	1,342	537	(78)	117		7,949	(12)		7,937
Result from equity investments											
Equity in the results of investees	62		13		268	3,409	(3,312)	440	817	(672)	585
Realization of comprehensive results on the sale of investments						20		20			20
	62		13		268	3,429	(3,312)	460	817	(672)	605
Finance results, net											
Finance income	429	191	110	25	14	134		903	5		908
Finance costs	(1,565)	(789)	(462)	(90)	(21)	(54)		(2,981)	(33)		(3,014)
Results of derivative financial instruments	37	(31)	(70)			4,450		4,386			4,386
Foreign exchange gains (losses), net	(398)	(116)	(75)	27		57		(505)			(505)
	(1,497)	(745)	(497)	(38)	(7)	4,587		1,803	(28)		1,775
Profit (loss) before income tax and social contribution	2,199	1,652	858	499	183	8,133	(3,312)	10,212	777	(672)	10,317
Income tax and social contribution											
Current	(167)	(658)	(68)	(213)		(611)		(1,717)	(84)		(1,801)
Deferred	(406)	(155)	48	17	1	(1,114)		(1,609)	(21)	(1)	(1,631)
Profit (loss) from continuing operations	1,626	839	838	303	184	6,408	(3,312)	6,886	672	(673)	6,885
Discontinued operations											
Loss from continuing operations				235				235			235
Profit (loss) for the period from continuing operations	1,626	839	838	538	184	6,408	(3,312)	7,121	672	(673)	7,120
Profit (loss) attributable to the owners of the Company	1,343	682	743	383	184	6,408	(3,341)	6,402	671	(673)	6,400
Profit (loss) attributable to non-controlling interests	283	157	95	155			29	719	1		720
Profit (loss) for the period	1,626	839	838	538	184	6,408	(3,312)	7,121	672	(673)	7,120

(**) Relates to long steel operations in Argentina.

(**) Relates substantially to the net revenue from electric energy operations from Votener to CBA and VCSA.

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VOTORANTIM

	Votorantim Cimentos	Nexa Resources	CBA	Long steels (*)	Votorantim Energia	Holding and other	Eliminations	Total, industrial segments	Votorantim Finanças	Eliminations	2020 Total, consolidated
Continuing operations											
Net revenue from products sold and services rendered	16,740	10,097	5,411	1,180	3,588	76	(1,710) (**)	35,382		1	35,383
Cost of products sold and services rendered	(12,816)	(8,059)	(4,831)	(809)	(3,571)	(48)	1,710 (**)	(28,424)			(28,424)
Gross profit	3,924	2,038	580	371	17	28		6,958		1	6,959
Operating income (expenses)											
Selling	(708)	(129)	(37)	(12)		(3)		(889)			(889)
General and administrative	(1,061)	(673)	(284)	(35)	(101)	(335)		(2,489)	(14)		(2,503)
Other operating income (expenses), net	(113)	(2,906)	175	(3)	84	469		(2,294)			(2,294)
	(1,882)	(3,708)	(146)	(50)	(17)	131		(5,672)	(14)		(5,686)
Operating profit (loss) before equity results and finance results	2,042	(1,670)	434	321		159		1,286	(14)	1	1,273
Result from equity investments											
Equity in the results of investees	51		(3)		445	(1,411)	1,633	715	719	(707)	727
Finance results, net											
Finance income	281	80	136	17	12	143	(11)	658	3	(1)	660
Finance costs	(1,349)	(880)	(415)	(131)	(20)	(188)	11	(2,972)	(7)		(2,979)
Results of derivative financial instruments	279	2	1			(403)		(121)			(121)
Foreign exchange gains (losses), net	(277)	(545)	(215)	7		3		(1,027)			(1,027)
	(1,066)	(1,343)	(493)	(107)	(8)	(445)		(3,462)	(4)	(1)	(3,467)
Profit (loss) before income tax and social contribution	1,027	(3,013)	(62)	214	437	(1,697)	1,633	(1,461)	701	(707)	(1,467)
Income tax and social contribution											
Current	(375)	(321)	(52)	(108)	(1)	(43)		(900)			(900)
Deferred	(215)	213	(766)	(7)	(19)	101		(693)	7		(686)
Profit (loss) for the year from continuing operations	437	(3,121)	(880)	99	417	(1,639)	1,633	(3,054)	708	(707)	(3,053)
Continued operations											
Loss from discontinued operations	1			(13)				(12)			(12)
Profit (loss) for the semester attributed to shareholders	438	(3,121)	(880)	86	417	(1,639)	1,633	(3,066)	708	(707)	(3,065)
Profit (loss) attributable to the owners of the Company	393	(2,646)	(927)	56	425	(1,639)	2,702	(1,636)	707	(707)	(1,636)
Profit (loss) attributable to non-controlling interests	45	(475)	47	30	(8)		(1,069)	(1,430)	1		(1,429)
Profit (loss) for the year	438	(3,121)	(880)	86	417	(1,639)	1,633	(3,066)	708	(707)	(3,065)

