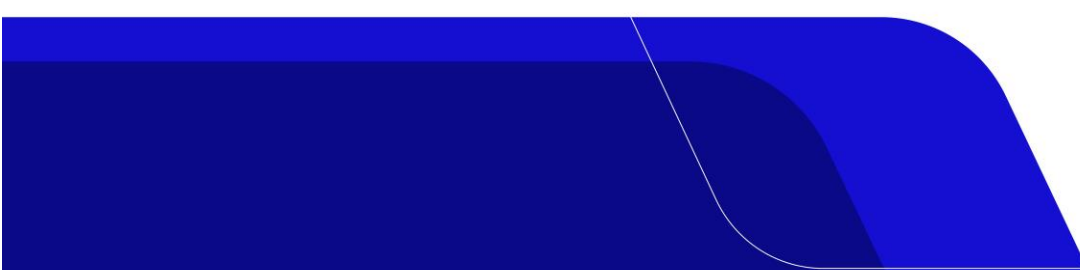




Individual and consolidated financial  
statements as at December 31, 2022  
and Independent Auditors' Report



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**Statement of financial position as at December 31**  
**In thousands of reais**

Assets	Note	Parent company		Consolidated	
		2022	2021	2022	2021
<b>Current assets</b>					
Cash and cash equivalents	9	552,839	1,280,956	849,082	1,449,345
Financial investments	10	270,544	280,485	339,846	337,350
Derivative financial instruments	6.2	25,804	10,749	33,172	10,749
Trade receivables	11	467,734	605,096	496,305	698,249
Inventory	12	1,569,932	1,236,046	1,881,369	1,592,312
Taxes recoverable	13	377,672	252,447	419,791	294,434
Dividends receivable	14	22,804	15,415	12,536	664
Other assets		198,817	63,026	238,175	71,880
		<u>3,486,146</u>	<u>3,744,220</u>	<u>4,270,276</u>	<u>4,454,983</u>
<b>Non-current assets available for sale</b>					
	31	78,137		78,137	
		<u>3,564,283</u>	<u>3,744,220</u>	<u>4,348,413</u>	<u>4,454,983</u>
<b>Non-current assets</b>					
<b>Long-term receivables</b>					
Financial investments	10		64	-	64
Derivative financial instruments	6.2	81,615	22,171	103,687	28,985
Taxes recoverable	13	659,417	662,662	690,852	685,465
Deferred income tax	22	260,854	342,498	155,623	253,943
Related parties	14	48,599	47,274	60,648	57,323
Judicial deposits	23	16,169	15,157	17,703	16,656
Other assets		44,296	43,988	49,918	69,768
		<u>1,110,950</u>	<u>1,133,814</u>	<u>1,078,431</u>	<u>1,112,204</u>
<b>Investments</b>					
Property, plant and equipment	17	4,659,346	4,155,577	5,499,239	5,152,008
Intangible assets	18	744,091	784,471	956,784	997,923
Right-of-use assets	19	16,810	39,685	31,246	43,137
		<u>8,084,402</u>	<u>7,497,002</u>	<u>7,926,292</u>	<u>7,510,244</u>
<b>Total assets</b>		<u>11,648,685</u>	<u>11,241,222</u>	<u>12,274,705</u>	<u>11,965,227</u>

Management notes to the individual and consolidated financial statements.

**Statement of financial position as at December 31**  
**In thousands of reais**

Liabilities and shareholders' equity	Note	Parent company		Consolidated	
		2022	2021	2022	2021
<b>Current Liabilities</b>					
Borrowing and debentures	20	107,593	38,285	107,593	69,383
Derivative financial instruments	6.2	4,148	231,289	4,148	231,289
Lease liabilities	19	12,835	25,542	16,274	27,126
Confirming payables	21	203,627	557,750	210,491	558,017
Trade payables		861,782	558,300	1,008,669	655,626
Salaries and payroll charges		151,342	145,131	170,926	162,243
Tax liabilities		17,696	32,832	33,962	78,275
Advances from customers		25,713	38,981	31,183	47,663
Dividends payable	14	206,044	57,199	227,116	142,191
Use of public assets – UBP	24	47,800	66,477	55,582	74,314
Energy futures contracts	15	94,899	11,142	94,899	11,142
Related parties	14	984	350	984	350
Provision	23	93,008	29,218	93,008	29,218
Other liabilities		73,438	24,142	133,729	72,797
		<u>1,900,909</u>	<u>1,816,638</u>	<u>2,188,564</u>	<u>2,159,634</u>
<b>Non-current liabilities</b>					
Borrowing and debentures	20	2,861,135	3,036,682	2,861,135	3,036,682
Derivative financial instruments	6.2	28,552	99,840	28,552	109,600
Lease liabilities	19	4,205	15,569	15,545	17,563
Related parties	14	58,985	49,543	73,106	61,800
Provision	23	708,039	784,579	710,731	790,729
Use of public assets – UBP	24	907,227	868,914	974,502	943,800
Energy futures contracts	15	26,899	24,253	26,899	24,253
Deferred income tax	22			13,074	39,636
Other liabilities		57,182	44,405	59,120	65,549
		<u>4,652,224</u>	<u>4,923,785</u>	<u>4,762,664</u>	<u>5,089,612</u>
<b>Total liabilities</b>		<u>6,553,133</u>	<u>6,740,423</u>	<u>6,951,228</u>	<u>7,249,246</u>
<b>Shareholders' equity</b>					
Share capital	25	4,705,047	4,705,309	4,705,047	4,705,309
Revenue reserve		673,531	183,384	673,531	183,384
Carrying value adjustments		(283,026)	(387,894)	(283,026)	(387,894)
Atributable to owners of the parent		5,095,552	4,500,799	5,095,552	4,500,799
Atributable to non-controlling interests				227,925	215,182
<b>Total equity</b>		<u>5,095,552</u>	<u>4,500,799</u>	<u>5,323,477</u>	<u>4,715,981</u>
<b>Total liabilities and equity</b>		<u>11,648,685</u>	<u>11,241,222</u>	<u>12,274,705</u>	<u>11,965,227</u>

Management notes to the individual and consolidated financial statements.

**Statement of profit or loss**  
**Financial years ended December 31**  
**In thousands of reais, unless stated otherwise**

	Note	Parent company		Consolidated	
		2022	2021 Restated Note 2.3 (a)	2022	2021 Restated Note 2.3 (a)
Net revenue from products sold and services provided	26	7,575,527	7,382,884	8,824,627	8,423,180
Cost of sales	27	(6,198,602)	(6,171,956)	(7,175,365)	(6,799,472)
<b>Gross profit</b>		<b>1,376,925</b>	<b>1,210,928</b>	<b>1,649,262</b>	<b>1,623,708</b>
<b>Operating income (expenses)</b>					
Selling expenses	27	(42,044)	(30,283)	(49,351)	(42,269)
General and administrative expenses	27	(351,560)	(294,097)	(405,059)	(338,027)
Other income (expenses), net	29	(45,671)	120,592	(49,600)	97,799
		(439,275)	(203,788)	(504,010)	(282,497)
<b>Operating income before equity interest and finance result</b>		<b>937,650</b>	<b>1,007,140</b>	<b>1,145,252</b>	<b>1,341,211</b>
<b>Equity results</b>					
Equity in the results of investees	16	45,757	132,241	(12,865)	13,355
		45,757	132,241	(12,865)	13,355
<b>Net finance results</b>	30				
Finance income		228,703	94,378	270,468	109,816
Finance costs		(471,773)	(426,236)	(512,431)	(461,500)
Result of derivative financial instruments		162,419	(67,344)	194,805	(70,289)
Foreign exchange gains (losses)		50,196	(74,468)	45,097	(74,554)
		(30,455)	(473,670)	(2,061)	(496,527)
<b>Profit before taxes</b>		<b>952,952</b>	<b>665,711</b>	<b>1,130,326</b>	<b>858,039</b>
<b>Income tax</b>	22				
Current		(105,431)		(198,906)	(68,000)
Deferred		3,769	77,864	9,567	48,319
<b>Profit from continuing operations</b>		<b>851,290</b>	<b>743,575</b>	<b>940,987</b>	<b>838,358</b>
<b>Discontinued operations</b>					
Net income (loss) from discontinuing operation	2.3 (a)	16,259	(631)	16,259	(631)
<b>Net income attributable to shareholders</b>		<b>867,549</b>	<b>742,944</b>	<b>957,246</b>	<b>837,727</b>
Attributable to owners of the parent		867,549	742,944	867,549	742,944
Attributable to non-controlling interests				89,697	94,783
<b>Profit for the year</b>		<b>867,549</b>	<b>742,944</b>	<b>957,246</b>	<b>837,727</b>
Weighted average number of outstanding shares, in thousands		595,833	887,440		
<b>Basic and diluted earnings per thousand shares</b>	25 (e)	<b>1,456</b>	<b>837</b>		
<b>Continuing Operations</b>					
<b>Basic and diluted net income per thousand shares, in reais</b>		<b>1,428.74</b>	<b>837.89</b>		
<b>Discontinued operations</b>					
<b>Basic and diluted earnings per thousand shares, in reais</b>		<b>27.29</b>	<b>(0.71)</b>		

Management notes to the individual and consolidated financial statements.

**Statement of other comprehensive income**  
**Financial years ended December 31**  
**In thousands of reais**

	Note	Parent company		Consolidated	
		2022	2021	2022	2021
<b>Profit for the year</b>		867,549	742,944	957,246	837,727
<b>Other components of comprehensive income (loss) to be reclassified to the statement of operations</b>					
Operating hedge accounting, net of tax effects	25 (d)	174,033	11,632	174,033	11,632
Share of other comprehensive income of investees		888	1,269	888	1,269
		174,921	12,901	174,921	12,901
<b>Total comprehensive income for the year</b>		1,042,470	755,845	1,132,167	850,628
<b>Comprehensive income attributable to shareholders</b>					
Attributable to owners of the parent				1,042,470	755,845
Attributable to non-controlling interests				89,697	94,783
				1,132,167	850,628

**Statement of changes in equity**  
**Financial years ended December 31**  
**In thousands of reais**

	Attributable to controlling shareholders										
	Note	Share capital		Profit reserve			Asset and liability valuation adjustments	Total	Share of non-controlling shareholders	Equity	
		Share capital	Share issue expenses	Capital	Legal	Retention					Accrued losses
<b>At January 1, 2021</b>		4,950,095					(985,901)	(400,795)	3,563,399	176,734	3,740,133
<b>Total comprehensive income for the year</b>											
Profit for the year							742,944		742,944	94,783	837,727
Other comprehensive income								12,901	12,901		12,901
							742,944	12,901	755,845	94,783	850,628
<b>Transactions with shareholders</b>											
Capital increase		521							521		521
Partial spin-off with capital reduction		(417,696)							(417,696)		(417,696)
Capital reduction with loss absorption		(483,461)					483,461				
Capital increase - Primary share offering		700,000							700,000		700,000
Share issuance expenses			(44,150)						(44,150)		(44,150)
Allocation of income for the year											
Constitution of legal reserve					12,025		(12,025)				
Approved dividends							(57,120)		(57,120)	(56,335)	(113,455)
Profit retention						171,359	(171,359)				
		(200,636)	(44,150)		12,025	171,359	242,957		181,555	(56,335)	125,220
<b>At December 31, 2021</b>		4,749,459	(44,150)		12,025	171,359		(387,894)	4,500,799	215,182	4,715,981
<b>At January 1, 2022</b>		4,749,459	(44,150)		12,025	171,359		(387,894)	4,500,799	215,182	4,715,981
<b>Total comprehensive income for the year</b>											
Profit for the year							867,549		867,549	89,697	957,246
Other comprehensive income								174,921	174,921		174,921
							867,549	174,921	1,042,470	89,697	1,132,167
<b>Transactions with shareholders</b>											
Acquisition of Alux do Brasil Indústria e Comércio Ltda.								(70,053)	(70,053)	(6,841)	(76,894)
Capital increase - CBA Energia	1.1 (n)									16,421	16,421
Dividends resolved	1.1 (g)					(171,359)			(171,359)		(171,359)
Dividends - CBA Energia	1.1 (n)									(67,535)	(67,535)
Share issuance expenses			(262)						(262)		(262)
Allocation of income for the year											
Constitution of legal reserve	25 (c)				43,377		(43,377)				
Approved dividends	25 (b)						(206,043)		(206,043)	(18,999)	(225,042)
Profit retention						618,129	(618,129)				
			(262)		43,377	446,770	(867,549)	(70,053)	(447,717)	(76,954)	(524,671)
<b>At December 31, 2022</b>		4,749,459	(44,412)		55,402	618,129		(283,026)	5,095,552	227,925	5,323,477

Management notes to the individual and consolidated financial statements.

**Statement of cash flows**  
**Financial years ended December 31**  
**In thousands of Reais**

	Note	Parent company		Consolidated	
		2022	2021	2022	2021
<b>Cash from operations</b>					
<b>Profit before income tax and social contribution</b>		<b>952,952</b>	<b>665,711</b>	<b>1,130,326</b>	<b>858,039</b>
Adjustments to non-cash items					
Interest, indexation accruals and exchange variations		186,020	404,517	169,806	416,376
Equity results	16 (c)	(45,757)	(131,610)	12,865	(12,724)
Depreciation, amortization and depletion	27	454,023	426,008	539,511	496,045
Energy futures contracts	29	86,403	(183,105)	86,403	(183,105)
Losses on sale of fixed assets	29		(29,000)		(29,000)
Write-off of assets disposed of		5,169	532,733	6,667	533,889
Net investment loss	29	47,522		47,522	
Recognition of gain from advantageous purchase in the acquisition of investments	29		(17,143)		(17,143)
Decrease in the provision for impairment of assets	29	(226,006)	(603,945)	(226,007)	(603,945)
Increase in the provision for impairment of assets	29	15,444		15,444	
Derivative financial instruments		(23,598)	909,386	(55,984)	912,332
Hydrological risk renegotiation			(188,047)		(285,446)
Rondon Project			111,955		111,955
Fair value - Investment property		(7,960)		(7,960)	
Constitution of provisions, net		38,056	86,146	39,458	85,887
		1,482,268	1,983,606	1,758,051	2,283,160
<b>Decrease (increase) in assets</b>					
Financial investments		106,260	188,543	76,657	234,517
Derivative financial instruments		(222,946)	(796,573)	(222,946)	(796,573)
Trade receivables		64,748	(196,397)	111,900	(219,590)
Inventory		(318,686)	(402,801)	(248,074)	(523,959)
Taxes recoverable		24,071	464,143	107,445	477,713
Judicial deposits		(18,412)	(4,620)	(18,429)	(5,232)
Other credits and other assets		(6,652)	(32,134)	(110,286)	(16,190)
<b>Increase (decrease) in liabilities</b>					
Trade payables		303,807	227,797	326,484	229,509
Confirming payables		(354,123)	(36,831)	(347,526)	(36,564)
Salaries and payroll charges		6,682	(13,360)	8,536	(13,518)
Taxes liabilities		(120,567)	1,774	(216,065)	(64,335)
Use of public assets - UBP		24,237	(7,034)	24,357	25,132
Payments of tax, civil and labor proceedings		(44,876)	(68,039)	(46,540)	(68,038)
Other obligations and other liabilities		61,940	12,759	56,171	20,401
<b>Cash provided by operating activities</b>		<b>987,751</b>	<b>1,320,833</b>	<b>1,259,735</b>	<b>1,526,433</b>
Interest paid on borrowing, debentures and use of public assets (UBP)		(238,028)	(196,421)	(250,069)	(198,263)
Income tax and social contribution paid		(161,495)	(106,589)	(254,887)	(167,108)
<b>Net cash provided by operating activities</b>		<b>588,228</b>	<b>1,017,823</b>	<b>754,779</b>	<b>1,161,062</b>
<b>Cash flow from investing activities</b>					
Acquisition of property, plant and equipment and intangible assets	17 e 18	(896,145)	(457,986)	(952,426)	(523,577)
Acquisition of 80% of Alux	1.1 (a)	(128,246)		(128,244)	
Remaining acquisition of 20% of Alux	1.1 (b)	(49,000)		(49,000)	
Acquisition of non-controlling interest in Enercan	1.1 (k)			(24,632)	
Acquisition of investment in Santa Cruz			(2,500)		(2,500)
Investment acquisition price adjustment			12,828		12,828
Capital increase in investees	16 (c)	(93,548)	(106,600)		
Sale of investment in São Miguel Paulista	1.1 (c)	47,500		47,500	
Receipt on sale of assets			(2,555)		(5,918)
Dividends received			35,633	46,528	
<b>Net cash used in investing activities</b>		<b>(1,119,439)</b>	<b>(521,180)</b>	<b>(1,060,274)</b>	<b>(519,167)</b>
<b>Cash flow from financing activities</b>					
Receipt for the issuance of common shares - Primary offering of shares			700,000		700,000
Share issue costs		(262)	(44,150)	(262)	(44,150)
Receipt of capital increase CBA Energia				16,421	
New loans and borrowing	20	534,971	308,928	534,971	308,928
Repayment of borrowing and debentures	20	(481,328)	(324,301)	(511,535)	(354,741)
Capital decrease			(407,022)		(407,022)
Derivative financial instruments		4,091	16,026	4,091	16,026
Dividends paid		(228,478)		(324,090)	(11,391)
Settlement of leases	19	(25,900)	(29,153)	(30,002)	(32,924)
<b>Net cash provided by (used in) financing activities</b>		<b>(196,906)</b>	<b>220,328</b>	<b>(310,406)</b>	<b>174,726</b>
Net increase (decrease) in cash and cash equivalents		(728,117)	716,971	(615,901)	816,621
Cash effects of companies acquired and included in consolidation				(9)	
Cash effects of companies acquired and included in consolidation				15,647	286
<b>Cash and cash equivalents at the beginning of the year</b>		<b>1,280,956</b>	<b>563,985</b>	<b>1,449,345</b>	<b>632,438</b>
<b>Cash and cash equivalents at the end of the year</b>		<b>552,839</b>	<b>1,280,956</b>	<b>849,082</b>	<b>1,449,345</b>
<b>Non-cash transactions</b>					
Capital increase			521		521
Properties involved in capital decrease			10,674		
New lease agreements			53,254	14,660	58,854
Accounts payable	1.1 (a)	5,000		5,000	
Acquisition remaining of 20% of Alux		(49,000)		(49,000)	
Property received as a form of debt settlement	31	(18,000)		(18,000)	

Management notes to the individual and consolidated financial statements.

**Statement of added value**  
**Financial years ended December 31**  
**In thousands of Reais**

	Note	Parent company		Consolidated	
		2022	2021	2022	2021
<b>Revenue</b>					
Sales of products sold and services provided (excluding sales returns and rebates)		8,850,189	8,755,276	10,527,940	10,162,963
Other operating income		48,319	77,670	45,902	56,657
Impairment of trade accounts receivable	11	(5,614)	3,829	(6,731)	3,814
		8,892,894	8,836,775	10,567,111	10,223,434
<b>Inputs purchased from third parties</b>					
Raw materials and other production inputs		(4,265,141)	(4,539,496)	(4,995,598)	(5,103,361)
Materials, electricity, third party services and others		(1,269,994)	(1,523,026)	(1,378,969)	(1,576,632)
		(5,535,135)	(6,062,522)	(6,374,567)	(6,679,993)
<b>Gross added value</b>					
		3,357,759	2,774,253	4,192,544	3,543,441
Depreciation, amortization and depletion	17 e 18	(454,023)	(426,008)	(539,511)	(496,045)
Increase in the provision for impairment of assets	29	226,006	603,945	226,007	603,945
Hydrological risk renegotiation	27		188,047		285,446
<b>Net added value produced</b>					
		3,129,742	3,140,237	3,879,040	3,936,787
<b>Added value received in transfer</b>					
Equity in the results of investees	16	45,757	131,610	(12,865)	12,724
Financial income and foreign exchange gains		1,027,726	552,677	1,137,281	587,398
Deferred income tax	22	3,769	77,864	9,567	48,319
		1,077,252	762,151	1,133,983	648,441
<b>Total added value to distribute</b>					
		4,206,994	3,902,388	5,013,023	4,585,228
<b>Distribution of added value</b>					
Personnel and social charges	28				
Direct remuneration		462,081	383,225	522,061	431,984
Social charges		238,252	186,635	270,451	214,154
Benefits		123,645	108,305	141,049	122,814
		823,978	678,165	933,561	768,952
<b>Taxes and contributions</b>					
Federal		890,288	905,140	1,249,674	1,210,166
State		510,227	486,998	675,773	620,032
		1,400,515	1,392,138	1,925,447	1,830,198
<b>Remuneration of third-party capital</b>					
Financial expenses and foreign exchange losses		1,058,181	1,026,347	1,139,342	1,083,925
Rentals and leases	19	56,771	62,794	57,427	64,426
		1,114,952	1,089,141	1,196,769	1,148,351
<b>Remuneration of own capital</b>					
Share of non-controlling shareholders				89,697	94,783
Profit for the six-month period		867,549	742,944	867,549	742,944
		867,549	742,944	957,246	837,727
<b>Total added value distributed</b>					
		4,206,994	3,902,388	5,013,023	4,585,228

## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

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### 1 Reporting entity

Companhia Brasileira de Alumínio (the “Company” or “CBA”) is controlled by Votorantim S.A. (“VSA”) and is headquartered in the city of São Paulo. Its core activities are the exploration of bauxite mining in Brazil, producing and/or trading bauxite, alumina, primary aluminum and semi-fabricated products in Brazil and abroad. The Company has a wide range of products, such as ingots, billets, plates, coils, foil and extruded products. It also carries out production operations through its subsidiaries.

CBA Itapissuma Ltda. (“CBA Itapissuma”), located in the Pernambuco town of Itapissuma, with an installed capacity of 56 thousand metric tons per year of aluminum foil and plates, which in addition to complementing CBA’s line of rolled products also contributes to improving the competitiveness of the domestic industry against imported products.

On January 31, 2022, a transaction was completed resulting in the acquisition of an 80% interest in Alux do Brasil Indústria e Comércio Ltda. (“Alux”), a company located in the State of São Paulo (Note 1.1. (a)). The first amendment to the share purchase and sale agreement was made on November 18, 2022, whereby the Company acquired 20% of the remaining shares (Note 1.1. (b)).

Alux, a company located in the State of São Paulo and specialized in producing aluminum from recycled scrap, with an installed capacity of 46,000 metric tons per year, is ranked among the largest suppliers of secondary aluminum alloys in Brazil. By fostering a circular economy, the acquisition of Alux also contributes to aluminum production with a lower carbon footprint.