(**) Relates to long steel operations in Argentina.

(**) Relates substantially to the net revenue from electric energy operations from Votener to CBA and VCSA.

(d) Adjusted EBITDA - business segments

								2021		
	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	22,296	14,140	8,423	2,119	4,010	117	(2,097) (**)	49,008		49,008
Cost of products sold and services rendered	(17,084)	(10,616)	(6,799)	(1,516)	(3,960)	(56)	2,097 (**)	(37,934)		(37,934)
Gross profit	5,212	3,524	1,624	603	50	61		11,074		11,074
Operating income (expenses)										
Selling	(700)	(132)	(42)	(21)		(6)		(901)		(901)
General and administrative	(1,243)	(757)	(338)	(45)	(117)	(329)		(2,829)	(12)	(2,841)
Other operating income (expenses), net	365	(238)	98		(11)	391		605		605
	(1,578)	(1,127)	(282)	(66)	(128)	56		(3,125)	(12)	(3,137)
Operating profit (loss) before equity results and finance results	3,634	2,397	1,342	537	(78)	117		7,949	(12)	7,937
Plus:										
Depreciation, amortization and depletion - continuing operations	1,666	1,385	496	58	5	26	1	3,637		3,637
EBITDA	5,300	3,782	1,838	595	(73)	143	1	11,586	(12)	11,574
Plus:										
Dividends received	181				81	8	(81)	189		189
Exceptional items										
Impairment of property, plant and equipment and intangible assets	33	2	(71)			827		791		791
Net gain on sale of investments						(625)		(625)		(625)
Gain from the advantageous purchase of an investee	(243)							(243)		(243)
Other	(24)		(46)			(169)		(239)		(239)
Adjusted EBITDA	5,247	3,784	1,721	595	8	184	(80)	11,459	(12)	11,447

(**) Relates to long steel operations in Argentina.

(**) Relates substantially to the net revenue from electric energy operations from Votener to CBA and VCSA.

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VOTORANTIM

	2020									
	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	16,740	10,097	5,411	1,180	3,588	76	(1,710) (**)	35,382		35,383
Cost of products sold and services rendered	(12,816)	(8,059)	(4,831)	(809)	(3,571)	(48)	1,710 (**)	(28,424)		(28,424)
Gross profit	3,924	2,038	580	371	17	28		6,958		6,959
Operating income (expenses)										
Selling	(708)	(129)	(37)	(12)		(3)		(889)		(889)
General and administrative	(1,061)	(673)	(284)	(35)	(101)	(335)		(2,489)	(14)	(2,503)
Other operating income (expenses), net	(113)	(2,906)	175	(3)	84	469		(2,294)		(2,294)
	(1,882)	(3,708)	(146)	(50)	(17)	131		(5,672)	(14)	(5,686)
Operating profit (loss) before equity results and finance results	2,042	(1,670)	434	321		159		1,286	(14)	1,273
Plus:										
Depreciation, amortization and depletion - continuing operations	1,420	1,248	431	44	5	31	1	3,180		3,180
EBITDA	3,462	(422)	865	365	5	190	1	4,466	(14)	4,453
Plus										
Dividends received	129		11		38	2	(38)	142	111	253
Exceptional items										
Impairment of property, plant and equipment and intangible assets	215	2,561	26					2,802		2,802
Gain from the advantageous purchase of an investee			(366)					(366)		(366)
						(427)		(427)		(427)
Other	29					91		120		120
Adjusted EBITDA	3,835	2,139	536	365	43	(144)	(37)	6,737	97	6,835