The Company also has an investee, Metalex Ltda. (“Metalex”), located in Araçari, São Paulo state, which is engaged in recycling aluminum scrap for the production of billets, with a production capacity of 90,000 metric tons per year.

The Company markets surplus electricity generated in the domestic market. The Company’s surplus energy was marketed domestically through Auren Comercializadora de Energia Ltda. (“Auren Comercializadora”) until January 31, 2022, (formerly Votener - Votorantim Comercializadora de Energia Ltda.), a member of Votorantim Group, which provided business intermediation and advisory services related to energy marketing.

CBA has proprietary hydroelectric plants and participates in joint ventures to enable it to drive down the cost of energy consumed during primary aluminum production. In all, there are 21 hydroelectric plants located in the South, Southeast and Midwest regions of Brazil, totaling 1.4 gigawatts of 100% renewable installed capacity (contributing to the production of low-carbon aluminum), already adjusted to reflect the Company’s interest in the assets and an average capacity factor of 53%. The Company is also involved in the construction of a 171.6 MW wind farm in Brazil’s Northeast. From February 2022, energy marketing began to be carried out internally.

The bauxite processed by the Company comes mainly from its three proprietary mining units, located in Goiás (Barro Alto) and Minas Gerais (Poços de Caldas and Mirai). A small portion is acquired from a supplier also located in Goiás state (Barro Alto), pursuant to a sale and purchase agreement effective until 2028.

The Company’s nickel operations have been paused while new alternative business plans were evaluated to make them sustainable, and impairment was recorded for all assets related to these operations. The impairment of the assets of the São Miguel Paulista plant was reversed in June 2022, upon the fulfillment of all the conditions precedent for the sale carried out in July 2022 (Note 1.1. (c)).

Management notes to the individual and consolidated financial statements.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**1.1. Key events during FY 2022**

**(a) Acquisition of 80% interest in Alux do Brasil Indústria e Comércio Ltda.**

On November 03, 2021, the Company signed an agreement to acquire 80% of the capital of Alux for R\$133,246, subject to adjustments on the closing date, as provided for in the sale and purchase agreement. The completion of the transaction was subject to compliance with the usual obligations and conditions precedent, as well as approval by the Brazilian antitrust authority (“CADE”), which was formally granted on January 6, 2022.

On January 31, 2022, the acquisition was completed, following the fulfillment of all conditions precedent.

The acquired balances of Alux, at their carrying amount and fair values as at January 31, 2022, are summarized below, based on the restated final Purchase Price Allocation (“PPA”). The difference between the carrying amount and fair value is due to adjustments resulting from the valuation and identification of assets and liabilities in accordance with IFRS3/CPC 15 (R1) – “Business Combinations”.

	Carrying amount	Adjustment	Fair value
Cash and cash equivalents	15,647		15,647
Trade accounts receivable	38,515		38,515
Inventory	27,523	824	28,347
Other assets	26,922	(26,821)	101
Property, plant and equipment - Land and improvements	3,893	20,874	24,767
Property, plant and equipment - Machinery and equipment	2,759	9,672	12,431
Property, plant and equipment - Vehicles	83	478	561
Intangible assets	23		23
Intangible assets - Customer portfolio		41,905	41,905
Intangible assets - Non-compete clauses		901	901
Trade payables	(32,967)		(32,967)
Other liabilities assumed	(7,985)		(7,985)
Deferred taxes on business combinations		(16,263)	(16,263)
<b>Total equity</b>	<b>74,413</b>	<b>31,570</b>	<b>105,983</b>

**Method used to determine fair value**

- (i) Inventory: adjusted based on the market values of the inventory items;
- (ii) Customer portfolio and non-competition agreement: the fair values of intangible assets arising from relationships with customers were determined based on an appraisal report prepared by an expert, using the Multi Period Excess Earnings Method (“MPEEN”);
- (iii) Property, plant and equipment: the methodology used to determine the market value of these assets was based on the rate of return, with the total market value estimated for all property, plant, and equipment items.
- (iv) Taxes recoverable: the Agreement for the Sale and Purchase of Shares related to the acquisition of an 80% interest in Alux by the Company establishes that the selling shareholders are entitled to 100% of future tax credits paid to Alux arising from taxable events that occurred before the acquisition. On January 31, 2022, the tax credits recognized by Alux amounted to R\$26,821.

Management notes to the individual and consolidated financial statements.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**Goodwill on acquisitions**

	<b>1/31/2022</b>
Consideration transferred	133,246
Value of the acquired portion of the acquiree's equity acquired at fair value (R\$105,983 x 80%) (i)	84,786
<b>Goodwill on expected future profitability</b>	<b>48,460</b>

- (i) Allocation of the amount in the final version of the Purchase Price Allocation (“PPA”)

The acquisition generated a balance of goodwill, considering that the cost of the business combination included an amount paid as a control premium.

**Acquisition price presented in the consolidated statement of cash flow**

	<b>1/31/2022</b>
Consideration paid	128,246
Accounts payable	5,000
Total transferred consideration	133,246

- (b) **Acquisition of remaining interest in Alux do Brasil Indústria e Comércio Ltda.**

On November 18, 2022 the Company made the first amendment to the Share Purchase and Sale Agreement to acquire the remaining 20% of the share capital of Alux, with an acquisition price of R\$98,000, paid as follows:

- (i) R\$49 million, equal to the first installment paid on November 30, 2022; and (ii) R\$49 million, equal to the second installment paid on January 31, 2023.

The difference between the carrying amount and the fair value due to appraisal adjustments has been summarized below.

	<b>11/30/2022</b>
Fair value of consideration paid	98,000
Fair value of the acquired portion of Alux's shareholders' equity	27,947
<b>Difference between the fair value of the consideration paid and the portion acquired from non-controlling interests</b>	<b>70,053</b>

The difference between the value by which non-controlling interests are adjusted and the fair value of the consideration paid was recognized in the line item "Asset and liability valuation adjustments", in equity in accordance with IFRS10/CPC 36 (R3) – “Consolidated Statements”.

- (c) **Sale of the São Miguel Paulista nickel refinery**

In July 2022, the conditions precedent for closing the sale of the São Miguel Paulista nickel plant were fulfilled, in accordance with the purchase agreement entered into with Jervois Mining Limited.

In order to effect the sale of the nickel plant, on July 1, 2022, the assets were transferred by a drop down operation, and the respective liabilities were assigned to a new legal entity named Cristal Mineração e Metalurgia Ltda. (“Cristal”).

The assets were transferred by means of a capital increase in the amount of R\$141,911, and partly through the assignment of liabilities in the amount of R\$23,204, resulting in the transfer of net assets totaling R\$118,707, as follows:

Management notes to the individual and consolidated financial statements.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

	<u>7/1/2022</u>
Transfer of assets through capital increase	141,911
Assignment of debt	(23,204)
<b>Total net assets transferred</b>	<b><u>118,707</u></b>

The net assets transferred to Cristal were comprised of the following:

	<u>7/1/2022</u>
<b>Current assets</b>	
Cash and cash equivalent (i)	750
Inventory (i)	2
Other assets (ii)	17
	<u>769</u>
<b>Non-current assets</b>	
Property, plant and equipment and intangible assets (i)	141,159
Decommissioning assets (ii)	27,911
	<u>169,070</u>
<b>Total assets</b>	<b><u>169,839</u></b>
<b>Current liabilities</b>	
Trade payables (ii)	(325)
Salaries and social charges (ii)	(471)
Provision (ii)	(1,487)
Other liabilities (ii)	(1,614)
	<u>(3,897)</u>
<b>Non-current liabilities</b>	
Decommissioning liabilities (ii)	(30,634)
Environmental liabilities (ii)	(16,601)
	<u>(47,235)</u>
<b>Total liabilities</b>	<b><u>(51,132)</u></b>
<b>Total net assets</b>	<b><u>118,707</u></b>

- (i) Transfer of assets through capital increase
- (ii) Assignment of liabilities.

The sales transaction was carried out at a total nominal amount of R\$125,000, of which R\$15,000 was received as an advance on December 7, 2020, and R\$47,500 was received on July 15, 2022, upon the closing of the agreement, with the remaining balance of R\$62,500 to be paid by June 30, 2023. The fair value, as presented above, totaled R\$118,707.

Upon the completion of the sale of the São Miguel Paulista nickel refinery, the Company reversed the previously recorded asset impairment of R\$169,070 in June 2022.

**(d) Impacts of the Russian invasion of Ukraine and sanctions imposed on Russia and its allies**

The Company has been monitoring the current situation in Ukraine and the sanctions imposed on Russia and Belarus, as well as their effects on the business of the Company and subsidiaries, including the Management notes to the individual and consolidated financial statements.

## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

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possibility that the conflict may escalate, and spread to other as yet unaffected countries. The conflict's possible ramifications include impacts on the supply chain, which could affect production, investments and product prices, as well as factors related to inflation and interest rates.

Up to the reporting date, no significant impacts on the Company's operations had been identified. However, we could not predict or measure possible future impacts resulting from the conflict on the Company's operations. The Company will continue to monitor the situation for possible impacts as the war plays out.

### (e) Public share offering

On April 3, 2022, the Company published a material fact regarding the secondary public offering with restricted efforts ("Restricted Offering") of common, registered, book entered shares, without par value, free and clear of any liens or encumbrances, issued by the Company and held by its controlling shareholder VSA.

On April 6, 2022, the Company published a press release regarding the pricing of its Restricted Offering. VSA's Board of Directors set the price per share at R\$19.00 (nineteen reais) so the Restricted Offering totaled R\$904,400, through the sale of 47,600,000 (forty-seven million six hundred thousand) shares.

In addition to complying with VSA's strategy of diversifying its portfolio, this transaction strengthens initiatives to increase the liquidity of the Company's shares in the market, consequently reaching the minimum free float requirement stipulated in the regulations of B3's Novo Mercado.

### (f) Contracting a committed credit facility

On September 22, 2021, the Company contracted a revolving credit facility (Committed Credit Facility) of US\$ 100 million, to replace an existing VSA credit facility in the amount of US\$ 200 million, to which the Company was one of the parties.

As part of this transaction, CBA has to measure and report its performance against emissions indices until 2025, receiving a cost reduction if it meets its targets, and cost increase in case of missing its targets.. The contracting of this credit facility provides further transparency and shows the Company's commitment to reducing greenhouse gas emissions. The transaction was supported by the opinion of Sustainalytics, a global independent consulting firm specializing in research, ratings, and Environmental, Social and Governance ("ESG") data for financial transactions (Second Party Opinion), which assessed the environmental indicators used.

Maturing in five years, this credit facility can be accessed at any time, but no resources have been used up to the reporting date.

### (g) Distribution of complementary dividends

At the Annual and Extraordinary General Meeting held on April 29, 2022, the Company resolved to distribute complementary additional dividends of R\$114,881, paid in May 2022. On November 30, 2022 the Company's Board of Directors resolved to distribute complementary dividends of R\$56,478, which were paid in December 2022, which consists of the remaining balance of adjusted net income for 2021, resulting in total complementary dividends of R\$171,359 paid in 2022.

## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

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### (h) Acquisition of equity interests in the on-site wind energy production asset Ventos de Santo Anselmo Energias Renováveis S.A. (“Ventos de Santo Anselmo”) and Ventos de Santo Isidoro Energias Renováveis S.A. (“Ventos de Santo Isidoro”) with buyback options for Auren Energia S.A. (“Auren Energia”)

On August 30, 2021, the Company and its subsidiary CBA Itapissuma completed the process of acquiring 49% of the share capital of Ventos de Santo Anselmo by CBA, and of the share capital of Ventos de Santo Isidoro by CBA Itapissuma from Auren Energia. These acquisitions were made to explore renewable wind energy farms (“wind farms”) already in possession of the licenses required by the concession authority. This transaction has reinforced the Company’s investments in diversifying its renewable energy matrix.

The wind farms are part of the Ventos do Piauí II and III wind parks, located between the states of Pernambuco and Piauí, and have an installed capacity of 171.6 MW, equivalent to an average guaranteed energy production of 74.4 MW. CBA, CBA Itapissuma, Ventos de Santo Anselmo and Ventos de Santo Isidoro also entered a ten-year energy supply agreement. The energy supply, which is expected to start in 2023, is intended for the use of CBA and its subsidiary CBA Itapissuma.

The ownership interests were acquired for R\$59,560, of which R\$47,112 corresponded to a direct purchase by the Company of (“Ventos de Santo Anselmo”), and R\$12,448 to the purchase by CBA Itapissuma of (“Ventos de Santo Isidoro”), payable in annual installments from 2023 to 2027. These amounts, which were initially recognized at fair value and subsequently measured at amortized cost using the effective interest rate method, are classified as payables to related parties (Note 14).

The Companies and Auren Energia also entered a shareholders' agreement that provides call options for Auren Energia over the equity interest the parent company holds in Ventos de Santo Anselmo and for CBA over that held in Ventos de Santo Isidoro, valid upon the termination of the energy supply agreements. These call options over the interests, assigned a price agreed beforehand by the parties and which can be unilaterally exercised by Auren Energia, led to this call option being recorded as a financial instrument at amortized cost. The accounting effects of these call options are disclosed in Note 14(a).

### (i) Issuance of carbon credits

On August 30, 2022, CBA carried out its first issue of 316,000 carbon credits, in partnership with Reservas Votorantim.

Reservas Votorantim is a company owned by Votorantim S.A specialized in land management and nature-based solutions for traditional and green economy businesses, and is engaged in the management of CBA’s environmental areas.

The initiative was made possible through “Legado Verdes do Cerrado”, a private reserve for sustainable development owned by CBA, of approximately 32,000 hectares located in Niquelândia (State of Goiás). The carbon credits issued have been audited and registered by Verra, a global platform which developed the Verified Carbon Standards (“VCS”), currently considered a global benchmark, and is the custodian of the credits.

At December 31, 2022, the Company had 316,000 metric tons not yet certified relating to carbon credits generated in 2017 and 2021, which had not yet been sold by December 31, 2022. Revenue is recognized only upon the effective sale of the carbon credits.

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In thousands of reais, unless stated otherwise

**(j) ESG Commitments – “Environmental, Social and Governance”**

As the Company and its subsidiaries move forward on their ESG journey, sustainability is one of their strategic drivers, in line with the 2030 Sustainability commitments, which are founded on seven pillars: integrity and transparency, safety, health and wellbeing, innovation, diversity and inclusion, reduction of greenhouse gas emissions, circular economy, and shared value. Climate change lies at the heart of the Company's strategy, informing innovation initiatives and current and future investments.

In addition, the Company has joined other companies in different industries to create the “Brazilian Voluntary Carbon Market Initiative”. Led by McKinsey & Company, this group will implement actions to develop a voluntary carbon market in Brazil and help build a high-integrity carbon credit market globally. Among the key deliverables from the program are practical measures to address the biggest barriers to the carbon market, including mechanisms to activate high-integrity supply and demand and general governance measures.

**(k) Acquisition of interest ofheld by Campos Novos Energia S.A. (“Enercan”) by the subsidiary CBA Energia Participações S.A.**

As a result of the public auction for the privatization of the Enercan shareholder Companhia Estadual de Geração e Transmissão de Energia Elétrica - CEEE-G (the “Seller”) and pursuant to the notice appraising its 6.51% interest in the venture, on August 8, 2022 it was obliged to sell its equity interest as per the shareholders’ agreement, which the Seller priced at R\$96,827.

On October 6, 2022 CBA Energia Participações S.A. notified the Seller that it was exercising its pre-emptive right, in accordance with the shareholders’ agreement, to purchase the portion of the offered shares to which it was entitled, which increased its interest by 1.6571%, for a price of R\$24,632. The conditions precedent were met and regulatory approval was secured, and on November 17, 2022 the parties signed the equity interest sale and purchase agreement.

	<b>11/30/2022</b>
Consideration transferred	24,632
Value of the portion of the Company's shareholders' equity acquired at fair value (R\$ 818,934 x 1.6571%)	13,571
<b>Goodwill on expected future profitability</b>	<b>11,061</b>

Before this date, CBA Energia Participações S.A. and the other shareholders held joint control of Enercan. However, as a result of this withdrawal, Enercan’s remaining shareholders exercised their option to purchase obtain these additional shares, which led one of them (a party not related to CBA Energia Participações S.A.) acquiring control of Enercan's, resulting in CBA Energia Participações S.A. and the other shareholders losing joint control.

On this date CBA Energia Participações S.A. ceased recognizing the assets, liabilities, revenue and expenses related to its percentage interest in Enercan, and began recognizing the entity as an associated company using the equity income method, as CBA Energia Participações S.A. still has significant influence over the

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

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entity. Upon deconsolidation, the goodwill of Enercan already existing in the amount of R\$ 30,501, was reclassified and is presented under the heading "Investments" (Note 16 (c)).

The table below shows the amounts in each line item of the statement of financial position which were deconsolidated from December 2022.

Assets	11/30/2022	Liabilities and shareholders' equity	11/30/2022
<b>Current assets</b>		<b>Current Liabilities</b>	
Cash and cash equivalents	9	Trade payables	6,083
Financial investments	49,567	Salaries and payroll charges	212
Trade receivables	54,828	Tax liabilities	47,508
Taxes recoverable	1,276	Dividends payable	52,474
Other assets	1,131	Use of public assets – UBP	1,203
	<u>106,811</u>	Other liabilities	<u>3,525</u>
			<u>111,005</u>
<b>Non-current assets</b>		<b>Non-current liabilities</b>	
Deferred income tax	7,921	Provision	1,867
Other assets	1,551	Use of public assets – UBP	9,849
	<u>9,472</u>	Deferred income tax	27,950
		Other liabilities	<u>2,712</u>
Investments	241		<u>42,378</u>
Property, plant and equipment	175,316		
Intangible assets	56,297	<b>Total liabilities</b>	<b><u>153,383</u></b>
Right-of-use assets	2		
	<u>241,328</u>	<b>Shareholders' equity</b>	
		Attributable to owners of the parent	194,756
		<b>Total equity</b>	<b><u>194,756</u></b>
<b>Total assets</b>	<b><u>348,139</u></b>	<b>Total liabilities and equity</b>	<b><u>348,139</u></b>

**(l) Discontinued operations of Mineração Rio do Norte (“MRN”)**

The Company’s management decided to divest its interest in MRN on December 27, 2022. The interest was consequently reclassified to assets held for sale (Note 31 (a)), and impairment of R\$47,522 was recognized, leading to this asset being stated at its fair value.

	11/30/2022
Asset held for sale	99,699
(-) Fair value adjustment	47,522
<b>Net assets held for sale</b>	<b><u>52,177</u></b>

The above fair value was calculated based on similar transactions at the current stage the investee is at.

**(m) Acquisition of L.C.G.S.P.E. Empreendimentos e Participações Ltda. (“L.C.G”) by the Company**

On October 1, 2022, the Company signed a purchase agreement for the entire shares of L.C.G from VSA. The acquiree, a small-sized company which operates as a back office for power plants, provided services to CBA up to September 30, 2022.

Management notes to the individual and consolidated financial statements.

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The acquisition was made at the market price in the amount of R\$5,337, without generating any goodwill, and was paid in full in October 2022.

As a result of the acquisition, L.C.G. is a subsidiary of CBA, and will be consolidated from October 2022.

### (n) Capital increase and interim dividend distribution of CBA Energia

On April 29, 2022 the Company's Annual and Extraordinary General Meeting resolved to pay out additional dividends from the allocated earnings for the financial year ended December 31, 2021 in the amount of R\$98,232, with R\$30,697 for CBA and R\$67,535 for Auren Energia.

On October 31, 2022 CBA and Auren Energia increased CBA Energia's capital by R\$24,631, with CBA contributing R\$8,210 and Auren Energia R\$16,421, via contributions in local currency. On the same date, CBA Energia resolved to pay out interim dividends of R\$4,000 from the interim profits determined by CBA Energia in the statement of financial position as at June 30, 2022, which were not yet paid.

## 2 Presentation of the financial statements and description of accounting policies

### 2.1 Basis of presentation

#### (a) Individual and consolidated financial statements

The individual and consolidated financial statements have been prepared and are being presented in accordance with the accounting practices adopted in Brazil and ratified by the Brazilian Securities Commission, effective from December 31, 2022, including the pronouncements issued by the Brazilian Accounting Pronouncements Committee ("CPC"), as well as the International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board ("IASB") and their interpretations ("IFRIC"), and show all relevant information pertinent to the financial statements, and only such information, which is consistent with that used by management in carrying out its duties.

The individual and consolidated financial statements were prepared using the historical cost as a value base, measured at fair value in the case of certain financial assets and liabilities, including derivative instruments.

The accounting policies applied to these financial statements are consistent with those adopted and disclosed in the financial statements for previous years. The accounting policies of subsidiaries, associated companies and joint operations have been adjusted to ensure consistency with the policies adopted by the Company.

The significant accounting policies relevant to understanding the financial statements were included in the respective notes, as a summary of the basis for recognition and measurement used by the Company.

The financial statements require the use of certain critical accounting estimates. They also require management to exercise its judgment in the process of applying the Company's accounting practices. Those areas involving a higher degree of judgment or complexity, or where assumptions and estimates are more significant, are disclosed in Note 4.

The Company prepared the individual and consolidated statements of added value as an integral part of the financial statements. These statements are required by the Brazilian corporate legislation and accounting practices adopted in Brazil, as stipulated in CPC 09 – "Statements of Added Value". IFRS does not require the presentation of these statements, and they are therefore considered supplementary information, without prejudice to the financial statements as a whole.

Management notes to the individual and consolidated financial statements.

## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

### (b) Approval of the financial statements

The Company's Board of Directors approved the issuance of these individual and consolidated financial statements on March 9, 2023.

### 2.2 Consolidation

The Company consolidates all entities over which it exercises control, i.e. when it is exposed to or has rights to variable returns on the basis of its involvement with the investee and the ability to manage the investee's core activities. The subsidiaries included in the consolidation are described in Note 2.2 (c).

#### (a) Subsidiaries

Transactions, balances and unrealized gains on intercompany transactions are eliminated. Unrealized losses are also eliminated, unless the transaction provides evidence of impairment of the asset being transferred. Upon acquisition, the accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Company.

#### (b) Associates and Joint Ventures

Joint operations are recorded in the financial statements to represent the Company's contractual rights and obligations. The assets, liabilities, revenue and expenses related to their interests in joint operations are therefore recorded individually in the financial statements.

Investments in associated companies and joint ventures are recorded using the equity income method and recognized initially at cost. The Company's interest in associated companies and its joint ventures includes the goodwill identified in the acquisition, net of any accumulated impairment losses.

Gains and losses resulting from the dilution of interests in associated companies and joint operations are recognized in the statement of profit or loss.

#### (c) Main companies included in the consolidated financial statements

Main consolidated companies	Percentage of voting capital		Headquarters	Main activities
	2022	2021		
Alux do Brasil Indústria e Comércio Ltda.	100.00		São Paulo - Brazil	Production of aluminium and its alloys in primary forms
Campos Novos Energia S.A.		23.78	Santa Catarina - Brazil	Electric power generation
CBA Energia Participações S.A.	100.00	100.00	São Paulo - Brazil	Participation in energy generation companies
CBA Itapissuma Ltda.	100.00	100.00	São Paulo - Brazil	Production of aluminium laminates
CBA Machadinho Geração de Energia Ltda.	100.00	100.00	São Paulo - Brazil	Participation in energy generation companies
L.C.G.S.P.E. Empreendimentos e Participações Ltda.	100.00		São Paulo - Brazil	Electrical installation and maintenance
Metalex Ltda.	100.00	100.00	São Paulo - Brazil	Production of aluminium and its alloys in primary forms
Santa Cruz Geração de Energia S.A.	100.00	100.00	São Paulo - Brazil	Energy generation
<b>Exclusive financial application funds</b>				
Fundo de Investimentos Pentágono CBA Multimercado - Crédito privado	100.00	100.00	Brazil	Financial resources management
Main unconsolidated companies	Percentage of voting capital		Headquarters	Main activities
	2022	2021		
<b>Affiliates</b>				
Alunorte - Alumina do Norte S.A.	3.52	3.52	Pará - Brazil	Production of aluminium and its alloys in primary forms
Baes-energética Barra Grande S.A.	15.00	15.00	Santa Catarina - Brazil	Electric power generation
Campos Novos Energia S.A.	25.44		Santa Catarina - Brazil	Electric power generation
Mineração Rio do Norte S.A. (Note 32 (a))	10.00	10.00	Pará - Brazil	Aluminum ore extraction

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### 2.3 Representation of comparative figures

#### (a) Assets classified as held-for-sale

The Company initiated a plan to sell its interest in MRN, and is therefore presenting the latter's results in these financial statements as a discontinued operation.

In accordance with IFRS 5/CPC 31 – “Non-current assets held for sale and discontinued operations”, the comparative financial information for FY 2021 is being restated to reflect this operation, with the amount of R\$631 adjusted to show the effects on revenue in the item “Equity income” and on expenses in the item “Losses from discontinued operations”.

### 2.4 Foreign currency translation

#### (a) Functional currency and presentation currency

The Company's functional currency is the Brazilian real (“R\$”).

#### (b) Transactions and balances

Foreign-currency operations are translated into reais. The exchange rates prevailing on the transaction or valuation dates are used for remeasured items. Exchange gains and losses resulting from the settlement of these transactions and from the translation at the exchange rates prevailing at the end of the year for cash assets and liabilities denominated in foreign currency are recognized in profit or loss as “Net exchange variations”.

## 3 New standards, alterations and interpretations of standards issued by the CPC and IASB

### 3.1 New standards issued and amendments to the accounting standards of the Company and its subsidiaries

A series of new accounting standards, interpretations and amendments to accounting standards effective from January 1, 2022 were adopted but did not have a significant impact on the Company's individual and consolidated financial statements.

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

#### a) Amendment to CPC 32/IAS 12 “Income Taxes” (applicable to periods beginning on January 1, 2023)

This change requires the recognition of deferred taxes on transactions, such as lease contracts or asset retirement obligations, that trigger the initial recognition of an asset or liability, resulting in equal taxable and deductible temporary differences.

The Company and its subsidiaries conducted a preliminary analysis of these amendments and identified possible impacts on their accounting policies. The Company and its subsidiaries are coordinating an assessment in accordance with the tax regulations to determine the possible impacts from January 1, 2023.

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### 4 Critical accounting estimates and judgments

Based on assumptions, the company makes estimates regarding the future. By definition, accounting estimates and judgments are continually assessed and are based on historical experience and other factors, including expectations of future events, which are considered reasonable under the circumstances.

The accounting estimates will seldom equal the related actual results. The estimates and assumptions that present a significant risk of causing relevant adjustments to the carrying amounts of assets and liabilities for the next fiscal year are included in the respective notes:

- (i) Derivative financial instruments (Note 6.2)
- (ii) Trade receivables (Note 11)
- (iii) Recoverable taxes (Note 13)
- (iv) Future energy contracts (Note 15)
- (v) Property, plant and equipment and asset retirement obligations (Note 17)
- (vi) Intangible assets (Note 18)
- (viii) Deferred income tax and social contribution (Note 22).

### 5 Social and environmental risk management

The Company and its subsidiaries are engaged in a variety of business activities and as such are subject to a wide range of national and international environmental laws, regulations, treaties and conventions, including those governing the disposal of materials into the environment, which require removal and cleaning, avoiding environmental contamination, or those related to environmental protection.

Violations of existing environmental regulations exposes offenders to heavy fines and monetary penalties, and may require technical measures or investments to ensure compliance with the requirements regarding emissions standards.

The Company and its subsidiaries periodically conduct surveys to identify potentially impacted areas and based on the best recorded cost estimates for the investigation, treatment and cleaning of the potentially impacted areas.

#### 5.1 Risks linked to climate change and sustainability strategy

The nature of the Company's operations exposes it to climate-change risks.

The Company's property, plant and equipment items (Note 17) and intangible assets (Note 18) may be affected by climate change, particularly in relation to their recoverability (impairment), which was assessed during the preparation of the financial statements. In the financial year ended December 31, 2022, Management considered the main data and risk assumptions listed below:

##### i. Transition risks

Legal and political: carbon pricing and carbon border taxes on aluminum;

Technological risk: lack of technologies available to reduce greenhouse gas emissions in the face of rising demand for low-carbon aluminum;

Market risk: fluctuations in aluminum prices due to the effects of climate change on the producing countries;

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Reputational risk: stigmatization of the sector as a carbon-intensive industry, despite the Company's low carbon footprint.

### ii. Physical risks

Chronic risks: relate mainly to long-term shifts in climate patterns, such as rainfall reduction, longer periods of drought and higher temperatures, which could lead to a decrease in hydroelectric energy generation, leading to impacts on production and conflicts over the use of water.

Acute risks: relate to extreme weather events, with the potential to cause soil collapse in mining areas, loss of seedlings used in the planting of mined areas, overloading of electrical systems, and damage to operational facilities.

## 6 Financial risk management

### 6.1 Financial risk factors

The activities of the Company and its subsidiaries expose them to a number of financial risks, namely: (a) market risk (currency, commodity prices and interest rates); (b) credit risk; and (c) liquidity risk.

A significant portion of the products sold by the Company are commodities (aluminum) with prices linked to international London Metal Exchange ("LME") rates, and denominated in US dollars.

Costs, however, are predominantly denominated in Brazilian reais, which results in a natural currency mismatch between revenue and costs. Furthermore, the Company and its subsidiaries have debts linked to different indices and currencies, which may affect their cash flow.

In order to mitigate the different effects of each market risk factor, the Company and its subsidiaries comply with the Financial Policy approved by the Board of Directors, which sets out governance and macro-guidelines for the financial risk management process, as well as measurement and monitoring indicators.

In accordance with this Policy, the following financial instruments may be contracted for financial hedging and risk mitigation: conventional swaps, purchases of call or put options, collars, currency, interest or commodity futures contracts, and currency, interest or commodity forward contracts (Non-Deliverable Forwards (NDF)). The strategies that include the simultaneous purchase and sale of options shall only be authorised when they do not result in a net short position for the underlying asset. The Company and its subsidiaries do not enter into financial instruments for speculative purposes.

#### (a) Market risk

##### (i) Currency risk

The Brazilian real (R\$) is the Company's functional currency, and all the efforts of the market risk management process are aimed at hedging cash flow in this currency, reducing exchange rate exposure, maintaining the Company's capacity to honor its financial obligations and to maintain the liquidity and debt levels stipulated by Management. This hedge is procured by monitoring the net exchange exposure.

The Financial Policy therefore highlights that the Company's derivatives operations aim to diminish volatility in cash flow, reduce exchange rate exposure and avoid mismatches between the Company's currencies. To reduce the exchange exposure primarily derived from future revenue denominated in US Dollars, the Company uses the derivative instruments approved in its Financial Policy to: (i) put its operating contracts and debts in reais in the same currency as its revenue; or (ii) convert its revenue in US

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dollars to Brazilian reais, thereby diminishing its exposure to US dollars (the exchange rate exposure is the same for US dollar revenue, cash and investments less costs, expenses and debts in the same currency).

The table below shows the carrying amounts of assets and liabilities indexed to foreign currencies at the reporting date:

	Note	Parent company		Consolidated	
		2022	2021	2022	2021
<b>Assets in foreign currency</b>					
Cash and cash equivalents	9	440,779	305,072	452,683	334,760
Derivative financial instruments	6.2	107,419	32,920	136,859	39,734
Trade receivables	11 (b)	133,406	174,785	150,828	197,138
		<u>681,604</u>	<u>512,777</u>	<u>740,370</u>	<u>571,632</u>
<b>Liabilities in foreign currency</b>					
Borrowing (i)		2,510,094	2,635,882	2,510,094	2,635,882
Derivative financial instruments	6.2	32,700	331,129	32,700	340,889
Confirming payables	21	26,693	397,445	26,693	397,445
Trade payables		148,949	72,405	149,738	80,786
		<u>2,718,436</u>	<u>3,436,861</u>	<u>2,719,225</u>	<u>3,455,002</u>
<b>Net exposure</b>		<b><u>(2,036,832)</u></b>	<b><u>(2,924,084)</u></b>	<b><u>(1,978,855)</u></b>	<b><u>(2,883,370)</u></b>

(i) Borrowing costs are not included in this table.

**(ii) Cash flow risk or fair value associated with interest rates**

The Company's interest rate risk derives from operational contracts, loans and borrowing. These contracts issued at floating rates expose the Company to the risk of floating interest rates affecting its cash flow. The loans and borrowing subject to fixed rates expose the Company to the fair value risk associated with interest rates.

The Financial Policy establishes guidelines and standards to hedge against changes in interest rates that affect the cash flow of the Company and its subsidiaries. Based on the projected exposure (from operating or debt contracts) to the main interest-rate indexes (primarily the CDI and IPCA), the Treasury function makes proposals to procure hedges, when applicable, and refers them for the approval of the Executive Board or Board of Directors, in accordance with the Company's Bylaws. These hedge proposals may consider swapping long interest positions for indices in short fixed forex rate positions or in the currency itself.

**(iii) Commodity price risk**

The Financial Policy establishes guidelines to hedge against commodity price fluctuations, both in revenue and costs, that affect the cash flow of the Company and its operating subsidiaries.

Exposure relating to each commodity considers the monthly production projections, sales and purchase volumes.

**(b) Credit risk**

Derivative financial instruments, time deposits, CDBs and reverse repurchase transactions indexed to debentures and financial treasury bills create exposure to counterparty and issuer credit risk.

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The Company's Financial Policy states that it should only consider issuers that have, at a minimum, been assessed by two of the following ratings agencies: Fitch Ratings, Moody's or Standard & Poor's. The minimum rating required for the counterparties is "A" (Brazilian scale) for onshore operations or "BBB-" (international scale) for offshore or equivalent operations. The Financial Policy sets out allocation limits per counterparty that take into account the concentration and percentage of each entity's equity.

Financial assets from issuers which do not meet the aforesaid minimum credit risk ratings require approval from the Board of Directors.

The methodology used to assess counterparty risks in derivative operations is the pre-settlement risk. This methodology consists of using Monte Carlo simulations to determine the value at risk associated with the non-performance of the financial obligations stipulated in each counterparty's contract. The methodology used is in accordance with the guidelines stipulated in the Financial Policy.

**(c) Liquidity risk**

Liquidity risk is managed in accordance with the Financial Policy, in order to guarantee an adequate liquidity position to meet the Company's financial commitments on time and at no additional cost. The main instrument for measuring and monitoring liquidity is cash flow projection.

The table below presents the Company's main financial liabilities by age range, for the remaining period in the statement of financial position until the contractual maturity date. Derivative financial liabilities are included in the analysis when their contractual maturities are essential to understanding temporary cash flows. The amounts shown in the table denote future cash flows, including the interest to be incurred, which is why these amounts cannot be reconciled with the amounts disclosed in the statement of financial position for loans and borrowing, leases and the use of public assets.

	Parent company					
	Up to 1 year	1 to 3 years	3 to 5 years	5 to 10 years	Over 10 years	Total
<b>At December 31, 2022</b>						
Borrowing and debentures	265,409	1,198,937	1,421,116	897,562	25,951	3,808,975
Derivative financial instruments	4,148	7,643	7,292	11,046	2,571	32,700
Lease liabilities	24,514	4,037				28,551
Drawee risk payable	203,627					203,627
Trade payables	861,782					861,782
Dividends payable	206,044					206,044
Use of public assets - UBP	69,861	151,661	170,825	528,234	551,608	1,472,189
Related parties	984	58,985				59,969
	<u>1,636,369</u>	<u>1,421,263</u>	<u>1,599,233</u>	<u>1,436,842</u>	<u>580,130</u>	<u>6,673,837</u>

	Parent company					
	Up to 1 year	1 to 3 years	3 to 5 years	5 to 10 years	Over 10 years	Total
<b>At December 31, 2021</b>						
Borrowing and debentures	172,352	1,120,307	1,417,693	962,941	42,513	3,715,806
Derivative financial instruments	231,289	13,156	14,206	51,948	20,530	331,129
Lease liabilities	25,093	14,772	96			39,961
Drawee risk payable	557,750					557,750
Trade payables	558,300					558,300
Dividends payable	57,199					57,199
Use of public assets - UBP	49,844	111,861	121,519	438,346	505,998	1,227,568
Related parties	350	49,543				49,893
	<u>1,652,177</u>	<u>1,309,639</u>	<u>1,553,514</u>	<u>1,453,235</u>	<u>569,041</u>	<u>6,537,606</u>

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						Consolidated
	Up to 1 year	1 to 3 years	3 to 5 years	5 to 10 years	Over 10 years	Total
<b>At December 31, 2022</b>						
Borrowing and debentures	265,409	1,198,937	1,421,116	897,562	25,951	3,808,975
Derivative financial instruments	4,148	7,643	7,292	11,046	2,571	32,700
Lease liabilities	26,299	8,070	4,562			38,931
Confirming payables	210,491					210,491
Trade payables	1,008,669					1,008,669
Dividends payable	227,116					227,116
Use of public assets - UBP	77,644	167,226	186,390	559,363	556,624	1,547,247
Related parties	984	73,106				74,090
	<u>1,820,760</u>	<u>1,454,982</u>	<u>1,619,360</u>	<u>1,467,971</u>	<u>585,146</u>	<u>6,948,219</u>

						Consolidated
	Up to 1 year	1 to 3 years	3 to 5 years	5 to 10 years	Over 10 years	Total
<b>At December 31, 2021</b>						
Borrowing and debentures	205,450	1,120,307	1,417,693	962,941	42,513	3,748,904
Derivative financial instruments	231,289	13,156	14,432	58,743	23,269	340,889
Lease liabilities	26,838	16,876	112			43,826
Confirming payables	558,017					558,017
Trade payables	655,626					655,626
Dividends payable	142,191					142,191
Use of public assets - UBP	57,681	143,206	137,192	477,528	510,357	1,325,964
Related parties	350	61,800				62,150
	<u>1,877,442</u>	<u>1,355,345</u>	<u>1,569,429</u>	<u>1,499,212</u>	<u>576,139</u>	<u>6,877,567</u>

## 6.2 Derivative financial instruments

### Accounting policy

Derivatives are recognized initially at their fair value on the date on which the derivative contract is signed, and subsequently held at fair value. The method for recognizing the resulting gain or loss depends on whether or not the derivative is designated as a hedging instrument (hedge accounting). In this case, the method depends on the nature of the item being hedged.

The Company uses hedge accounting and designates certain derivatives as:

#### (a) Cash flow hedges

In order to reduce the cash flow volatility in reais, the Company takes out derivative financial instruments designated as accounting hedges against non-derivative liabilities.

**Operating revenue hedging program (revenue/strategic hedge)** - In order to reduce cash flow volatility, the Company takes out derivative financial instruments to make the forward sale of the commodity in conjunction with the forward sale of US dollars.

The Company stopped using this hedge in June 2021, and the current agreements expired in May 2022.

The effective part of the changes in the fair values of the designated derivatives classified as cash flow hedges is recognized in equity under "Asset and liability valuation adjustments". The amounts accumulated in equity relating to any ineffective portions are immediately recognized in the profit or loss for the period. Gains or losses are recorded in the profit or loss for the periods during which the respective LME-indexed sales are made. The Company has no outstanding positions related to this program as at December 31, 2022.

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**Program hedging the export premium** – In order to reduce cash flow volatility, in 2020 and 2021 the Company took out derivative financial instruments to hedge a part of the premium implemented on overseas sales against the exchange rate variance. In this case, the hedge was made by buying and selling options, thereby forming a Zero Cost Collar (“ZCC”). This ZCC produces a free forex oscillation interval for the USD premium, with a cap and ceiling for the USD. The effective part of the changes in the fair value of the designated derivatives classified as cash flow hedges is recognized in equity under “Asset and liability valuation adjustments”. The amounts accumulated in equity relating to any ineffective portions are immediately recognized in the profit or loss for the period. Gains or losses are recorded in the profit or loss for the periods during which the respective LME-indexed sales are made. The Company’s has no outstanding positions related to this program as at December 31, 2022.

**USD Export Credit Notes (“NCE”)** - To hedge the future cash flow generated by revenue denominated in US dollars (with prices based on LME prices - in USD per metric ton), the Company designated non-derivative financial liabilities in a foreign currency in hedge accounting. The effective part of the exchange variations of the designated operations classified as cash flow hedges is recognized in equity under “Asset and liability valuation adjustments”.

The amounts accumulated in equity relating to any ineffective portions are immediately recognized in profit or loss for the period. Gains or losses and the amortization of interest are recorded in profit and loss in the periods during which the respective LME-indexed aluminum sales are made.

### (b) Derivative instruments not designated for hedge accounting

In order to reduce the cash flow volatility in reais, the Company takes out derivative financial instruments to hedge against foreign exchange exposure. The instruments below were not designated for hedge accounting.

**USD debt hedging instruments** - derivative financial instruments procured to swap out floating IPCA rates (or other indexes) in reais for rates fixed in US dollars, partially matching the currency of finance costs and debt amortization with the revenue currency, thus reducing the Company’s exposure to US dollars. The hedging instruments consist of swaps. Gains or losses on the mark-to-market of operations are recognized in finance income (loss) for the period under “Net finance income (cost)”.

**Hedging operating contracts** - derivative financial instruments procured to swap out floating IPCA rates (or other indexes) in reais for rates fixed in US dollars in the company’s operating contracts, partially matching the currency of the operating contracts with the revenue currency, thus reducing the Company’s exposure to US dollars. The hedging instruments consist of swaps. Gains or losses on the mark-to-market of operations are recognized in finance income (loss) for the period under “Net finance income (cost)”.

### (c) Fair value of derivatives and others financial instruments

The fair values of financial instruments that are not traded in active markets are determined using established pricing techniques. The Company uses its judgment to choose between methods and to make assumptions which are primarily based on the market conditions in force as at the reporting date.

All operations involving derivative financial instruments took place on over-the-counter markets.

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**(d) Effects of derivatives on the statement of financial position, finance income (loss) and cash flow**

The table below summarizes the derivative financial instruments and the items they hedge:

Strategy	Unit	Principal amount		2021 Total (net between assets and liabilities)	Income (expenses)	Finance result	Fair value		2022 Realized (gain) loss	Parent company 2022 Total (net between assets and liabilities)
		2022	2021				Other comprehensive income	2022		
<b>Derivative instruments designated for hedge accounting</b>										
<b>Operating result hedging program (strategic hedge)</b>										
Aluminum forwards	ton		57,200	(217,452)	(190,209)		132,518		275,143	
US dollar forwards	thousands of USD		119,641	2,852	51,388		(2,043)		(52,197)	
				(214,600)	(138,821)		130,475		222,946	
<b>Derivative instruments not designated for hedge accounting</b>										
<b>US dollar debt hedging instruments</b>										
Floating Rate Swaps in IPCA vs. fixed rate in USD	thousands of BRL	128,937	141,948	(67,969)		39,435			(4,091)	(32,625)
				(67,969)		39,435			(4,091)	(32,625)
<b>Hedging of energy futures contracts</b>										
Floating rate swaps in IPCA vs. fixed rate in USD	thousands of BRL	651,235	651,235	(15,640)		122,984				107,344
				(15,640)		122,984				107,344
				(298,209)	(138,821)	162,419	130,475		218,855	74,719
Current assets				10,749						25,804
Non-current assets				22,171						81,615
Current liabilities				(231,289)						(4,148)
Non-current liabilities				(99,840)						(28,552)
				(298,209)						74,719

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										Consolidated
										2022
Strategy	Unit	Principal amount		2021 Total (net between assets and liabilities)	Income (expenses)	Fair value		Realized (gain) loss	2022 Total (net between assets and liabilities)	
		2022	2021			Income	Other comprehensive income			Finance result
<b>Derivative instruments designated for hedge accounting</b>										
<b>Operating result hedging program (strategic hedge)</b>										
Aluminum forwards	ton		57,200	(217,452)	(190,209)		132,518		275,143	
US dollar forwards	thousands of USD		119,641	2,852	51,388		(2,043)		(52,197)	
				(214,600)	(138,821)		130,475		222,946	
<b>Derivative instruments not designated for hedge accounting</b>										
<b>US dollar debt hedging instruments</b>										
Floating Rate Swaps in IPCA vs. fixed rate in USD	thousands of BRL	128,937	141,948	(67,969)		39,435		(4,091)		(32,625)
				(67,969)		39,435		(4,091)		(32,625)
<b>Hedging of energy futures contracts</b>										
Floating rate swaps in IPCA vs. fixed rate in USD	thousands of BRL	823,310	823,310	(18,586)		155,370				136,784
				(18,586)		155,370				136,784
				(301,155)	(138,821)	194,805	130,475	218,855		104,159
Current assets				10,749						33,172
Non-current assets				28,985						103,687
Current liabilities				(231,289)						(4,148)
Non-current liabilities				(109,600)						(28,552)
				(301,155)						104,159

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										Parent company			
Strategy	Unit	2023	2024	2025	2026	2027	2028	2029	2030	Fair value by maturity			
												2031	As of 2032
<b>Derivative instruments not designated for hedge accounting</b>													
<b>US dollar debt hedging instruments</b>													
Floating rate swaps in IPCA vs. fixed rate in USD	thousands of BRL	(4,107)	(3,887)	(3,720)	(3,696)	(3,596)	(3,427)	(2,042)	(1,929)	(1,858)	(4,363)		
		(4,107)	(3,887)	(3,720)	(3,696)	(3,596)	(3,427)	(2,042)	(1,929)	(1,858)	(4,363)		
<b>Hedging of energy futures contracts</b>													
Floating rate swaps in IPCA vs. fixed rate in USD	thousands of BRL	25,763	15,395	13,430	11,528	9,897	8,466	7,275	6,129	5,211	4,250		
		25,763	15,395	13,430	11,528	9,897	8,466	7,275	6,129	5,211	4,250		
		21,656	11,508	9,710	7,832	6,301	5,039	5,233	4,200	3,353	(113)		

										Consolidated			
Strategy	Unit	2023	2024	2025	2026	2027	2028	2029	2030	Fair value by maturity			
												2031	As of 2032
<b>Derivative instruments not designated for hedge accounting</b>													
<b>US dollar debt hedging instruments</b>													
Floating rate swaps in IPCA vs. fixed rate in USD	thousands of BRL	(4,107)	(3,887)	(3,720)	(3,696)	(3,596)	(3,427)	(2,042)	(1,929)	(1,858)	(4,363)		
		(4,107)	(3,887)	(3,720)	(3,696)	(3,596)	(3,427)	(2,042)	(1,929)	(1,858)	(4,363)		
<b>Hedging of energy futures contracts</b>													
Floating rate swaps in IPCA vs. fixed rate in USD	thousands of BRL	33,131	19,602	17,092	14,666	12,583	10,755	9,233	7,767	6,591	5,364		
		33,131	19,602	17,092	14,666	12,583	10,755	9,233	7,767	6,591	5,364		
		29,024	15,715	13,372	10,970	8,987	7,328	7,191	5,838	4,733	1,001		

IPCA - Broad Consumer Prices Index.