(**) Relates to long steel operations in Argentina.

(**) Relates substantially to the net revenue from electric energy operations from Votener to CBA and VCSA.

36 Subsequent events

(a) Settlement of the CO2 emission rights loan - VCSA

In January 2022, the short-term loan for CO2 emission rights in the amount of USD 45 million (R\$ 268) was settled with CO2 emission rights.

(b) Sale of investment - APDR

In January 20, 2022, the Company concluded the sale of subsidiary APDR, in accordance with the intention agreement signed in November 2021 (Note 1.1 (jj)).

This sale resulted in a net income of R\$ 69 in the Company's results in 2022, mainly as a result of the realization of the exchange rate variation, previously recognized directly in the comprehensive income of shareholders' equity.

(c) Future sale agreement - Nexa

In January 21, 2022, subsidiary Nexa signed an Offtake Agreement (future sale agreement), in which it undertakes to sell 100% of the copper concentrate that will be produced by the Aripuanã mine for a period of five years, at the market price, but subject to a price cap.

(d) Acquisition of 80% of Alux

In January 6, 2022, after complying with the respective conditions precedent, CADE's approval was obtained, without restrictions. On January 31, 2022, the acquisition of 80% of the share capital of Alux was completed.

The following is a summary of Alux's book balances on the transaction completion date:

	On January 31, 2022
Cash and cash equivalents	16
Accounts receivable	38
Inventories	27
Other assets	27
Property, plant and equipment	7
Trade payables	(33)
Other liabilities assumed	(8)
Acquired identifiable net assets	74

Alux had shareholders' equity at fair value of R\$134, due to net assets plus adjustments, resulting from the valuation and identification of assets and liabilities in accordance with IFRS 3 / CPC 15 (R1) – "Business combination". The net assets at fair value and recognized on the acquisition date are shown below:

	On January 31, 2022
Equity value of Alux	74
Adjustments of purchase price allocation	
Purchase price allocation of property, plant and equipment	31
Purchase price allocation of account receivable	60
Deferred taxes on business combinations	(31)
Equity value of Alux, at fair value	134

The acquisition cost included goodwill of R\$25 related to the control premium, as shown in the table below:

	On January 31, 2022
Consideration transferred	
Cash paid on acquisition of Alux	133
Value of the acquired 80% portion of Alux's shareholders' equity, at fair value	(108)
Goodwill on expected future profitability	25

As a result of the business combination carried out on January 31, 2022, we present below the balance sheet items at fair value:

	Carrying amount	Adjustment	Fair value
Cash and cash equivalents	16		16
Accounts receivable	38	60	98
Inventories	27		27
Other assets	27		27
Property, plant and equipment	7	31	38
Trade payables	(33)		(33)
Other liabilities assumed	(8)		(8)
Deferred taxes on business combinations		(31)	(31)
Total equity	74	60	134

(e) Repurchase of Voto 41 bonds through VCI - VCSA

In 2022, the indirect subsidiary VCI repurchased and canceled the balance of USD 16 million of principal related to its bonds maturing in 2041.

(f) Use of a Committed Credit Revolving - VCSA

During January and February 2022, the indirect subsidiary St. Marys made further withdrawals from the available Committed Credit Facility in the amount of USD 57 million, due in August 2024.

The approximate amount of USD 187 million remains available to VCSA's subsidiaries for further withdrawals, if necessary.