USD - US dollar.

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**6.3 Fair value estimation**

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

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

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

The Company discloses fair value measurements according to the following hierarchy levels:

- (i) Quoted prices (unadjusted) in active markets for identical assets and liabilities (Level 1).
- (ii) Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (as prices) or indirectly (derived from prices) (Level 2).

At December 31, 2022 and 2021, the financial assets and liabilities carried at fair value were classified within Levels 1 and 2 of the fair value hierarchy, as shown below:

	Parent company		
	Fair value measured based on		2022
	Prices quoted in active market	Price-supported valuation technique	
	Level 1	Level 2	Fair value
<b>Assets</b>			
Cash and cash equivalents	371,980	180,859	552,839
Financial investments	270,501	43	270,544
Derivative financial instruments		107,419	107,419
	642,481	288,321	930,802
<b>Liabilities</b>			
Derivative financial instruments		32,700	32,700
Energy futures contracts		121,798	121,798
		154,498	154,498

	Parent company		
	Fair value measured based on		2021
	Prices quoted in active market	Price-supported valuation technique	
	Level 1	Level 2	Fair value
<b>Assets</b>			
Cash and cash equivalents	422,842	858,114	1,280,956
Financial investments	221,590	58,959	280,549
Derivative financial instruments		32,920	32,920
	644,432	949,993	1,594,425
<b>Liabilities</b>			
Derivative financial instruments		331,129	331,129
Energy futures contracts		35,395	35,395
		366,524	366,524

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

	Fair value measured based on		Consolidated
	Prices quoted in active market	Price-supported valuation technique	2022
	Level 1	Level 2	Fair value
<b>Assets</b>			
Cash and cash equivalents	451,336	397,746	849,082
Financial investments	333,538	6,308	339,846
Derivative financial instruments		136,859	136,859
	784,874	540,913	1,325,787
<b>Liabilities</b>			
Derivative financial instruments		32,700	32,700
Energy futures contracts		121,798	121,798
		154,498	154,498

	Fair value measured based on		Consolidated
	Prices quoted in active market	Price-supported valuation technique	2021
	Level 1	Level 2	Fair value
<b>Assets</b>			
Cash and cash equivalents	527,348	921,997	1,449,345
Financial investments	221,588	115,826	337,414
Derivative financial instruments		39,734	39,734
	748,936	1,077,557	1,826,493
<b>Liabilities</b>			
Derivative financial instruments		340,889	340,889
Energy futures contracts		35,395	35,395
		376,284	376,284

## Companhia Brasileira de Alumínio

### Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

#### 6.4 Sensitivity analysis statement

The following sensitivity analysis was conducted on the main risk factors affecting the pricing of financial instruments for cash and cash equivalents, short-term investments, loans, borrowing, debentures and derivative financial instruments. Key risk factors include exposure to fluctuations in the US dollar, CDI, IPCA and SOFR rates and electricity prices. 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, 2022 are described below:

**Scenario I** - Considers a shock of + or - 25% in the market curves as at December 31, 2022;

**Scenario II** - Considers a shock of + or - 50% in the market curves as at December 31, 2022.

Risk Factors	Cash and cash equivalents and financial investments	Borrowing and debentures (i)	Principal of derivative financial instruments	Unit	Energy futures contracts	Parent company			
						Impacts on P/L			
						-25%	-50%	+25%	+50%
Exchange									
USD	440,779	2,510,094	780,172	thousands of BRL		671,028	1,342,056	(671,028)	(1,342,056)
Interest rates									
BRL - CDI	322,801	231,444		thousands of BRL		(3,118)	(6,235)	3,118	6,235
BRL - IPCA	59,665	201,929	780,172	thousands of BRL		(23,736)	(44,084)	27,206	57,996
USD - SOFR		514,274		thousands of USD		6,127	12,255	(6,127)	(12,255)
BRL - TR		36,226		thousands of BRL		148	295	(148)	(295)
MtM of eletricity									
Fair value				thousands of BRL	121,798	(4,976)	(6,334)	6,998	13,997

Management notes to the individual and consolidated financial statements.

## Companhia Brasileira de Alumínio

### Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

Risk Factors	Cash and cash equivalents and financial investments	Borrowing and debentures (i)	Principal of derivative financial instruments	Unit	Energy futures contracts	Consolidated Impacts on P/L Scenarios I & II				
						-25%	-50%	+25%	+50%	
Exchange										
USD	452,683	2,510,094	952,247	thousands of BRL		698,223	1,396,445	(698,223)	(1,396,445)	
Interest rates										
BRL - CDI	642,799	231,444		thousands of BRL		(14,038)	(28,075)	14,038	28,075	
BRL - IPCA	59,665	201,929	952,247	thousands of BRL		(32,653)	(61,264)	36,830	78,006	
USD - SOFR		514,274		thousands of USD		6,127	12,255	(6,127)	(12,255)	
BRL - TR		36,226		thousands of BRL		148	295	(148)	(295)	
MtM of eletricity										
Fair value				thousands of BRL		121,798	(4,976)	(6,334)	6,998	13,997

- (i) The balances presented do not concur with the note because the sensitivity analysis did not include borrowing costs.

BRL - Local currency – Brazilian real.

CDI - Interbank Deposit Certificate.

IPCA - Broad Consumer Prices Index.

TR - Reference Rate.

USD - US dollar.

SOFR - Secured Overnight Financing Rate.

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**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**6.5 Capital Risk Management**

The Company’s objectives in managing its capital are to safeguard its ability to offer consistent returns to shareholders and benefits to other stakeholders, while maintaining an optimal capital structure.

The Company constantly monitors significant indicators, such as the financial leverage ratio, which is calculated as total net debt divided by adjusted EBITDA for the last twelve months.

Although this supplementary information is not defined by Brazilian and international accounting standards, the Company uses adjusted EBITDA as an indicator of its operational performance. Adjusted EBITDA is calculated on the basis of net income plus/less finance income(loss), plus income tax and social contribution, depreciation, amortization and depletion, less equity income plus dividends received from investees, plus/less exceptional non-cash items (non-cash items considered by Management as unusual are excluded from the adjusted EBITDA measurement), in accordance with CVM Directive 527 of October 4, 2012.

		<b>Consolidated</b>	
	<b>Note</b>	<b>2022</b>	<b>2021</b>
Borrowing and debentures	20	2.968.728	3.106.065
Lease liabilities	19	31.819	44.689
Cash and cash equivalents	9	(849.082)	(1.449.345)
Financial investments	10	(339.846)	(337.414)
Derivative financial instruments	6.2	(104.159)	301.155
<b>Net debt – (A)</b>		<b>1.707.460</b>	<b>1.665.150</b>

		<b>Consolidated</b>	
		<b>2022</b>	<b>2021</b>
Profit for the year		957.246	837.727
Income tax		189.339	19.681
Profit before income tax		1.146.585	857.408
Depreciation, amortization and depletion		539.511	496.045
Net finance results		2.061	496.527
<b>EBITDA</b>		<b>1.688.157</b>	<b>1.849.980</b>
Exceptional items			
Equity		12.865	(13.355)
Equity in earnings - Discontinued operations		(16.259)	631
Energy future contracts		86.403	(183.105)
Loss on sale of investment		18.493	
Recognition of gain on bargain purchase for acquisition of investments			(17.143)
Recognition at fair value of assets held for sale		47.522	
Gain on sale of property			(29.000)
Provision for impairment of taxes		15.444	
Reversal for impairment of assets		(226.007)	(71.051)
<b>Adjusted EBITDA (B)</b>		<b>1.626.618</b>	<b>1.536.957</b>
<b>Financial leverage index – (A/B)</b>		<b>1,05</b>	<b>1,08</b>

Management notes to the individual and consolidated financial statements.

## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

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### 7 Financial instruments by category

#### Accounting Policy

Normal purchases and sales of financial assets and liabilities are recognized on the trade date, i.e. the date on which the Company pledges to purchase or sell the asset. Financial assets are initially recognized at fair value plus transaction costs for all financial assets not carried at fair value through profit or loss, where transaction costs are expensed to profit or loss.

Financial assets are written off when the rights to receive cash flow from investments have expired, or when the Company has substantially transferred all risks and benefits of these assets. Financial assets at fair value through profit or loss are subsequently carried at fair value. Loans and receivables are subsequently carried at amortized cost using the effective interest method.

Gains or losses deriving from changes to the fair values of financial assets classified at fair value through profit and loss are stated in the statement of profit or loss under “Net financial gains/losses” in the financial year during which they occur.

#### (a) Classification, recognition and measurement

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

##### (i) Amortized cost

Financial assets measured at amortized cost are assets held under a business model for the purpose of collecting contractual cash flow, and for which the contractual terms of the financial asset originate, on specific dates, principal cash flow and interest on the outstanding principal amount.

##### (ii) Fair value through profit or loss

Financial assets which an entity uses to realize cash flow by selling such assets and financial assets that do not generate cash flow and solely entail the payment of principal and interest on the outstanding principal.

##### (iii) Fair value through other comprehensive income

Financial assets measured at fair value through other comprehensive income are held under a business model with the objective of receiving contractual cash flow or for sale. The financial asset's contractual conditions generated cash flow on specific dates that constitute payments of principal and interest on the outstanding principal.

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In thousands of reais, unless stated otherwise

Parent company				
2022				
	Note	Amortized cost	Fair value through profit or loss	Total
<b>Assets</b>				
Cash and cash equivalents (i)	9		552,839	552,839
Financial investments	10		270,544	270,544
Derivative financial instruments	6.2		107,419	107,419
Trade accounts receivable	11	467,734		467,734
Dividends receivable	14	22,804		22,804
Related parties	14	48,599		48,599
		<u>539,137</u>	<u>930,802</u>	<u>1,469,939</u>
<b>Liabilities</b>				
Borrowing and debentures	20	2,968,728		2,968,728
Derivative financial instruments	6.2		32,700	32,700
Lease liabilities	19	17,040		17,040
Confirming payables	21	203,627		203,627
Trade payables		861,782		861,782
Energy futures contracts	15		121,798	121,798
Dividends payable	14	206,044		206,044
Related parties	14	59,969		59,969
		<u>4,317,190</u>	<u>154,498</u>	<u>4,471,688</u>

Parent company					
2021					
	Note	Amortized cost	Fair value through profit or loss	Fair value through other comprehensive income	Total
<b>Assets</b>					
Cash and cash equivalents (i)	9		1,280,956		1,280,956
Financial investments	10		280,549		280,549
Derivative financial instruments	6.2		22,171	10,749	32,920
Trade accounts receivable	11	605,096			605,096
Dividends receivable	14	15,415			15,415
Related parties	14	47,274			47,274
		<u>667,785</u>	<u>1,583,676</u>	<u>10,749</u>	<u>2,262,210</u>
<b>Liabilities</b>					
Borrowing and debentures	20	3,074,967			3,074,967
Derivative financial instruments	6.2		105,781	225,348	331,129
Lease liabilities	19	41,111			41,111
Confirming payables	21	557,750			557,750
Trade payables		558,300			558,300
Energy futures contracts	15		35,395		35,395
Dividends payable	14	57,199			57,199
Related parties	14	49,893			49,893
		<u>4,339,220</u>	<u>141,176</u>	<u>225,348</u>	<u>4,705,744</u>

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				Consolidated
				2022
	Note	Amortized cost	Fair value through profit or loss	Total
<b>Assets</b>				
Cash and cash equivalents (i)	9		849,082	849,082
Financial investments	10		339,846	339,846
Derivative financial instruments	6.2		136,859	136,859
Trade accounts receivable	11	496,305		496,305
Related parties	14	60,648		60,648
		<u>556,953</u>	<u>1,325,787</u>	<u>1,882,740</u>
<b>Liabilities</b>				
Borrowing and debentures	20	2,968,728		2,968,728
Derivative financial instruments	6.2		32,700	32,700
Lease liabilities	19	31,819		31,819
Confirming payables	21	210,491		210,491
Trade payables		1,008,669		1,008,669
Energy futures contracts	15		121,798	121,798
Dividends payable	14	227,116		227,116
Related parties	14	74,090		74,090
		<u>4,520,913</u>	<u>154,498</u>	<u>4,675,411</u>

				Consolidated	
				2021	
	Note	Amortized cost	Fair value through profit or loss	Fair value through other comprehensive income	Total
<b>Assets</b>					
Cash and cash equivalents (i)	9		1,449,345		1,449,345
Financial investments	10		337,414		337,414
Derivative financial instruments	6.2		28,985	10,749	39,734
Trade accounts receivable	11	698,249			698,249
Dividends receivable	14	664			664
Related parties	14	57,323			57,323
		<u>756,236</u>	<u>1,815,744</u>	<u>10,749</u>	<u>2,582,729</u>
<b>Liabilities</b>					
Borrowing and debentures	20	3,106,065			3,106,065
Derivative financial instruments	6.2		115,541	225,348	340,889
Lease liabilities	19	44,689			44,689
Confirming payables	21	558,017			558,017
Trade payables		655,626			655,626
Energy futures contracts	15		35,395		35,395
Dividends payable	14	142,191			142,191
Related parties	14	62,150			62,150
		<u>4,568,738</u>	<u>150,936</u>	<u>225,348</u>	<u>4,945,022</u>

- (i) In practice, the fair value and amortized cost are the same, based on the definition of the features of cash equivalents.

### 7.1 Offsetting financial instruments

Financial assets and liabilities are offset, and the net amount is recorded in the statement of financial position, when there is a legal right to offset the recognized amounts and an intention to settle them on a net basis, or to realize the asset and settle the liability simultaneously. This legal right should not be contingent on future events, and should apply both in the normal course of business and in the event of default, insolvency or bankruptcy of the company or counterparty.

Management notes to the individual and consolidated financial statements.

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**8 Credit quality of financial assets**

The local and global ratings were obtained from ratings agencies (*Standard & Poor's, Moody's and Fitch Ratings*). For reporting purposes, we used the standard nomenclature of *Standard & Poor's* and Fitch Ratings, and the classifications established in our Financial Policies.

	Parent company						Consolidated					
	2022			2021			2022			2021		
	Local rating	Global rating	Total	Local rating	Global rating	Total	Local rating	Global rating	Total	Local rating	Global rating	Total
<b>Cash and cash equivalents</b>												
AAA	198,541		198,541	1,066,992		1,066,992	482,846		482,846	1,205,471		1,205,471
AA+				54,412		54,412				54,412		54,412
AA	19		19	153,722		153,722	52		52	153,942		153,942
AA-		79,190	79,190				1	79,190	79,191	-		-
A+		275,085	275,085	4	5,816	5,820		286,988	286,988	4	35,504	35,508
No rating	4		4	10		10	5		5	12		12
	<u>198,564</u>	<u>354,275</u>	<u>552,839</u>	<u>1,275,140</u>	<u>5,816</u>	<u>1,280,956</u>	<u>482,904</u>	<u>366,178</u>	<u>849,082</u>	<u>1,413,841</u>	<u>35,504</u>	<u>1,449,345</u>
<b>Financial investments</b>												
AAA	270,480		270,480	280,480		280,480	338,423		338,423	321,918		321,918
AA				5		5	1,359		1,359	15,432		15,432
No rating	64		64	64		64	64		64	64		64
	<u>270,544</u>		<u>270,544</u>	<u>280,549</u>		<u>280,549</u>	<u>339,846</u>		<u>339,846</u>	<u>337,414</u>		<u>337,414</u>
<b>Derivative financial instruments</b>												
AAA	107,343		107,343	31,824		31,824	107,344		107,344	31,824		31,824
AA	76		76	1,096		1,096	29,515		29,515	7,910		7,910
	<u>107,419</u>		<u>107,419</u>	<u>32,920</u>		<u>32,920</u>	<u>136,859</u>		<u>136,859</u>	<u>39,734</u>		<u>39,734</u>
	<u>576,527</u>	<u>354,275</u>	<u>930,802</u>	<u>1,588,609</u>	<u>5,816</u>	<u>1,594,425</u>	<u>959,609</u>	<u>366,178</u>	<u>1,325,787</u>	<u>1,790,989</u>	<u>35,504</u>	<u>1,826,493</u>

**9 Cash and cash equivalents**

**Accounting policy**

Cash and cash equivalents include cash, bank deposits and other highly liquid short-term investments which are readily convertible into a known amount of cash, and which are subject to a low risk of impairment.

	Parent company		Consolidated	
	2022	2021	2022	2021
<b>Local currency</b>				
Cash and banks	4,447	5,013	39,117	12,556
Bank Deposit Certificates - "CDBs"	77,562	858,114	294,441	921,997
Repurchase agreements - Public securities	5,944	112,757	38,726	162,816
Repurchase agreements - Private securities	24,107		24,105	
Financial Treasury Bills - "LFTs"				17,216
Shares of Investment Funds			10	
	<u>112,060</u>	<u>975,884</u>	<u>396,399</u>	<u>1,114,585</u>
<b>Foreign currency</b>				
Cash and banks	361,589	305,072	373,493	334,760
Time Deposits	79,190		79,190	
	<u>440,779</u>	<u>305,072</u>	<u>452,683</u>	<u>334,760</u>
	<u>552,839</u>	<u>1,280,956</u>	<u>849,082</u>	<u>1,449,345</u>

Cash and cash equivalents in foreign currency include sight deposits in current bank accounts, which yield fixed rates or rated indexed to US federal funds.

As at December 31, 2022, the CDBs and reverse repurchase securities yielded an average 102.52% p.a. and 95.66% p.a., respectively (102.73% p.a. and 101.67% p.a. respectively as at December 31, 2021) of the variations of the Interbank Deposit Certificate rate (CDI), and time deposits yielded 4.54%.

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**10 Short-term investments**

**Accounting policy**

Securities are classified as short-term investments when they do not qualify as cash and cash equivalents and/or are held for investment purposes based on the specified allocation of the funds.

	Parent company		Consolidated	
	2022	2021	2022	2021
<b>Local currency</b>				
Bank Deposit Certificates - "CDBs"	43	18,147	6,308	66,199
Financial Treasury Bills - "LFTs"	210,772	200,203	273,809	209,016
National Treasury Notes - "NTNs"	59,665		59,665	
Repurchase agreements - Public securities		62,135		62,135
Other	64	64	64	64
	<u>270,544</u>	<u>280,549</u>	<u>339,846</u>	<u>337,414</u>
Current	270,544	280,485	339,846	337,350
Non-current assets		64		64
	<u>270,544</u>	<u>280,549</u>	<u>339,846</u>	<u>337,414</u>

Most investments are in securities issued by the government or financial institutions, which earn interest of between 101.37% p.a. and 102.82% p.a. (December 31, 2021 – 103.64% and 105.21%) of the CDI variation.

**11 Trade receivables**

**Accounting policy**

Trade receivables are amounts due from customers for products sold or services performed in the ordinary course of the Company's business. Trade receivables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest rate method, less a provision for the impairment of trade receivables.

The allowance for doubtful accounts is calculated at an amount which is considered adequate to cover probable losses arising on the collection of accounts receivable. The Company applied the simplified approach of CPC 48/IFRS 9 - "Financial instruments" to calculate the estimated credit losses. The Company uses the customer's payment profile to determine their risk ratings. A provision matrix was compiled for each class of risk based on the historical data on accounts not received and payment times, which apply to all accounts receivable.

**(a) Breakdown**

	Note	Parent company		Consolidated	
		2022	2021	2022	2021
Trade receivables - Brazil		269,895	375,177	341,571	464,675
Trade receivables - foreign customers		131,829	182,989	149,853	205,356
Related parties	14	95,281	70,587	40,563	57,169
		<u>497,005</u>	<u>628,753</u>	<u>531,987</u>	<u>727,200</u>
Allowance for doubtful accounts		(29,271)	(23,657)	(35,682)	(28,951)
		<u>467,734</u>	<u>605,096</u>	<u>496,305</u>	<u>698,249</u>

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**Management notes to the individual and consolidated financial statements as at December 31, 2022**

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**(b) Breakdown by currency**

	Parent company		Consolidated	
	2022	2021	2022	2021
Real	334,328	430,311	345,477	501,111
US dollar	133,406	174,785	150,828	197,138
	<u>467,734</u>	<u>605,096</u>	<u>496,305</u>	<u>698,249</u>

**(c) Movement in estimated allowance for doubtful accounts**

The estimated losses on doubtful accounts are recorded at an amount considered sufficient to cover probable realization losses. The accounting policy for estimating the losses requires an individual analysis of the invoices of defaulting customers and of the collection measures adopted by the relevant department. The provision to be made is estimated in accordance with the stage of collection.