(g) Capital increase in subsidiary VCI – VCSA

During January and February 2022, the direct subsidiary VCSA carried out capital increases in the indirect subsidiary VCI in the total amount of R\$100 (USD 19 million).

(h) Reverse merge - VGE

On February 3, 2022, indirect subsidiary VTRM was merged into subsidiary VGE. VTRM now holds the following assets in its equity at the time of the merger:

- (i) Interest of 66.6667% in the capital stock of CBA Energia, whose generation assets include UHE Campos Novos and UHE Barra Grande, corresponding to 100% of its preferred shares;
- (ii) Interest of 66.6667% in Pollarix's capital stock, whose generation assets include UHE Amador Aguiar I and II (Consórcio Capim Branco), UHE Picada, UHE Igarapava (Consórcio Igarapava) and UHE Campos Novos, corresponding to 100% of the preferred shares issued by it;
- (iii) Interest of 100% in Votener's capital stock, corresponding to 16,438,442 shares issued by it.

As a result of the reverse merger, the amount of 992,547 shares that VGE owned, issued by VTRM, was canceled and replaced by an equal number of shares of VTRM and were attributed to VSA. In addition, as a result of the assets merged into VTRM, 612,874,904 new VTRM common shares were issued, which were also assigned to VSA. The equity value attributed to VGE's assets (excluding the value of the interest held by VGE in VTRM) was R\$2.8 billion.

(i) Approval of the distribution of dividends through the VSA

On February 10, 2022, the Company resolved to its parent company Hejoassu Administração S.A., the amount of R\$ 734 corresponding to dividends related to part of the balance of the "Profit Reserves" account, accumulated from previous years.

The amount was fully paid on February 24, 2022.

(j) Distribution of dividends – Nexa

On February 15, 2022, the Board of Directors of subsidiary Nexa approved, subject to ratification by the Company's Shareholders, at the 2023 annual shareholders' meeting in accordance with Luxembourg laws, a distribution in dividends to the Company's shareholders of approximately R\$ 279 to be paid on March 25, 2022.

(k) Redemption of total Senior Notes - Nexa Resources Perú S.A.A. ("Nexa Peru")

On February 24, 2022, indirect subsidiary Nexa Peru announced the early redemption and cancellation of all 4.625% Senior Notes due in 2023. The aggregate principal amount of the Notes is USD 128 million.

The Notes will be redeemed on March 28, 2022 at a price equal to the greater of (i) 100% of the outstanding principal amount of the Notes, and (ii) the sum of the present values of the remaining scheduled payments of principal and interest on the Notes. Notes to be redeemed discounted to the redemption date semi-annually at the applicable Treasury Rate plus 45 basis points, in each case plus accrued and unpaid interest and additional amounts, if any, but excluding the redemption date, in accordance with the provisions of the deed that governs the Notes.

(l) Proposal for potential acquisition of CCR shares

On March 23, 2022, the Company, together with Itaúsa S.A., formalized the terms of the proposal for the potential acquisition of the entire stake of Andrade Gutierrez Participações S.A. ("AG") in CCR S.A. ("CCR").

The offer, already accepted by AG, contemplates the acquisition of 14.9% of the capital of CCR, representing an amount of R\$ 4.1 billion, of which VSA will invest R\$ 1.3 billion. In the end, considering VSA's current interest of 5.8% in CCR, the Company will have approximately 10.3% of CCR's capital.

(m) Merger of CESP Shares by VTRM

On March 25, 2022, at the conclusion of the corporate restructuring described in Note 1.1 (hh), VTRM merged all of CESP's shares, excluding its own shares and CESP's treasury shares. As a result, VTRM issued new shares, which were attributed to CESP's shareholders, replacing the merged shares issued by it. With the conclusion of the transaction, the Company now holds a 37.74% interest in the capital stock of VTRM.

On March 28, 2022, VTRM changed its corporate name to Auren Energia S.A., and its shares are traded on the stock market under the ticker "AURE3".