	Parent company		Consolidated	
	2022	2021	2022	2021
At the beginning of the year	(23,657)	(27,486)	(28,951)	(32,765)
Provision, net of reversals	(5,614)	3,829	(6,731)	3,814
At the end of the year	<u>(29,271)</u>	<u>(23,657)</u>	<u>(35,682)</u>	<u>(28,951)</u>

The allowance for doubtful accounts made was recorded in profit or loss for the year. The amounts charged to this allowance are usually written-off when the respective debts are not expected to be recovered.

**(d) Maturity**

	Parent company		Consolidated	
	2022	2021	2022	2021
Current	381,121	458,512	408,873	548,817
Up to 3 months past due	59,427	78,327	62,708	82,071
From 3 to 6 months past due	1,064	7,864	2,886	7,965
Over 6 months past due (i)	55,393	84,050	57,520	88,347
	<u>497,005</u>	<u>628,753</u>	<u>531,987</u>	<u>727,200</u>

- (i) Of the amounts shown in the table above, R\$49,045 and R\$55,045 refer to the balance receivable from customers that present real guarantees (chattel mortgages) with the negotiation of securities due on December 31, 2022 and December 31, 2021, respectively.

**12 Inventory**

**Accounting policy**

Stated at the lower of cost and net realizable value. The cost is determined by the weighted average cost method. The cost of finished goods and goods in process consists of raw materials, direct labor and other direct costs, as well as indirect production costs (based on normal operating capacity).

The net realizable value of inventory is the estimated selling price in the ordinary course of business, less the costs necessary to make the sale. Imports in progress are stated at the accrued cost of each import operation.

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The Company carries out a physical check on its goods in inventory at least once a year. Inventory adjustments are recorded in “Cost of goods sold and services rendered”.

**(a) Breakdown**

	Parent company		Consolidated	
	2022	2021	2022	2021
Finished products	256,026	371,572	348,749	472,590
Semi-finished products	851,990	574,539	937,963	693,636
Auxiliary and consumable materials	204,423	125,404	247,682	157,762
Raw materials	161,140	113,607	254,335	214,930
Imports in progress	129,471	94,033	130,584	90,927
Other		5,211	376	13,425
Estimate of loss (i)	(33,118)	(48,320)	(38,320)	(50,958)
	<u>1,569,932</u>	<u>1,236,046</u>	<u>1,881,369</u>	<u>1,592,312</u>

No inventory has been used to secure liabilities.

- (i) The estimated losses mainly relate to obsolete and slow-moving material.

**(b) Movement in estimated inventory losses**

	Parent company				2022	2021
	Finished products	Semi-finished products	Raw materials	Auxiliary materials	Total	Total
At the beginning of the year	(2,423)	(14,485)	(947)	(30,465)	(48,320)	(52,491)
Reversals (provisions) net	(2,308)	(409)	341	17,578	15,202	4,171
At the end of the year	<u>(4,731)</u>	<u>(14,894)</u>	<u>(606)</u>	<u>(12,887)</u>	<u>(33,118)</u>	<u>(48,320)</u>

	Consolidated				2022	2021
	Finished products	Semi-finished products	Raw materials	Auxiliary materials	Total	Total
At the beginning of the year	(4,534)	(14,513)	(1,447)	(30,464)	(50,958)	(52,491)
Reversals (provisions) net	(3,356)	(1,820)	841	16,973	12,638	1,533
At the end of the year	<u>(7,890)</u>	<u>(16,333)</u>	<u>(606)</u>	<u>(13,491)</u>	<u>(38,320)</u>	<u>(50,958)</u>

**13 Recoverable taxes**

**Accounting policy**

Recoverable taxes are recorded when the Company has a legal right to recover them. Contingent assets that could possibly be recovered, resulting from past events, the existence of which will only be confirmed or not by the occurrence of uncertain future events, are not recorded.

Recoverable taxes are presented net of estimated tax credit losses, and are tested for impairment by the Company annually.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

**In thousands of reais, unless stated otherwise**

Recoverable taxes represent taxes rights that will be realized by offsetting against future obligations deriving from the Company’s operations or from the possible sale of part of the credits. The Company continually reviews its capacity to realize these assets and, where necessary, provisions are made to assure that these assets are recorded at their market value.

**(a) Breakdown**

	Parent company		Consolidated	
	2022	2021	2022	2021
State Value-added Tax (ICMS)	502,091	398,939	539,658	413,821
Income Tax and Social Contribution (IRPJ and CSLL)	267,392	290,361	270,097	292,516
Social Contribution on Revenue (COFINS)	138,694	127,598	143,604	164,767
Social Integration Program (PIS)	29,667	26,837	30,729	36,807
Social security credit	22,364	20,570	30,427	20,570
ICMS on property, plant and equipment	69,189	40,032	71,208	40,032
Other	7,692	10,772	24,920	11,386
	<u>1,037,089</u>	<u>915,109</u>	<u>1,110,643</u>	<u>979,899</u>
Current	377,672	252,447	419,791	294,434
Non-current assets	659,417	662,662	690,852	685,465
	<u>1,037,089</u>	<u>915,109</u>	<u>1,110,643</u>	<u>979,899</u>

## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

### 14 Related parties

#### Accounting practices

Transactions with related parties are conducted by the Company under strictly commutative conditions, according to the usual market prices and conditions, and therefore they do not generate any inappropriate benefit for its counterparties or losses for the Company. The Company enters into contracts with related parties during the normal course of its business (parents, affiliates, joint operations and shareholders), related to the purchase and sale of products and services, asset leasing, the sale of raw materials and services.

#### (a) Statement of financial position

	Parent company											
	Parent company	Controlled companies					Related companies					
	VSA	Alux	CBA Energia	CBA Itapissuma	CBA Machadinho	Metalex	Enercan	Alunorte	Auren Comerc.	Auren Energia	Banco Votorantim	Outros
<b>Accounts receivable from customers</b>												
Invoicing between group companies			3,573		1,810		49,331		537	30,804		
Others	1,970										147	7,109
<b>Dividends receivable</b>			6,983	9,231								6,590
<b>Current and non-current assets</b>												
Shareholding in Ventos de Santo Anselmo (ii)										43,050		
Cash equivalents and derivative financial instruments (iii)												75
Other assets												5,549
<b>Suppliers</b>												
Services shared by the Operational Center of Excellence - CoE (v)	3,609											
Energy billing (i)			8,329		3,944		25,214		42,809			
Invoicing of group companies				15		1,212		48,403				9,058
<b>Current and non-current liabilities</b>												
Shareholding in Ventos de Santo Anselmo (ii)										53,380		
Advances from customers								538		447		
Energy futures contracts (i)									121,798			
Derivative financial instruments (iii)											32,700	
Other liabilities												5,604
<b>Dividends payable</b>	139,873											
Non-controlling shareholders												66,171
<b>Total on December 31, 2022</b>	<b>145,452</b>	<b>10,556</b>	<b>17,560</b>	<b>1,825</b>	<b>3,944</b>	<b>50,543</b>	<b>25,214</b>	<b>49,478</b>	<b>195,411</b>	<b>97,024</b>	<b>32,775</b>	<b>100,081</b>

Management notes to the individual and consolidated financial statements.

# Companhia Brasileira de Alumínio



## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

	Parent company											
	Parent company	Controlled companies					Joint operation	Related companies				
	VSA	Alux	CBA Energia	CBA Itapissuma	CBA Machadinho	Metalex	Enercan	Alunorte	Auren Comerc.	Auren Energia	Banco Votorantim	Outros
<b>Accounts receivable from customers</b>												
Invoicing between group companies				353	5,068	23,836			29,288			
Others	3,689											8,353
<b>Dividends receivable</b>			13,358		1,393			664				
<b>Current and non-current assets</b>												
Shareholding in Ventos de Santo Anselmo (ii)										36,372		
Cash equivalents and derivative financial instruments (iii)											154,767	
Other assets												10,902
<b>Suppliers</b>												
Services shared by the Operational Center of Excellence - CoE (v)	4,912											
Energy billing (i)			6,616	6	3,566		41,123		47,492			645
Invoicing of group companies						1,249						
<b>Current and non-current liabilities</b>												
Shareholding in Ventos de Santo Anselmo (ii)										46,331		
Advances from customers								347				3
Energy futures contracts (i)									35,395			
Derivative financial instruments (iii)											68,430	
Other liabilities												3,212
<b>Dividends payable</b>	43,339											
Non-controlling shareholders												13,860
											49,690	
<b>Total on December 31, 2021</b>	<b>51,940</b>		<b>19,974</b>	<b>359</b>	<b>10,027</b>	<b>25,085</b>	<b>41,123</b>	<b>1,011</b>	<b>112,175</b>	<b>82,703</b>	<b>272,887</b>	<b>36,975</b>

Management notes to the individual and consolidated financial statements.

Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

	Consolidated							
	Parent company	Related companies						
	VSA	Enercan	Alunorte	Auren Comerc.	Auren Energia	Banco Votorantim	MRN	Outros
<b>Accounts receivable from customers</b>								
Invoicing between group companies			537	30,811				
Others	1,970				664		39	6,542
<b>Dividends receivable</b>		5,946					6,590	
<b>Current and non-current assets</b>								
Shareholding in Ventos de Santo Anselmo (ii)					55,101			
Cash equivalents and derivative financial instruments (iii)						29,515		
Other assets								5,547
<b>Suppliers</b>								
Services shared by the Operational Center of Excellence - CoE (v)	3,796							
Energy billing (i)		25,214		42,809				
Invoicing of group companies			48,403					8,739
<b>Current and non-current liabilities</b>								
Shareholding in Ventos de Santo Anselmo (ii)					67,501			
Advances from customers			537		447			
Energy futures contracts (i)				121,798				
Derivative financial instruments (iii)						32,700		
Other liabilities								5,605
<b>Dividends payable</b>	139,873				20,307			
Non-controlling shareholders								66,936
<b>Total on December 31, 2022</b>	<b>145,639</b>	<b>31,160</b>	<b>49,477</b>	<b>195,418</b>	<b>144,020</b>	<b>62,215</b>	<b>6,629</b>	<b>26,433</b>

Management notes to the individual and consolidated financial statements.

Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

	Consolidated							
	Parent company	Joint operation	Related companies					
	VSA	Enercan	Alunorte	Auren Comerc.	Auren Energia	Banco Votorantim	MRN	Outros
<b>Accounts receivable from customers</b>								
Invoicing between group companies					34,362			
Others	3,689							19,118
<b>Dividends receivable</b>			664					
<b>Current and non-current assets</b>								
Shareholding in Ventos de Santo Anselmo (ii)					46,657			
Cash equivalents and derivative financial instruments (iii)						177,009		
Other assets								10,666
<b>Suppliers</b>		41,123						
Services shared by the Operational Center of Excellence - CoE (v)	6,719							
Energy billing (i)				52,524				
Invoicing of group companies								644
<b>Current and non-current liabilities</b>								
Shareholding in Ventos de Santo Anselmo (ii)					58,590			
Advances from customers			347					3
Energy futures contracts (i)				35,395				
Derivative financial instruments (iii)						78,190		
Other liabilities								3,210
<b>Dividends payable</b>	43,339				29,386			22,896
Non-controlling shareholders								46,570
						49,690		
<b>Total on December 31, 2021</b>	<b>53,747</b>	<b>41,123</b>	<b>1,011</b>	<b>122,281</b>	<b>134,633</b>	<b>304,889</b>		<b>103,107</b>

Management notes to the individual and consolidated financial statements.

# Companhia Brasileira de Alumínio



## Management notes to the individual and consolidated financial statements as at December 31, 2022 In thousands of reais, unless stated otherwise

### (b) Statement of profit or loss

	Parent company													
	Parent company	Controlled companies					Related companies							
	VSA	Alux	CBA Energia	CBA Itapissuma	CBA Machadinho	Metalex	Enercan	Alunorte	Auren Comerc.	Auren Energia	Banco Votorantim	L.C.G.S.P.E.	Nexa Resources	Outros
<b>Purchases</b>														
Services shared by the Operating Excellence Center - CoE (v)	36,194													
Energy sales (i)			102,543		46,785		237,078		462,584					
Sales of the group's companies				17,663		20,899		425,326				3,923	412	153
<b>Sales</b>									275,253					
Balances of energy sales (i)														
Balances of intercompany sales		69,949		7,639		510,930							12,573	6,875
<b>Finance revenue (costs)</b>														
Rights from electric power trading agreements in the free market (i)										(160)				
Cash equivalents and derivative financial instruments (iii)											39,400			
Other												469		(2,100)
<b>Total as of December 31, 2022</b>	<b>36,194</b>	<b>69,949</b>	<b>102,543</b>	<b>25,302</b>	<b>46,785</b>	<b>531,829</b>	<b>237,078</b>	<b>425,326</b>	<b>737,837</b>	<b>(160)</b>	<b>39,869</b>	<b>3,923</b>	<b>12,985</b>	<b>4,928</b>

	Parent company													
	Parent company	Controlled companies					Joint operation	Related companies						
	VSA	Alux	CBA Energia	CBA Itapissuma	CBA Machadinho	Metalex	Enercan	Alunorte	Auren Comerc.	Auren Energia	Banco Votorantim	L.C.G.S.P.E.	Nexa Resources	Outros
<b>Purchases</b>														
Services shared by the Operating Excellence Center - CoE (v)	26,944													
Energy sales (i)			78,953		41,935		227,620		643,139					22,114
Sales of the group's companies				6,647		8,195		341,853				4,277	676	51
<b>Sales</b>									360,168					
Balances of energy sales (i)														
Balances of intercompany sales				7,691		320,586							13,631	6,476
<b>Finance revenue (costs)</b>														
Rights from electric power trading agreements in the free market (i)										(9,959)				
Cash equivalents and derivative financial instruments (iii)											(49,446)			
Other														82
<b>Total on December 31, 2021</b>	<b>26,944</b>		<b>78,953</b>	<b>14,338</b>	<b>41,935</b>	<b>328,781</b>	<b>227,620</b>	<b>341,853</b>	<b>1,003,307</b>	<b>(9,959)</b>	<b>(49,446)</b>	<b>4,277</b>	<b>14,307</b>	<b>28,723</b>

Management notes to the individual and consolidated financial statements.

# Companhia Brasileira de Alumínio



## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

	Consolidated								
	Parent company	Related companies							
	VSA	Auren Comerc.	Auren Energia	Alunorte	Banco Votorantim	L.C.G.S.P.E.	Nexa Resources	Nexa Cajamarquilla	Outros
<b>Purchases</b>									
Services shared by the Operating Excellence Center - CoE (v)	39,066								
Energy sales (i)		507,114							
Sales of the group's companies				425,326		3,923	412		99
<b>Sales</b>									
Balances of energy sales (i)		275,947	1,025						
Balances of intercompany sales							12,573	6,875	203
<b>Finance revenue (costs)</b>									
Rights from electric power trading agreements in the free market (i)			(257)						
Cash equivalents and derivative financial instruments (iii)					71,785				
Other					469				(2,100)
<b>Total as of December 31, 2022</b>	<b>39,066</b>	<b>783,061</b>	<b>768</b>	<b>425,326</b>	<b>72,254</b>	<b>3,923</b>	<b>12,985</b>	<b>6,875</b>	<b>(1,798)</b>

	Consolidated								
	Parent company	Related companies							
	VSA	Auren Comerc.	Auren Energia	Alunorte	Banco Votorantim	L.C.G.S.P.E.	Nexa Resources	Nexa Cajamarquilla	Outros
<b>Purchases</b>									
Services shared by the Operating Excellence Center - CoE (v)	29,259								
Energy sales (i)									
Sales of the group's companies		724,079		341,853		4,277	676		51
<b>Sales</b>									
Balances of energy sales (i)		440,154							
Balances of intercompany sales							13,631	6,475	1
<b>Finance revenue (costs)</b>									
Rights from electric power trading agreements in the free market (i)			(11,932)						
Cash equivalents and derivative financial instruments (iii)					(58,595)				
Other									82
<b>Total as of December 31, 2021</b>	<b>29,259</b>	<b>1,164,233</b>	<b>(11,932)</b>	<b>341,853</b>	<b>(58,595)</b>	<b>4,277</b>	<b>14,307</b>	<b>6,475</b>	<b>134</b>

Management notes to the individual and consolidated financial statements.

## Companhia Brasileira de Alumínio

### Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

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- (i) The balance of current and non-current liabilities relates to the Company's rights under electric power trading agreements entered into in the free market.
- (ii) Refers to call options for the acquisition, by Auren Energia, of the ownership interests held by CBA in Ventos de Santo Anselmo, and by CBA Itapissuma in Ventos de Santo Isidoro, accounted for as financial instruments at amortized cost, and classified as non-current assets and liabilities (Note 1.1 (h)).
- (iii) Relates to cash equivalents and derivative financial instruments procured from Banco Votorantim S.A.
- (iv) On February 3, 2022, Auren Energia, (formerly named VTRM) carried out a downstream merger of its joint parent company together with Votorantim Geração de Energia S.A., with the consequent extinction of the merged company.
- (v) Relates to administrative, human resources, accounting, tax, technical assistance, and information technology activities that are shared by the Center of Excellence of the parent company VSA. These activities, which are carried out for all the companies of the Votorantim Group, are reimbursed to VSA in proportion to the cost of the services actually rendered to the Company.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

**In thousands of reais, unless stated otherwise**

**(c) Company debts secured by related parties**

Type	Guarantor	2022	2021
BNDES	VSA	201,929	221,929
Eurobonds – USD (Voto 24) (Note 20 (f))	VSA		500,484
		201,929	722,413

**15 Future energy contracts**

**Accounting policy**

The Company is authorized to market energy in both the free market and the regulated market.

A portion of these transactions took the form of contracts entered into in order to receive or deliver energy for internal use, respectively, in accordance with the latter’s production demands and are not therefore classified as financial instruments.

Another portion of these transactions consists of sales of surplus energy not used in the production process. These transactions take place in an active market and meet the definition of financial instruments, due to the fact that they are settled in energy and readily convertible into cash. Such contracts are recorded as derivatives and are recognized in the Company’s statement of financial position at fair value on the date on which the derivative is entered into, and subsequently revalued at their fair values at the reporting date. The fair value recognition and realization of these financial instruments are recorded under “Other operating expenses” (Note 29).

The fair values of these derivatives are estimated partly based on price quotes in active markets, as long as such market data exists, and partly through the use of assessment techniques, which consider: (i) prices established in the purchase and sale operations; (ii) the risk margin on the supply; and (iii) the projected market price during the period of availability. Whenever the fair value upon initial recognition for these contracts differs from the transaction price, a loss or gain on the fair value is recognized in the profit or loss for the year.

The transactions carried out by the company Auren Comercializadora de Energia Ltda. in the Free Contracting Environment (“ACL”) led to a gain from the sale of surplus energy, which was recognized at its fair value on the transaction date.

In the financial year ended December 31, 2022, the fair value realized through the physical settlement of the Company’s energy purchase and sale contracts resulted in total revenue of R\$26,683. The new position at the reporting date due to the marking-to-market of sale and purchase contracts resulted in an expense of R\$113,086. These amounts were recorded within "Other operating income (expenses), net" (Note 29) and vary according to the energy prices in the market.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

	Parent company and Consolidated	
	2022	2021
<b>Liabilities</b>		
Current	94,899	11,142
Non-current	26,899	24,253
	<u>121,798</u>	<u>35,395</u>
	Parent company and Consolidated	
	2022	2021
Realization	26,683	28,097
Mark-to-market of energy contracts	(113,086)	155,008
	<u>(86,403)</u>	<u>183,105</u>

**16 Investments**

**Accounting practices**

The Company's investments in associated companies, subsidiaries and joint ventures are recorded using the equity income method.

Associates are those entities in which the Group has significant influence, but not control or joint control, over the financial and operating policies.

A joint venture is an arrangement under which the Company has joint control over the entity and is entitled to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities. The assets, liabilities, revenue and expenses related to investees interests in joint operations are therefore recorded individually in the financial statements.

Investments in associated companies and in joint operations are recorded by the equity income method and recognized initially at cost, which includes transaction costs.

The Company's investments in associated companies and joint operations include the goodwill identified on each acquisition, net of any accumulated impairment loss.

Following initial recognition, the financial statements include the Company's share of profit or loss and OCI ("Other comprehensive income") of equity-accounted investees, until the date on which significant influence or joint control ceases. Investments in subsidiaries are accounted for using the equity method in the Company's individual financial statements.

The Company tests the carrying values of its subsidiaries' investments in subsidiaries for impairment. The process of estimating these amounts involves the use of assumptions, judgments and estimates regarding future cash flow that represent the Company's best estimates.

The Company concluded that as at December 31, 2022 there were no impairment losses to be recognized on its investments, except for the effects of the loss on the interest in MRN (Note 1.1 (I)).

# Companhia Brasileira de Alumínio



## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

### (a) Breakdown

	Information on investees as of December 31, 2022				Equity		Balance	
	Equity	Profit (loss) for the year	Percentage total (%)	Percentage of voting interest (%)	2022	2021	2022	2021
<b>Parent company</b>								
<b>Investments valued at their equity amounts</b>								
<b>Subsidiaries</b>								
Alux do Brasil Indústria e Comércio Ltda. (i)	105,047	40,844	100.00	100.00	30,776		105,047	
CBA Energia Participações S.A. (ii)	333,009	116,368	33.33	100.00	33,511	43,083	105,083	102,695
CBA Itapissuma Ltda.	618,672	8,379	100.00	100.00	8,380	55,377	618,672	579,796
CBA Machadinho Geração de Energia Ltda.	138,849	(2,507)	100.00	100.00	(2,507)	9,000	138,850	145,536
L.C.G.S.P.E. Empreendimentos e Participações Ltda.	6,582	1,245	100.00	100.00	1,245		6,582	
Metalex Ltda.	161,894	12,677	100.00	100.00	12,676	27,746	161,894	99,217
Santa Cruz Geração de Energia S.A.	3,748	(3,290)	100.00	100.00	(3,289)	223	3,748	7,037
<b>Affiliated companies</b>								
Alunorte - Alumina do Norte S.A. (iii) (v)	2,222,155	(794,989)	3.03	3.52	(24,123)	13,035	99,290	114,546
Mineração Rio do Norte S.A. (Note 31 (a))	996,989	162,587	10.00	10.00				90,030
<b>Investments valued at cost</b>								
Other							44	44
<b>Revaluation surplus</b>								
Alux do Brasil Indústria e Comércio Ltda. (i)					(2,668)		28,902	
CBA Itapissuma Ltda.					(7,575)	(15,328)	178,809	186,059
Metalex Ltda.					(669)	(895)	8,395	9,064
<b>Goodwill</b>								
Alux do Brasil Indústria e Comércio Ltda. (i)							48,459	
Metalex Ltda.							49,430	49,431
					45,757	132,241	1,553,205	1,383,455

Management notes to the individual and consolidated financial statements.

# Companhia Brasileira de Alumínio



## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

	Information on investees as of December 31, 2022				Equity		Consolidated Balance	
	Equity	Profit (loss) for the year	Percentage total (%)	Percentage of voting interest (%)	2022	2021	2022	2021
<b>Investments valued at their equity amounts</b>								
<b>Affiliated companies</b>								
Alunorte - Alumina do Norte S.A. (iii) (v)	3,240,319	(794,989)	3.03	3.52	(24,123)	13,035	99,290	114,546
Campos Novos Energia S.A. (iv)	862,981	483,431	25.44	25.44	11,205		219,531	
Mineração Rio do Norte S.A. (iii) (Note 31 (a))	996,989	162,587	10.00	10.00				90,030
Other investments					53	320	165	352
<b>Investments evaluated by cost</b>								
Other							44	44
<b>Goodwill</b>								
Campos Novos Energia S.A. (iv)							41,562	
					(12,865)	13,355	360,592	204,972

- (i) Acquisition of the company Alux do Brasil Indústria e Comércio Ltda. (Note 1.1 (a));
- (ii) The 33.33% interest held in CBA Energia Participações S.A. represents 100% of the common shares, and provides the Company with control over this investee.
- (iii) Relates to an investee over which the Company exercises significant influence through agreements entered into with shareholders.
- (iv) 1.66% increase in the interest in Enercan (Note 1.1 (k)).
- (v) For the purpose of calculating the balance of the investment, the company disregarded the amount paid in by Hydro Aluminium Brasil Investment B.V. in Alunorte, in December 2022, in the amount of R\$1,050,000. This is due the fact that other controlling shareholders, in addition to CBA, have the option to exercise their pre-emptive rights to subscribe new shares by February 28, 2022, in proportion to their interests, as well as the legal guarantees provided to non-controlling shareholders. If one of the current shareholders does not exercise their pre-emptive rights, these rights can exercised by the shareholders that are participating in the capital increase. After the capital increase has been completed, Alunorte will issue a final allocation notification reporting the resulting equity interests, sending the respective documents to the shareholders to analyze and sign, whereupon the equity interest will change as a result of the aforesaid capital increase.

Management notes to the individual and consolidated financial statements.

Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

(b) Information about the investees

See below the summarized financial information of the principal associates, subsidiaries and joint ventures as at December 31, 2022 and 2021:

										2022
	Percentage of total participation	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Equity	Net revenues	Operating income	Financial results	Net profit (loss) for the year
<b>Subsidiaries</b>										
Alux do Brasil Indústria e Comércio Ltda.	100.00	92,596	37,781	25,228	102	105,047	397,520	(358,393)	1,717	40,844
CBA Energia Participações S.A.	33.33	30,572	347,565	45,128		333,009	81,837	31,961	2,570	116,368
CBA Itapissuma Ltda.	100.00	559,278	288,991	206,730	22,867	618,672	967,099	(988,758)	30,038	8,379
CBA Machadinho Geração de Energia Ltda.	100.00	22,145	119,739	3,035		138,849	38,650	(43,667)	2,510	(2,507)
L.C.G.S.P.E. Empreendimentos e Participações Ltda.	100.00	6,036	1,121	575		6,582	2,145	(1,178)	278	1,245
Metalex Ltda.	100.00	147,679	96,291	79,114	2,962	161,894	577,428	(565,406)	655	12,677
Santa Cruz Geração de Energia S.A.	100.00	4,053	1,355	856	804	3,748	158	(4,402)	954	(3,290)
<b>Affiliates</b>										
Alunorte - Alumina do Norte S.A.	3.03	812,231	11,570,929	3,764,075	6,396,930	2,222,155	11,248,435	(11,999,804)	(43,620)	(794,989)
Campos Novos Energia S.A.	25.44	317,077	1,012,547	279,816	186,827	862,981	1,080,877	(595,392)	(2,054)	483,431
Mineração Rio do Norte S.A.	10.00	591,992	3,295,390	837,114	2,053,279	996,989	1,892,735	(1,645,305)	(84,843)	162,587
<b>2021</b>										
	Percentage of total participation	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Equity	Net revenues	Operating income	Financial results	Net profit (loss) for the year
<b>Subsidiaries</b>										
CBA Energia Participações S.A.	33.33	106,540	284,794	73,457		317,877	144,260	(7,666)	1,272	137,866
CBA Itapissuma Ltda.	100.00	501,147	263,511	144,445	40,417	579,796	847,760	(785,610)	(6,773)	55,377
CBA Machadinho Geração de Energia Ltda.	100.00	27,869	126,042	8,375		145,536	43,768	(35,586)	818	9,000
Metalex Ltda.	100.00	105,555	68,955	73,178	2,115	99,217	486,730	(456,460)	(2,523)	27,747
Santa Cruz Geração de Energia S.A.	100.00	7,544	1,798	727	1,578	7,037	742	(3,279)	2,759	222
<b>Affiliates</b>										
Alunorte - Alumina do Norte S.A.	3.03	2,899,785	8,209,677	3,385,466	3,949,084	3,774,912	10,898,856	(9,890,818)	(578,449)	429,589
Mineração Rio do Norte S.A.	10.00	621,775	2,876,631	921,228	1,676,874	900,304	1,554,587	(1,368,357)	(192,537)	(6,307)

Management notes to the individual and consolidated financial statements.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**(c) Movement in investments**

	Parent company		Consolidated	
	2022	2021	2022	2021
At the beginning of the year	1,383,455	1,187,573	204,972	198,774
Equity	45,757	132,241	(12,865)	13,355
Equity in earnings – discontinued operations (iii)	16,259		16,259	
Enercan deconsolidation (Note 1.1 (k))			194,756	
Investment acquisition Enercan (Note 1.1 (k))			13,571	
Goodwill on the purchase of the interest Enercan (Note 1.1 (k))			11,061	
Reclassification of Enercan's goodwill - effect of the deconsolidation (Note 1.1 (k))			30,501	
Acquisition of 80% investment Alux (Note 1.1 (a))	133,246			
Remaining acquisition 20% Alux investment (Note 1.1 (b))	27,947			
Capital increase in investees (i)	93,548	106,600		
Dividends resolved	(56,448)	(43,191)	(5,952)	283
Hedge accounting of investee (ii)	8,228	(5,746)	8,228	(4,904)
Investment acquisition Santa Cruz		6,815		
Reclassification to assets classified as held for sale (iii)	(99,699)	(631)	(99,699)	(631)
Other	912	(206)	(240)	(1,905)
At the end of the year	1,553,205	1,383,455	360,592	204,972

- (i) Capital increase in the investees CBA Itapissuma Ltda., Metalex Ltda and L.C.G.
- (ii) Effects of hedge accounting in investees.
- (iii) The Company opted to initiate a plan to sell its interest in MRN, and is therefore presenting the latter's results in these financial statements as a discontinued operation. The comparative financial information for the period 2021 has been restated to reflect this operation (Note 2.3 (a)).

**17 Property, plant and equipment**

**Accounting policy**

Property, plant and equipment is stated at its historical purchase or construction cost less depreciation. The 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 the item will exist, and when the cost of the item can be measured reliably. The carrying amounts of replaced items or parts are derecognized.

All other repairs and maintenance are charged to the statement of profit or loss during the financial period in which they are incurred. The cost of major refurbishments is included in the carrying value of the asset when the 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.

With the exception of land, which is not depreciated, the depreciation of other assets is calculated using the straight-line method to reduce their costs to their residual values over their estimated useful lives. The useful lives and residual values are reviewed annually, and adjusted if appropriate.

The carrying amount of an asset is immediately written down to its recoverable amount when the carrying amount is greater than the estimated recoverable amount, in accordance with the criteria that the Company uses to determine the recoverable amount.

## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

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The gains and losses on disposal are determined by comparing the sales amounts with the carrying amounts, and are recognized within "Other operating revenue (expenses), net" (Note 29) in the statement of profit or loss.

### 17.1 Impairment of non-financial assets

The Company and its subsidiaries review their assets for signs of impairment annually, or whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

An impairment loss is recognized when the carrying amount of the asset or cash-generating unit (CGU) exceeds its recoverable amount. This value is the higher of the fair value of the asset, less selling costs (net sales proceeds), and its value in use.

The value in use is determined based on the projected free operational cash flow discounted to present value using a discount rate that reflects current market appraisals, based on financial budgets approved by Management for a five-year period. All market projections are supported by reports issued by trade associations, consultancy firms and research and statistics institutes in the respective countries in which we operate. The fair value is obtained by selling an asset or cash generating unit in an arm's length transaction between informed and interested parties, adjusted for estimated sales expenses.

For impairment testing purposes, assets are grouped at the lowest level for which there is separately identifiable cash flow (CGU level). If new prospective evidence is found of the recovery of assets, except for goodwill, that have incurred impairment, they are tested again and can have their impairment provision reversed on the reporting date.

An identified loss is recognized in profit or loss for the period at the amount by which the asset's carrying amount exceeds its recoverable value.

In FY 2022 the qualitative analysis carried out by the Company and its subsidiaries did not identify signs of impairment during impairment tests, except for the impairment recorded to reflect the ARO adjustment made after discount rate review, added to property, plant and equipment, referring to the Niquelândia plant (Note 1.1 (c)).

### 17.2 Asset Retirement Obligations ("ARO")

The Company and its subsidiaries have retirement obligations as a result of the exploration of mines for the purpose of extracting natural resources. The accounting policies for recording the ARO liabilities can be seen in Note 23 (c).

The retirement cost, equivalent to the present value of the obligation (liabilities), is capitalized as part of the carrying amount of the mining rights asset. The asset is amortized using the straight-line method over the mine's remaining useful life. The Company annually reviews the useful lives of its mines and estimates the future amounts required to reclaim the explored areas.

**Management notes to the individual and consolidated financial statements as at  
December 31, 2022**  
**In thousands of reais, unless stated otherwise**

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## 17.3 Interest capitalization (CPC 20)

The interest to be capitalized is determined based on the loan (liabilities) accounts and interest expense accounts (profit or loss). The interest for the month is divided by the average balance of the loans, resulting in the percentage used to allocate interest for the period to projects in progress considered in item (Note 18 (b)). Interest is only distributed to projects considered “qualifying” under CPC 20.

According to item 7 of CPC 20 (R1), applying the capitalization of loan costs is restricted to the following assets, which can be considered qualifying:

- a) Inventory (assets not manufactured or otherwise produced over a long period of time, or inventory produced on a small scale and on a one-off basis)
- b) Manufacturing plants (units/production facilities)
- c) Power generation facilities
- d) Intangible assets
- e) Investment property.

# Companhia Brasileira de Alumínio



## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

### (a) Breakdown and movements

									Parent company	
									2022	2021
	Land and improvements	Buildings and construction	Machinery, equipment and facilities	Vehicles	Furniture and fixtures	Construction in progress	Asset retirement obligation	Other	Total	Total
At the beginning of the year										
Cost	139.043	2.508.810	6.107.158	112.618	29.256	468.077	217.626	312.151	9.894.739	9.591.230
Accumulated depreciation	(4.597)	(1.033.058)	(4.195.277)	(98.617)	(23.546)		(105.291)	(278.776)	(5.739.162)	(5.476.667)
Net balance	134.446	1.475.752	1.911.881	14.001	5.710	468.077	112.335	33.375	4.155.577	4.114.563
Additions (v)			26.390	6		869.387		318	896.101	457.986
Write-offs	(78)	(3.963)	(944)	(184)					(5.169)	(663.949)
Reversal (provision) for impairment of assets	156	(1.458)	23.968	83	7	745	33.393	42	56.936	603.945
Additions by corporate operations										521
Write-offs for corporate transactions (i)		(39.398)	(101.761)				(27.911)		(169.070)	(10.674)
Reversal (constitution) for impairment of assets (i)		39.398	101.761				27.911		169.070	
Depreciation		(52.853)	(312.792)	(3.862)	(1.211)		(10.650)	(2.696)	(384.064)	(368.782)
Cash flow reassessment							(53.847)		(53.847)	26.840
Transfers (iv)	1.486	18.763	580.493	5.712	1.489	(591.262)		(22.869)	(6.188)	(4.873)
At the end of the year	136.010	1.436.241	2.228.996	15.756	5.995	746.947	81.231	8.170	4.659.346	4.155.577
Cost	141.066	2.489.265	6.484.907	112.867	30.451	746.947	197.172	284.873	10.487.548	9.894.739
Accumulated depreciation	(5.056)	(1.053.024)	(4.255.911)	(97.111)	(24.456)		(115.941)	(276.703)	(5.828.202)	(5.739.162)
Net balance at the end of the year	136.010	1.436.241	2.228.996	15.756	5.995	746.947	81.231	8.170	4.659.346	4.155.577
Average annual depreciation rates – %		3	5	19	4		2			

Management notes to the individual and consolidated financial statements.

# Companhia Brasileira de Alumínio



## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

									Consolidated	
									2022	2021
	Land and improvements	Buildings and construction	Machinery, equipment and facilities	Vehicles	Furniture and fixtures	Construction in progress	Asset retirement obligation	Other	Total	Total
At the beginning of the year										
Cost	153.859	3.075.535	7.129.536	117.805	38.071	546.289	217.626	312.151	11.590.871	11.219.984
Accumulated depreciation	(8.123)	(1.298.288)	(4.614.787)	(102.368)	(31.230)		(105.291)	(278.776)	(6.438.863)	(6.113.488)
Net balance	145.736	1.777.247	2.514.749	15.437	6.841	546.289	112.335	33.375	5.152.008	5.106.496
Additions (v)			27.730	6	81	924.290		318	952.426	523.577
Write-offs	(78)	(4.003)	(1.347)	(185)	(2)				(5.615)	(661.742)
Reversal (constitution) for impairment of assets (i)	156	(1.458)	24.011	83	7	745	33.393		56.937	603.945
Additions by corporate operations										521
Write-offs for corporate transactions (ii)		(39.398)	(101.761)				(27.911)		(169.070)	(10.674)
Reversal for impairment of assets (i)		39.398	101.761				27.911		169.070	
Depreciation	(279)	(70.286)	(355.045)	(4.506)	(1.614)		(10.650)	(3.267)	(445.647)	(431.665)
Cash flow reassessment							(53.847)		(53.847)	26.840
Subsidiaries included in consolidation (ii)	3.764		11.719	568	90			21.554	37.695	
Subsidiaries excluded from consolidation (iii)	(1.009)	(117.382)	(51.943)	(42)	(43)	(4.375)		(522)	(175.316)	
Transfers (iv)	1.485	26.558	612.034	5.713	1.925	(644.289)		(22.828)	(19.402)	(5.290)
At the end of the year	149.775	1.610.676	2.781.908	17.074	7.285	822.660	81.231	28.630	5.499.239	5.152.008
Cost	157.594	2.827.180	7.460.679	118.917	39.708	822.660	197.172	308.530	11.932.440	11.590.871
Accumulated depreciation	(7.819)	(1.216.504)	(4.678.771)	(101.843)	(32.423)		(115.941)	(279.900)	(6.433.201)	(6.438.863)
Net balance at the end of the year	149.775	1.610.676	2.781.908	17.074	7.285	822.660	81.231	28.630	5.499.239	5.152.008
Average annual depreciation rates – %		3	5	19	4		2			

- (i) Relates to the drop down of assets made of the São Miguel Paulista unit at the company Cristal, and the subsequent sale in July 2022, as per Note 1.1 (c).
- (ii) Relates to the acquisition of Alux in January 2022, from which date the investee started to be consolidated (Note 1.1 (a)).
- (iii) Relates to the de-consolidation of Enercan in December 2022, as per Note 1.1 (k).
- (iv) Transfers include the reclassification of "Work in progress" from Property, plant and equipment to "Software" in intangible assets.
- (v) Additions to works in progress mainly relate to the smelter projects (R\$199,791), the Alumina plant (R\$182,744), and the smelter upgrade (R\$88,935).

Management notes to the individual and consolidated financial statements.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

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**(b) Works in progress**

The balance relates mainly to projects for the expansion and optimization of the industrial units, as follows:

	2022			Consolidated 2021		
	Gross balance	Provision for impairment	Net balance	Gross balance	Provision for impairment	Net balance
Furnace room projects (i)	199,791		199,791	53,190		53,190
Alumina Plant project (ii)	204,012	(16,710)	187,302	112,966	(12,596)	100,370
Furnace reform	87,027		87,027	172,488		172,488
Expansion (Metalex)	40,756		40,756	40,356		40,356
Plastic Transformation	37,294		37,294	25,240		25,240
Safety, health and environmental projects	25,051		25,051	25,136		25,136
Foundry projects	22,457		22,457	17,837		17,837
Itapissuma Projects	22,439		22,439	32,503		32,503
Mining projects	19,262		19,262	10,943		10,943
Rondon Bauxite project	13,940		13,940	8,670		8,670
Sustaining (CBA + Metalex)	13,414		13,414	6,578		6,578
Plant Revitalization and Adaptation (iii)	12,528		12,528	-		-
Modernization of plants	7,572		7,572	4,834		4,834
Iron Nickel Project	165,817	(165,817)		165,817	(165,817)	
Calcination furnaces	10,044	(10,044)		14,158	(14,158)	
Tijuco Alto Project	6,239	(6,239)		6,239	(6,239)	
Others (iv)	142,119	(8,292)	133,827	57,181	(9,037)	48,144
	<u>1,029,762</u>	<u>(207,102)</u>	<u>822,660</u>	<u>754,136</u>	<u>(207,847)</u>	<u>546,289</u>

- (i) The main movements relate to the Upgrade Project, smelters and the restarting of two curtailed smelters – 01 and 03
- (ii) Primarily consists of the Filter Press sub-project. This investment was made to change the dry disposal technology, increasing the safety of the waste disposal system and extending the useful life of the Palmital Dam;
- (iii) The balance was mainly related to the UHE Jurupará and Itupararanga revitalization projects;
- (iv) Primarily consist of the Physical Asset Management Projects (“GAF”), in the amount of R\$23,494, High-voltage Management (“GATR”) in the amount of R\$ 14,082, Information Technology (R\$8,998) and Legacy Nickel projects (R\$ 4,820), totaling R\$51,561.

The above balances are stated net of the provision for impairment, where the Company values its assets whenever events or changes in circumstances indicate that the carrying amount may no longer be recoverable. Paused projects are continuously assessed, and a provision is made if there are signs of impairment. The remaining balances of projects with a provision for impairment relate to the Company’s estimates regarding the resumption of the projects and/or the use the assets in other production lines.

In the financial year ended December 31, 2022, charges on loans and borrowing capitalized under works in progress amounted to R\$7,257 (R\$5,645 as at December 31, 2021). The capitalization rate of 6.38% per month was used (4.80% per month as at December 31, 2021).

## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

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### 18 Intangible assets

#### 18.1 Software

Software licenses purchased are capitalized on the basis of the costs incurred for their purchase and implementation. These acquisition and implementation costs are amortized over their estimated useful lives of three to ten years.

The costs associated with software maintenance are expensed as they are incurred. Development costs directly related to the design and testing of identifiable and exclusive software products, controlled by the Company are recognized as intangible assets in the following situations:

- (i) It is technically feasible to complete the software so it will be available for use;
- (ii) Management intends to complete the software and to use it or sell it.
- (iii) The software can be sold or used;
- (iv) It can be demonstrated that the software will probably generate future economic benefits;
- (v) Technical and financial resources and other suitable resources are available to conclude the development and use or sell the software; and
- (vi) The expense attributable to the software during development can be measured reliably.

#### 18.2 Goodwill

Goodwill consists of the positive difference between the amount paid and/or payable for the acquisition of an entity and the net amount of the acquired Entity's assets and liabilities at fair value. Goodwill resulting from the acquisition of subsidiaries is recorded as intangible assets in the consolidated financial statements.

Annually, the Company reviews the net carrying amount of goodwill, in order to assess whether there are indications of impairment. The gains and losses on the sale of an entity include the carrying amount of the goodwill related to the entity sold.

This goodwill is allocated for impairment testing to Cash Generating Units ("CGUs") or groups of CGUs that should benefit from the business combination generating the goodwill. The recoverable amounts of CGUs were determined according to the value in use, based on the discounted cash flow model.

The recoverable value is sensitive to the discount rate used in the discounted cash flow method, the future expected cash receipts and the growth rate used for extrapolation purposes.

#### 18.3 Rights to natural resources

The costs of acquiring mine exploration and maintenance rights that increase access to ore are capitalized and amortized using the straight line method over their useful lives, or, when applicable, based on the mines' depletion.

After the mine goes into production, these expenses are amortized and treated as production costs.

Mineral depletion is calculated based on the projected future extraction, considering the estimated useful lives of the reserves.

### 18.4 Use of public assets (“UBP”)

Denotes the amounts established in concession agreements relating to the rights to explore hydro generation potential (onerous concession), the contracts for which are signed in the form of a Use of public assets (“UBP”) agreement.

The accounting record is made upon issue of the operating license, regardless of the disbursement schedule stipulated in the contract. The initial recording of this liability (obligation) and intangible asset (concession right) corresponds to the value of the future obligations brought to present value (i.e. the present value of the future payment cash flow).

The amortization of intangible assets is calculated using the straight-line method over the remaining term of the concession. The financial liability is restated by the index stipulated in the contract, and adjusted to present value over time, less any payments made.

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**(a) Breakdown and movements**

							Parent company	
							2022	2021
	Goodwill	Exploitation rights over natural resources	Software	Use of public assets - UBP	Hydrological risk renegotiation	Other	Total	Total
At the beginning of the year								
Cost	79,722	192,763	48,136	494,070	188,047	9,359	1,012,097	621,382
Accumulated amortization and depletion		(46,000)	(34,618)	(134,979)	(10,896)	(1,133)	(227,626)	(198,554)
Net balance	79,722	146,763	13,518	359,091	177,151	8,226	784,471	422,828
Additions			44				44	385,841
Amortization and depletion		(5,193)	(5,041)	(18,545)	(17,707)	(126)	(46,612)	(29,071)
Transfers (iii)		40	6,188			(40)	6,188	4,873
At the end of the year	79,722	141,610	14,709	340,546	159,444	8,060	744,091	784,471
Cost	79,722	192,803	53,934	494,070	188,046	9,319	1,017,894	1,012,097
Accumulated amortization and depletion		(51,193)	(39,225)	(153,524)	(28,602)	(1,259)	(273,803)	(227,626)
Net balance at the end of the year	79,722	141,610	14,709	340,546	159,444	8,060	744,091	784,471
Average annual amortization and depletion rates – %		3	20	3	3			

Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

							2022	Consolidated 2021
	Goodwill	Exploitation rights over natural resources	Software	Use of public assets - UBP	Hydrological risk renegotiation	Other	Total	Total
At the beginning of the year								
Cost	166,265	192,763	83,868	526,706	285,446	39,854	1,294,902	800,141
Accumulated amortization and depletion		(46,000)	(67,983)	(144,491)	(11,348)	(27,157)	(296,979)	(268,878)
Net balance	166,265	146,763	15,885	382,215	274,098	12,697	997,923	531,263
Additions (i)	48,458		691				49,149	493,931
Write-offs			(23)			(1,029)	(1,052)	
Amortization and depletion		(5,193)	(9,102)	(19,752)	(22,857)	(9,623)	(66,527)	(32,561)
Subsidiaries included in consolidation (ii)			61			44,626	44,687	
Subsidiaries excluded from consolidation (iii)	(30,501)		(54)	(2,899)	(53,344)		(86,798)	
Transfers (iv)		40	19,402			(40)	19,402	5,290
At the end of the year	184,222	141,610	26,860	359,564	197,897	46,631	956,784	997,923
Cost	184,222	192,803	103,062	522,276	228,790	80,766	1,311,919	1,294,901
Accumulated amortization and depletion		(51,193)	(76,202)	(162,712)	(30,893)	(34,135)	(355,135)	(296,978)
Net balance at the end of the year	184,222	141,610	26,860	359,564	197,897	46,631	956,784	997,923
Average annual amortization and depletion rates – %		3	20	3	3			

- (i) Relates to the acquisition of Alux in January 2022, from which date the investee started to be consolidated (Note 1.1 (a)).
- (ii) Effect of recognition of the consolidated rights over the brands and patents of the company Alux.
- (iii) Relates to the de-consolidation of Enercan in December 2022, as per Note 1.1 (k).
- (iv) Transfers include the reclassification from "Work in progress" in Property, plant and equipment to "Software" in intangible assets.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

**In thousands of reais, unless stated otherwise**

**(b) Goodwill impairment tests**

Indefinite-lived assets, like goodwill, are not subject to amortization and are tested annually for impairment or whenever there are signs of impairment.

The Company and its subsidiaries test the carrying value of each CGU's property, plant and equipment and its intangible assets at least annually. The process of estimating these amounts involves the use of assumptions, judgments and estimates of future cash flow that represents the Company's best estimate.

The Company's Management determined the budgeted gross margin based on past performance and on its expectations regarding market development. Cash flow was discounted at a discount rate in real terms and after tax, which represents an estimate of the rate which a market participant would apply, taking into account the value of money over time and the specific risks inherent to each CGU.

The goodwill relates to the following investments made by the Company:

	Parent company		Consolidated	
	2022	2021	2022	2021
Metalex Ltda.			49,430	49,430
Alux do Brasil Indústria e Comércio Ltda.			48,458	
Consórcio Empresarial Salto Píão (i)	35,587	35,587	35,587	35,587
Rio Verdinho Energia S.A. (i)	28,990	28,990	28,990	28,990
Machadinho Energética S.A. (i)	15,145	15,145	15,145	15,145
CBA Energia Participações S.A.			6,612	6,612
Campos Novos Energia S.A. (Note 1.1 (k))				30,501
	<u>79,722</u>	<u>79,722</u>	<u>184,222</u>	<u>166,265</u>

**(i) Assets and liabilities are recorded under the Company's respective equity items.**

These premises were used to analyze the Company's CGUs.

The sales volume considers the annual average growth rate over the projection period of seven years. It is based on past performance and management expectations regarding market development.

The sales price considers the annual average growth rate over the projection period of seven years. They are based on current trends in the sector and include long-term inflation forecasts.

The gross margin is the average margin as a percentage of revenue over the seven-year projection period. It is based on current levels of sales margins and sales mix, with adjustments made to reflect expected changes in the future price of aluminum, a key raw material.

Other operating costs include fixed costs, which do not vary significantly with sales volumes or prices. Management estimated these costs based on the current business structure, adjusting them for inflation, and not reflecting any future restructuring or cost saving measures. The amounts shown above represent the average operating costs for the seven-year projection period.

We did not identify any evidence of impairment in the goodwill tested.

## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

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### 19 Leases

#### Accounting policy

The Company has controls in place to identify lease contracts, enabling the Company to assess the applicability of the commercial lease standard to each contract signed. As permitted by the accounting standard, the Company does not consider the following as lease agreements: (i) short-term leases (less than 12 months); and (ii) contracts with a value of less than USD5,000 (R\$26). When identifying right-of-use assets within the scope of the contracts identified, we also disregard: (i) the variable payment portion; (ii) contracts where the lease asset could not be identified; (iii) contracts under which the Company is not entitled to obtain substantially all of the economic benefits from the use of the asset; and (iv) contracts under which the Company does not have substantial control over the use of the asset. Out-of-scope leases are recorded monthly in profit and loss for the accrual period during which the leased asset's are used.

For contracts considered to be within the scope of the lease accounting standard, the Company records for the period of the contract a lease liability that reflects future agreed payments, on the other hand, a right-of-use asset is recorded at the same amount.

The right-of-use asset is amortized monthly over the lease term, defined based on a combination of the non-cancellable period of a lease, the term covered by any extension option, the term covered by any termination option, and above all the time Management intends to remain in each contract (when contracts have automatic renovation clauses).

The liability is adjusted, over the accrual period of the contract, to the present value of the obligation based on the internal interest rate of the contract or the incremental rate, which should reflect the cost to the Company of acquiring debt with similar terms to those set out in the lease contract, in terms of term, value, collateral and economic environment. The liability is settled based on through the flow of payments made to the lessor.

The right-of-use amortization expense is recorded as part of the cost of the goods sold, administrative, selling and other operating expenses, depending on how the lease is used, and the interest expense is settled by restating the present value of the lease liabilities recorded in finance income/loss.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**(a) Right-of-use**

	Parent company				2021
	2022			Total	
	Buildings and construction	Vehicles	Machinery, equipment and facilities	Total	Total
At the beginning of the year					
Cost	19,486	21,032	51,586	92,985	39,751
Accumulated amortization	(7,421)	(12,590)	(32,408)	(53,300)	(25,854)
Net balance	12,065	8,442	19,178	39,685	13,897
New contracts (i)					53,254
Write-offs					(216)
Amortization	(4,410)	(6,092)	(12,845)	(23,347)	(28,155)
Renegotiation of contracts	472			472	905
At the beginning of the year	8,127	2,350	6,333	16,810	39,685
Cost	19,958	21,033	51,586	92,577	92,985
Accumulated amortization	(11,831)	(18,683)	(45,253)	(75,767)	(53,300)
At the beginning of the year	8,127	2,350	6,333	16,810	39,685
Average annual amortization rates – %	25	33	40		

	Consolidated				2021
	2022			Total	
	Buildings and construction	Vehicles	Machinery, equipment and facilities	Total	Total
At the beginning of the year					
Cost	19,980	21,317	63,421	104,718	44,884
Accumulated amortization	(7,909)	(12,837)	(40,835)	(61,581)	(29,644)
Net balance	12,071	8,480	22,586	43,137	15,240
New contracts (i)	123	33	14,504	14,660	58,854
Write-offs					(216)
Amortization	(4,490)	(6,154)	(16,693)	(27,337)	(31,819)
Renegotiation of contracts	472			472	943
Principal remeasurement			314	314	135
At the beginning of the year	8,176	2,359	20,711	31,246	43,137
Cost	20,556	21,171	78,238	119,965	104,718
Accumulated amortization	(12,380)	(18,812)	(57,527)	(88,719)	(61,581)
At the beginning of the year	8,176	2,359	20,711	31,246	43,137
Average annual amortization rates – %	26	34	12		

(i) Primarily consists of contract renewals.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**(b) Lease liabilities**

	<b>Parent company</b>	
	<b>2022</b>	<b>2021</b>
At the beginning of the year	41,111	14,526
New contracts		53,254
Write-offs		(482)
Settlements	(25,900)	(29,153)
Adjustment to present value	1,829	2,966
At the end of the year	<u>17,040</u>	<u>41,111</u>
Current	12,835	25,542
Non-current assets	4,205	15,569
At the beginning of the year	<u>17,040</u>	<u>41,111</u>

	<b>Consolidated</b>	
	<b>2022</b>	<b>2021</b>
At the beginning of the year	44,689	15,915
New contracts (i)	14,660	58,854
Write-offs	(15)	(522)
Settlements	(30,002)	(32,924)
Principal remeasurement	314	135
Adjustment to present value	2,173	3,231
At the end of the year	<u>31,819</u>	<u>44,689</u>
Current	16,274	27,126
Non-current assets	15,545	17,563
At the beginning of the year	<u>31,819</u>	<u>44,689</u>

(i) Primarily consists of contract renewals.

**(c) Profile**

	<b>Parent company</b>					
	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>Total</b>
Real	8,707	5,661	2,563	109		17,040

	<b>Consolidated</b>					
	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>Total</b>
Real	12,291	9,364	5,492	2,391	2,281	31,819

Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

20 Loans, borrowing and debentures

Accounting policy

Loans, borrowing and debentures 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 profit or loss over the period of the loans and borrowing using the effective interest rate method.

(a) Breakdown and fair value

Type	Average interest rate percentages	Current		Non-current		Total		Parent company	
		2022	2021	2022	2021	2022	2021	2022	Fair value 2021
<b>Local currency</b>									
BNDES (i)	IPCA + 4.68%	19,736	20,494	178,546	197,467	198,282	217,961	184,573	197,135
Debentures	CDI + 1.55%	1,287	811	229,141	229,157	230,428	229,968	239,692	223,452
FINEP	TR + 3.30%	3		35,813		35,816		24,698	
Other	Fixed BRL 2.40%			598	598	598	598	595	588
		21,026	21,305	444,098	427,222	465,124	448,527	449,558	421,175
<b>Foreign currency</b>									
Export credit notes	SOFR + 2.50% e Pre USD 4.71%	79,037	16,582	2,070,548	2,110,687	2,149,585	2,127,269	1,794,905	1,772,359
Export prepayment	SOFR + 3.27%	7,530		346,489		354,019		392,209	
Eurobonds - USD	Fixed USD 4.75%		398		498,773		499,171		525,598
		86,567	16,980	2,417,037	2,609,460	2,503,604	2,626,440	2,187,114	2,297,957
		107,593	38,285	2,861,135	3,036,682	2,968,728	3,074,967	2,636,672	2,719,132
Interest on loans and financing		29,931	21,277						
Current portion of long-term loans and financing (principal)		77,662	17,008						
		107,593	38,285						

Management notes to the individual and consolidated financial statements.

Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

Type	Average interest rate percentages	Current		Non-current		Total		Consolidated	
		2022	2021	2022	2021	2022	2021	2022	Fair value 2021
<b>Local currency</b>									
BNDES (i)	IPCA + 4.68%	19,736	20,494	178,546	197,467	198,282	217,961	184,573	197,135
Debentures	CDI + 1.55%	1,287	31,909	229,141	229,157	230,428	261,066	239,692	254,371
FINEP	TR + 3.30%	3		35,813		35,816		24,698	
Other	Fixed BRL 2.40%			598	598	598	598	595	588
		<u>21,026</u>	<u>52,403</u>	<u>444,098</u>	<u>427,222</u>	<u>465,124</u>	<u>479,625</u>	<u>449,558</u>	<u>452,094</u>
<b>Foreign currency</b>									
Export credit notes	SOFR + 2.50% and Fixed USD 4.71%	79,037	16,582	2,070,548	2,110,687	2,149,585	2,127,269	1,794,905	1,772,359
Export prepayment	SOFR + 3.27%	7,530	-	346,489	-	354,019	-	392,209	-
Eurobonds - USD	Fixed USD 4.75%		398		498,773		499,171		525,598
		<u>86,567</u>	<u>16,980</u>	<u>2,417,037</u>	<u>2,609,460</u>	<u>2,503,604</u>	<u>2,626,440</u>	<u>2,187,114</u>	<u>2,297,957</u>
		<u>107,593</u>	<u>69,383</u>	<u>2,861,135</u>	<u>3,036,682</u>	<u>2,968,728</u>	<u>3,106,065</u>	<u>2,636,672</u>	<u>2,750,051</u>
Interest on loans and financing		29,931	21,960						
Current portion of long-term loans and financing (principal)		77,662	47,423						
		<u>107,593</u>	<u>69,383</u>						

- (i) 67% of the financing contracts with BNDES are linked to swaps that exchange the IPCA floating rate in reais for a fixed rate in US dollars.

BNDES - Brazilian Development Bank.

FINEP - Study and Project Funding.

BRL - Local currency – Brazilian real.

CDI - Interbank Deposit Certificate.

IPCA - Broad Consumer Prices Index.

TR - Reference Rate.

USD - US dollar.

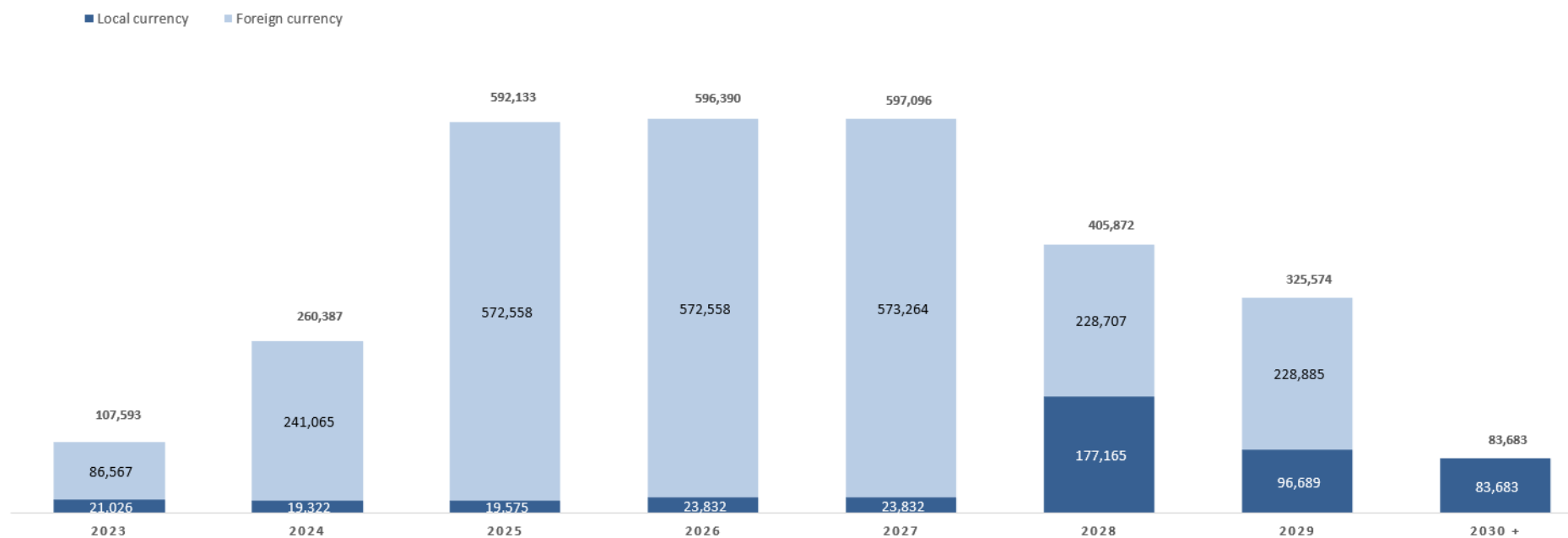
SOFR - Secured Overnight Financing Rate.

Management notes to the individual and consolidated financial statements.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**  
 In thousands of reais, unless stated otherwise

**(b) Maturity**

The maturity profile of loans, borrowing and debentures as at December 31, 2022 is:



The total in foreign currency does not reflect BNDES loan swaps.

Management notes to the individual and consolidated financial statements.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**(c) Movements**

	Parent company		Consolidated	
	2022	2021	2022	2021
At the beginning of the year	3,074,967	2,885,316	3,106,065	2,946,505
Funding costs, net of amortization	1,823	(855)	1,850	(822)
Settlement (Note 20 (g))	(481,328)	(324,301)	(511,535)	(354,741)
New loans and financing (Note 20 (g))	534,971	308,928	534,971	308,928
Foreign exchange effects	(51,535)	74,116	(51,535)	74,113
Interest accrual	173,652	157,696	176,343	159,857
Adjustment through other comprehensive income (i)	(120,744)	134,632	(120,744)	134,632
Interest paid	(163,078)	(160,565)	(166,687)	(162,407)
At the end of the year	2,968,728	3,074,967	2,968,728	3,106,065

- (i) Primarily consists of exchange variations of the principal in Export Credit Notes designated for hedge accounting.

**(d) Breakdown by currency**

	Parent company					
	Current		Non-current		Total	
	2022	2021	2022	2021	2022	2021
Real	21,026	21,305	444,098	427,222	465,124	448,527
US dollar	86,567	16,980	2,417,037	2,609,460	2,503,604	2,626,440
	107,593	38,285	2,861,135	3,036,682	2,968,728	3,074,967

	Consolidated					
	Current		Non-current		Total	
	2022	2021	2022	2021	2022	2021
Real	21,026	52,403	444,098	427,222	465,124	479,625
US dollar	86,567	16,980	2,417,037	2,609,460	2,503,604	2,626,440
	107,593	69,383	2,861,135	3,036,682	2,968,728	3,106,065

**(e) Breakdown by index**

	Parent company					
	Current		Non-current		Total	
	2022	2021	2022	2021	2022	2021
<b>Local currency</b>						
Fixed rate			598	598	598	598
CDI	1,287	811	229,141	229,156	230,428	229,967
TR	3		35,813		35,816	-
IPCA (i)	19,736	20,494	178,546	197,468	198,282	217,962
	21,026	21,305	444,098	427,222	465,124	448,527
<b>Foreign currency</b>						
SOFR	10,636		503,020		513,656	
Fixed rate	75,931	16,980	1,914,017	2,609,460	1,989,948	2,626,440
	86,567	16,980	2,417,037	2,609,460	2,503,604	2,626,440
	107,593	38,285	2,861,135	3,036,682	2,968,728	3,074,967

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

	Current		Non-current		Consolidated	
	2022	2021	2022	2021	2022	2021
<b>Local currency</b>						
Fixed rate			598	598	598	598
CDI	1,287	31,910	229,141	229,156	230,428	261,066
IPCA (i)	19,736	20,493	178,546	197,468	198,282	217,961
	21,026	52,403	444,098	427,222	465,124	479,625
<b>Foreign currency</b>						
SOFR	10,636		503,020		513,656	
Fixed rate	75,931	16,980	1,914,017	2,609,460	1,989,948	2,626,440
	86,567	16,980	2,417,037	2,609,460	2,503,604	2,626,440
	107,593	69,383	2,861,135	3,036,682	2,968,728	3,106,065

- (i) 67% of the financing contracts with BNDES are linked to swaps that exchange the IPCA floating rate in reais for a fixed rate in US dollars.

**(f) Guarantees**

At December 31, 2022, loans and borrowing amounting to R\$201,928 (R\$722,413 at December 31, 2021) were collateralized by VSA consent aval (Note 14 (c)).

Additionally, the Company acts as a guarantor forsecures two loans granted by BNDES to Rio Verde Energia S.A., which mature in September 2026, with an outstanding balance of R\$86,861 at December 31, 2022 (R\$109,185 at December 31, 2021). This guarantee is limited to meeting the obligation under it to perform the energy purchase and sale agreement entered into between Auren Comercializadora and Rio Verde Energia S.A.

**(g) Funding and amortization**

On August 30 and September 2, 2022, the Company entered into three borrowing agreements under export credit facilities in the aggregate amount of US\$ 96.5 million (equivalent to R\$498 million). The average cost of the funding is SOFR + 3.03% p.a., subject to annual targets for reducing greenhouse gas emissions from primary aluminum production. The cost of the contract will increase or decrease depending on whether or not the established targets are met. The average funding term is 5.6 years, with maturity in August and September 2027 and September 2029.

On September 26, 2022, with the aim of reducing the concentration of maturities in 2024, the Company redeemed the total outstanding balance of the bonds, amounting to US\$ 78.519 million (equivalent to R\$407.7 million). The transaction involved the payment of a repurchase premium of R\$1.9 million, recognized in the statement of profit or loss under finance costs. On June 14, 2022 the Company had already bought back and canceled a portion of its bonds amounting to USD 11 million in the secondary market. Together, the principal repaid on the two transactions during the period was R\$462 million, in addition to interest determined and owed totaling R\$16.2 million. These bonds are guaranteed by VSA.

In November 2022, the Company signed a contract with Financiadora de Estudos e Projetos (“FINEP”) to finance research and development and innovation projects in the amount of R\$ 109 million, maturing at the end of 2032. In December 2022 the first tranche of this loan was released in the amount of R\$36 million.

## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

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In December 2022 the Company signed two contracts with the Brazilian Development Bank (BNDES) to finance the upgrading of CBA smelters and implement a scrap processing line at Metalex in the total aggregate amount of R\$611 million. The financing will come from the Finem Climate Fund and Finem Environment facilities, with total terms of 12 and 20 years and final maturity in 2034 and 2042 respectively. The funds will be released over the course of the projects' implementation, with no funds having been released to date.

### (h) Financial covenants

The BNDES loans in force oblige the intervening guarantor Votorantim S.A. to meet certain financial indices, such as: (i) net debt over adjusted EBITDA equal to or lower than 4.0; (ii) Equity over total assets equal to or exceeding 0.3; and (iii) debt service coverage, calculated as cash position plus adjusted EBITDA on interest plus short-term debt, should equal or exceed 1.0.

As at December 31, 2022 and 2021, all the financial covenants had been met in accordance with existing contractual clauses.

### (i) Borrowing costs

Loans and borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset are included in the cost of that asset, when it is probable that they will result in future economic benefits to the entity, and the costs can be measured reliably. Other loan costs are recorded as an expense in the period during which they are incurred.

## 21 Confirming Payables

The Company has drawee risk payableforfait transactions to financial institutions in the domestic and international markets in order to enable its suppliers to factor their CBA receivables at these financial institutions. As part of this transaction, where the suppliers are the decision-makers, the suppliers transfer the right to receive payment of bills for goods and services to the financial institutions. In exchange, they receive the funds in advance, less a fee charged upon assignment by the financial institution, which becomes the creditor.

Regardless of these contracts between suppliers and banks, the commercial conditions are always agreed by the Company and the supplier. In accordance with the commercial agreement, the supplier negotiates with the Company its participation in Drawee Risk programs, so the bank can factor its invoices at any time until they fall due. The Company currently has contracts with a number of suppliers participating in Drawee Risk programs, and as at December 31, 2022 the average DSO was 40 days.

Under IFRS 9, this transaction maintained its essence as a trade payable and not as bank debt, as the Company did not derecognize the original liabilities, and they were not substantially modified during the execution of the contract.

CBA understands that separately presenting these accounts in Drawee risk payable is important to understanding the entity's financial position and providing greater transparency to stakeholders.

Payments are presented within operating activities in the Company's statement of cash flow, in accordance with IAS 7.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

**In thousands of reais, unless stated otherwise**

The accounts payable included in these contracts are shown below:

Confirming payables	Deadline	Parent company		Consolidated	
		2022	2021	2022	2021
Local customers	Up to 245 days	176,934	160,305	183,798	160,572
Foreign customers	Up to 120 days	26,693	397,445	26,693	397,445
		<u>203,627</u>	<u>557,750</u>	<u>210,491</u>	<u>558,017</u>

**22 Current and deferred income tax and social contributions**

**Accounting policy**

The income tax and social contribution expenses for the year are comprised of current and deferred taxes. Taxes are recognized in the statement of profit or loss, except to the extent that they relate to items recognized directly in equity. In this case, they are also recognized in equity or in comprehensive income.

Management periodically evaluates the positions taken in the income and social contribution tax returns with respect to situations in which the applicable tax regulations are subject to interpretation. It establishes provisions, where appropriate, on the basis of the amounts expected to be paid to the tax authorities.

Current income and social contribution taxes are stated net, by entity, in liabilities when there are amounts payable, or in assets when the prepaid amounts exceed the total amount due at the reporting date.

Under Technical Pronouncement CPC 32 – “Taxes on profit”, a deferred asset should be recognized on temporary differences and tax losses only to the extent that their realization is probable. The balances of deferred tax assets are periodically analyzed for impairment, based on the historical profits generated and future projected taxable earnings, relying on internal assumptions and future economic scenarios, which are therefore subject to change.

Deferred income tax assets and liabilities are stated net in the statement of financial position when there is a legal right and an intention to offset them against current taxes, generally when related to the same legal entity and tax authority.

The provision for income tax and social contribution is calculated individually by each entity based on the tax rates and rules effective in that entity’s location. The Company and its subsidiaries also recognize provisions for situations in which additional taxes will probably be due.

Where the outcome of these matters is different from the amounts initially recorded, such differences will have an impact on the current and deferred tax assets and liabilities for the period during which the determination is made.

The Company and its subsidiaries use the taxable income basis and calculate and record the tax and the social contribution at the effective rates in force on the dates on which the financial statements were prepared. The deferred income tax and social contribution credits derive from tax losses, negative bases, and temporary differences regarding: (a) the effects of exchange variations determined (systematic calculation of income tax and social contribution on a cash basis – foreign exchange effects); (b) adjustments of financial instruments to their fair values; (c) provisions non-deductible to date through to their effective realization; and (d) temporary difference arising from the application of the CPCs.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**(a) Reconciliation of IRPJ and CSLL expenses**

The current amounts are calculated based on the rates currently applicable to taxed income, plus or minus the respective additions and exclusions.

The income tax and social contribution amounts presented in the statement of profit or loss for the years ended December 31, 2022 and 2021 are reconciled with their statutory rates as follow:

	Parent company		Consolidated	
	2022	2021	2022	2021
Profit before income tax and social contribution	952,952	665,711	1,130,326	858,039
Standard rate	34%	34%	34%	34%
Tax calculated at the standard rate	(324,004)	(226,342)	(384,311)	(291,733)
<b>Adjustments to the effective rates</b>				
Equity in the results of investees	15,557	44,962	(4,374)	4,541
Use of Tax Losses and CSLL Negative Calculation Basis		207,693	(10,667)	226,798
Constitution of Tax Losses and CSLL Negative Calculation Basis from previous years	132,742		133,463	
Temporary additions without recognition of deferred taxes			14,105	(1,611)
Reversal of deferred tax (impairment)	32,477	89,054	32,477	89,054
Effect of companies taxed on presumed profit			(4,408)	2,798
Non-taxable interest (i)	28,108		28,108	
Other permanent exclusions (additions), net	13,458	(37,503)	6,268	(49,528)
Income tax and social contribution computed	(101,662)	77,864	(189,339)	(19,681)
Current	(105,431)		(198,906)	(68,000)
Deferred	3,769	77,864	9,567	48,319
Effects recorded in P&L	(101,662)	77,864	(189,339)	(19,681)
Effective rate - %	10.67	11.70	16.75	2.29

(i) Denotes SELIC interest applied to tax overpayments.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**(b) Breakdown of deferred tax balances**

	Parent company		Consolidated	
	2022	2021	2022	2021
Loss before income tax and social contribution	308,753	225,000	308,753	225,000
<b>Tax credits on temporary differences</b>				
Provisions for impairment and sundry losses	137,820	174,094	137,820	174,187
Provisions for tax, civil, labor and environmental contingencies	134,014	107,692	135,079	115,523
Deferral of losses on derivative contracts	111,147	278,996	111,147	278,996
Exchange gains (losses) taxed on a cash basis		95,904		95,904
Use of public assets (UBP)	64,541	61,283	64,541	61,283
Environmental liabilities	41,664	49,209	41,664	49,209
CPC 25 – Decommissioning of assets	49,456	42,787	49,456	42,787
Sale of investments adjusted to fair value	25,139	27,845	25,139	27,845
Energy futures contracts	41,411	12,034	41,411	12,034
Provision for inventory losses	11,260	16,428	11,260	16,428
Provision for profit sharing	33,406	31,160	33,719	31,408
Provision for impairment of trade receivables	5,936	3,906	6,227	3,906
Other	21,509	9,978	22,022	10,261
<b>Tax debts on temporary differences</b>				
Adjustments to the useful lives of PP&E items (depreciation)	(476,071)	(549,816)	(476,071)	(557,008)
Gains on bargain purchase for acquisitions of investments	(130,252)	(130,252)	(130,252)	(130,252)
Capital gains from advantageous purchases of investments			(107,003)	(96,341)
Renegotiation of hydrological risk	(63,936)	(63,936)	(77,010)	(97,052)
CPC 20 – Capitalized interest	(24,148)	(22,786)	(24,148)	(22,786)
Goodwill amortization	(7,392)	(7,392)	(7,392)	(7,392)
CPC 12 – Adjustment to present value	(3,619)	(6,087)	(3,619)	(6,087)
Exchange gains (losses) taxed on a cash basis	(4,705)		(4,705)	
Other	(15,079)	(13,549)	(15,489)	(13,546)
	260,854	342,498	142,549	214,307
Deferred tax net assets of the same legal entity	260,854	342,498	155,623	253,943
Deferred tax net liabilities of the same legal entity			(13,074)	(39,636)

**(c) Effect of deferred income tax and social contribution on the profit or loss for the year and in comprehensive income**

	Parent company		Consolidated	
	2022	2021	2022	2021
At the beginning of the year	342,498	274,414	214,307	175,768
Effect on profit or loss	3,769	77,864	9,567	48,319
Effect on other components of comprehensive income – hedge accounting	(85,414)	(9,780)	(85,414)	(9,780)
Companies acquired and included in consolidation (i)			(15,938)	
Effect of excluded subsidiaries (ii)			20,029	
At the end of the year	260,854	342,498	142,549	214,307

- (i) Denotes the balances of the acquired company Alux do Brasil Indústria e Com. Ltda., as per Note 1.1.(a);
- (ii) This balance denotes the deconsolidation of the company Campos Novos Energia S.A. (Enercan), which occurred in November 2022 (Note 1.1 (k)).

## Management notes to the individual and consolidated financial statements as at December 31, 2022 In thousands of reais, unless stated otherwise

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### 23 Provisions

#### Accounting policy

The Company is a party to tax, civil, labor and environmental proceedings in progress at different court levels. Provisions for potentially unfavorable outcomes in current proceedings are made and restated based on Management's opinion, supported by legal advisors, which requires a high level of judgment regarding the matters involved.

#### (a) Judicial deposits

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

#### (b) Tax, civil, labor and environmental provisions and legal proceedings

Recognized when: (i) there is 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. No provisions are recognized relating to future operating losses.

Provisions are carried at the present value of the expenses necessary to settle the obligation, which reflects current market assessments of the time value of money and the specific risks inherent to the obligation. Any increase in the obligation over the course of time is recognized as a financial expense.

#### (c) Asset retirement obligation

The Company recognizes an obligation at fair value for asset retirement in the period during which they occur, charged to the respective items of property, plant and equipment. The Company considers the accounting estimates related to the reclaiming of degraded areas and the costs of closing mines and dams as a critical accounting practice, as it involves significant provisions and estimates involving a range of assumptions, such as interest rates, inflation, the useful life of the asset based on its current stage of depletion, the costs involved and the projected depletion dates for each mine and dam. These estimates are reviewed annually by the Company.

The measurement of obligations for asset retirement involves the use of judgment for several assumptions. From an environmental perspective, these comprise future obligations to restore the environment to ecologically similar conditions to those existing before the start of the project or activity, or to take compensatory measures, agreed with the competent bodies, where it is impossible to return to these pre-existing conditions. These obligations arise from the beginning of the environmental degradation of the occupied area, from the object of the operation or from formal commitments assumed to the environmental agency, where degradation needs to be compensated. The dismantling and withdrawal of an asset from operation occurs when it is permanently deactivated, through its stoppage, sale or disposal.

The recorded liability is periodically restated based on these discount rates, plus inflation for the reference period. As at December 31, 2022 the interest rate for 2022 was revalued at between 5.63% and 6.44%.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**(d) Breakdown and movements**

							Parent company	
							2022	2021
	Judicial proceedings							
	Asset retirement obligation	Tax	Labor	Civil	Environmental	Total	Total	
At the beginning of the year	526,870	193,074	72,628	20,138	1,087	813,797	758,783	
Additions		32,597	42,701	6,815	4,161	86,274	121,596	
Write-off for corporate operations	(32,122)					(32,122)		
Reversals		(20,617)	(12,795)	(4,628)	(590)	(38,630)	(86,608)	
Judicial deposits, net of write-offs		(10,093)	(7,296)	(11)		(17,400)	(3,734)	
Settlements	(27,690)	(2,530)	(14,422)	(203)	(31)	(44,876)	(68,038)	
Indexation accruals, net of reversals		27,530	8,023	11,800	(364)	46,989	9,248	
Adjustment to present value	40,570					40,570	38,212	
Cash flow reassessment	(53,555)					(53,555)	44,338	
At the end of the year	454,073	219,961	88,839	33,911	4,263	801,047	813,797	
Current	1,006	15,140	43,140	33,625	97	93,008	29,218	
Non-current	453,067	204,821	45,699	286	4,166	708,039	784,579	
	454,073	219,961	88,839	33,911	4,263	801,047	813,797	

							Consolidated	
							2022	2021
	Judicial proceedings							
	Asset retirement obligation	Tax	Labor	Civil	Environmental	Total	Total	
At the beginning of the year	526,870	196,713	73,727	20,961	1,676	819,947	761,469	
Additions		32,851	43,537	6,815	4,161	87,364	123,960	
Effects of companies included in the consolidation		(1,900)				(1,900)		
Write-off for corporate operations	(32,122)					(32,122)	1,084	
Reversals		(22,026)	(12,795)	(4,688)	(590)	(40,099)	(86,608)	
Judicial deposits, net of write-offs		(10,093)	(7,296)	(11)		(17,400)	(3,734)	
Settlements	(27,690)	(2,530)	(15,999)	(290)	(31)	(46,540)	(68,038)	
Monetary restatement, net of reversals		27,845	8,041	11,882	(294)	47,474	9,263	
Adjustment to present value	40,570					40,570	38,212	
Cash flow reassessment	(53,555)					(53,555)	44,339	
At the end of the year	454,073	220,860	89,215	34,669	4,922	803,739	819,947	
Current	1,006	15,140	43,140	33,625	97	93,008	29,218	
Non-current	453,067	205,720	46,075	1,044	4,825	710,731	790,729	
	454,073	220,860	89,215	34,669	4,922	803,739	819,947	

**(e) Tax, civil, labor and environmental provisions and remaining judicial deposits**

The Company and its subsidiaries are party to tax, labor, civil and environmental proceedings in progress, and are disputing them before both the administrative and judicial courts, subject to judicial deposits where applicable.

The provisions for losses under contingent liabilities rated as probable defeats are recognized, while those classified as possible are not recognized for accounting purposes, and are disclosed in the notes to the financial statements, and those classified as remote are neither provisioned for nor reported, except when the Company considers their disclosure to be justified.

The amounts involved in the contingencies are periodically estimated and restated. The classification of losses as possible, probable or remote is based on Management's assessment, based on the opinion of its legal advisors.

The provisions and corresponding judicial deposits are presented as follows:

Management notes to the individual and consolidated financial statements.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

	Parent company							
	2022				2021			
	Judicial deposits	Provision	Carrying amount	Remaining judicial deposits	Judicial deposits	Provision	Carrying amount	Remaining judicial deposits
Tax	(21,296)	241,257	219,961	14,990	(11,203)	204,277	193,074	14,127
Labor	(42,121)	130,960	88,839		(34,825)	107,453	72,628	
Civil	(11)	33,922	33,911	1,172		20,138	20,138	1,023
Environmental		4,263	4,263	7		1,087	1,087	7
	<u>(63,428)</u>	<u>410,402</u>	<u>346,974</u>	<u>16,169</u>	<u>(46,028)</u>	<u>332,955</u>	<u>286,927</u>	<u>15,157</u>

	Consolidated							
	2022				2021			
	Judicial deposits	Provision	Carrying amount	Remaining judicial deposits	Judicial deposits	Provision	Carrying amount	Remaining judicial deposits
Tax	(21,296)	242,156	220,860	15,097	(11,203)	207,916	196,713	14,226
Labor	(42,121)	131,336	89,215	741	(34,825)	108,552	73,727	811
Civil	(11)	34,680	34,669	1,198		20,961	20,961	1,023
Environmental		4,922	4,922	667		1,676	1,676	596
	<u>(63,428)</u>	<u>413,094</u>	<u>349,666</u>	<u>17,703</u>	<u>(46,028)</u>	<u>339,105</u>	<u>293,077</u>	<u>16,656</u>

**Comments on provisions representing probable losses**

**(i) Tax provisions**

Tax proceedings rated as representing probable loss are represented by disputes related to federal, state and municipal taxes, before either the judicial or administrative courts, with the main cases for which provisions were made involving disputes about IRPJ, IPTU, CFEM and other matters.

**(ii) Provision for labor contingencies**

Labor claims classified as representing probable defeats are those filed by former employees, outsourced staff and trade unions, primarily claiming severance fees, health and safety risk premiums, overtime, time while in transit to and from work, and compensation claims for alleged occupational illnesses, workplace accidents, moral and property damages.

The company makes provisions for proceedings when disbursement is likely, in accordance with the provisions policy prepared by the Company. Most of these cases are being tried in the Regional Labor Tribunals in Minas Gerais, Goiás, Campinas and São Paulo.

**(iii) Provisions for civil contingencies**

The Company is a party to civil proceedings of an administrative and jurisdictional nature. The contingencies referred to originate from proceedings with different legal natures, highlighting actions for indemnity for material damage and moral damage, collection actions, executions and administrative requests.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**(iv) Provisions for environmental contingencies**

The Company has environmental policies and procedures in place to ensure compliance with environmental and other legal requirements. Management performs regular analyses to identify environmental risks and ensure that the systems in place adequately address these risks.

The Company’s environmental, administrative and judicial litigation basically refers to the investigation of alleged violations that do not comply with specific legislation, whether through administrative procedures or legal proceedings.

**Cases rated as possible defeats**

The Company has actions involving risk of loss classified by Management as possible, based on the assessment of its legal advisors, for which no provision has been made.

	Parent company		Consolidated	
	2022	2021	2022	2021
Tax	2,328,820	2,826,421	2,373,312	2,894,572
Labor	116,887	124,292	117,474	125,585
Civil	79,059	114,574	79,852	115,688
Environmental	4,504	5,158	4,504	5,558
	<u>2,529,270</u>	<u>3,070,445</u>	<u>2,575,142</u>	<u>3,141,403</u>

**Comments on contingent tax liabilities rated as representing possible defeats**

The following table shows the analysis of the relevance of these proceedings:

	Consolidated	
	2022	2021
PIS and COFINS credit processes (i)	766,576	709,218
IRPJ Negative Balance Disallowance (ii)	71,918	342,089
"Plano Verão" Disallowance (iii)	314,585	293,554
ICMS on Electricity charges (iv)	245,504	233,561
Tax Classification Error - Imports (v)		191,274
Collection of ICMS due to differences in the destination of goods (vi)	91,597	86,388
Financial Compensation for the Exploration of Mineral Resources - CFEM (vii)	65,629	62,592
Other	817,503	975,896
	<u>2,373,312</u>	<u>2,894,572</u>

**(i) PIS and COFINS credit proceedings**

The Company is a party to Decisions and Assessment Notices regarding the disallowance of PIS and COFINS credits on items used in the production process, which the federal tax authorities believe do not give rise to an entitlement to credit in respect of these contributions. The restated amount as at December 31, 2022 is R\$ 766,576. All proceedings are currently pending administrative decisions.

In the opinion of management and its independent legal advisers, based on legal precedent and case law, the probability of defeat in these cases is rated as possible.

## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

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### (ii) Disallowance of Negative IRPJ Balance

The Company received decisions issued by the federal tax authorities contesting the calculated negative balances of IRPJ and CSLL. The amounts disputed in the cases as at December 31, 2022 totaled R\$71,918. Note that in 2022 the Company obtained favorable administrative decisions in 11 cases totaling R\$289,555, restated in December 2022, which in addition to drastically reducing the amount disputed, allowed the Company to use the credits in question.

Lastly, in relation to the other cases pending judgment, in the opinion of Management and its independent legal advisers, the tax authorities erred in disallowing the credits presented by the Company, which is why the chance of defeat in these cases is rated as possible.

### (iii) Disallowance of "Plano Verão"

The Company received a decision issued by the Federal tax authority, questioning the credit used to offset the amount arising from a lawsuit related to the disputes regarding the understatement of inflation in the "Plano Verão".

Due to the questioning by the Federal tax authority, the Company filed an objection that is awaiting judgment at the first administrative level.

As at December 31, 2022 the restated amount of these assessments totals R\$314,585.

In the opinion of management and its independent legal advisers, the assessment is unlikely to be upheld, which is why the probability of defeat in this case is rated as possible.

### (iv) ICMS on electricity charges

The Company is a party to judicial and administrative disputes regarding ICMS on sector charges levied on the electricity rate. As at December 31, 2022 the restated amount of these assessments totals R\$245,504.

The administrative and judicial proceedings are currently pending a decision.

In the opinion of management and its independent legal advisers, the assessment is groundless, which is why the probability of defeat in the case is rated as possible.

### (v) Tax classification error – Imports

In March 2017, the Company was fined due to an alleged tax classification error on the importing of inputs, resulting in a requirement to pay taxes (IPI, PIS, COFINS and II), whose value in December 2022 totals R\$208,563.

Since the fine is understood to be improper, the Company filed a challenge that was judged favorably in the first administrative instance. At a judgment session on December 19, 2022, CARF denied the official appeal, and unanimously upheld the DRF's decision cancelling the assessment, given the expert opinion in favor of the Company prepared by an expert appointed by CARF.

## Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

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As a result of the issuance of the decision in favor of the Company, and the fact it is unlikely to be overturned in a special appeal, the chance of defeat in the case has been amended to remote.

In the opinion of Management and its independent legal advisers, the case should be made final and unappealable in the first quarter of 2023, and the contingency can then be written off.

### (vi) Charging ICMS due to differences in the destination of goods

Due to the disallowance of credits arising from the purchase of assets due to differences in the destination of the goods, the Company was fined for alleged failure to pay ICMS. As at December 31, 2022 the restated amount of these assessments totals R\$91,597.

In the opinion of Management and its independent legal advisers, the criteria adopted with respect to the destination of the goods is compliant with the pertinent legislation, and the probability of defeat in the case is considered as possible.

### (vii) Financial compensation for the exploration of mineral resources – CFEM

The Company received fines issued by the National Mining Production Department for alleged underpayment or failure to pay CFEM. As at December 31, 2022 the restated amount of these assessments totals R\$65,629. The proceedings are currently at the administrative and judicial stage.

In the opinion of Management and its independent legal advisers, the assessments are groundless, which is why the probability of defeat in this case is rated as possible.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**  
 In thousands of reais, unless stated otherwise

**24 Use of public assets (“UBP”)**

**Accounting policy**

This amount is originally recognized as a financial liability (obligation) and as intangible asset (right to use a public asset), which corresponds to the amount of the total annual expenses over the contract period, discounted to its present value (present value of future payment cash flow).

The Company owns or has interests in companies that hold concession agreements in the power industry. Most of these contracts stipulate annual payments from the commencement of operations, adjusted by the IGPM index for the use of the public asset (UBP).

The agreements have an average term of 35 years, and the amounts to be paid are shown below:

Hydropower plants / Companies	Concession start date	Concession end date	Payment start date	Rate	2022		Parent company 2021		
					Intangible assets	Liabilities	Rate	Intangible assets	Liabilities
Salto Pilão	apr-02	jan-42	jan-10	60%	146,804	681,205	60%	156,986	695,143
Salto do Rio Verdinho	dec-02	dec-44	oct-10	100%	5,890	30,823	100%	6,246	30,662
Itupararanga	feb-04	feb-24	jan-04	100%	96	709	100%	179	1,212
Piraju	dec-98	nov-38	feb-03	100%	700	7,601	100%	763	7,794
Ourinhos	jul-00	nov-40	sep-05	100%	879	6,545	100%	949	6,610
Fumaça	jun-96	dec-46		100%	53,050	65,567	100%	55,270	55,270
França	jun-96	dec-46		100%	40,521	49,578	100%	42,217	42,217
Porto Raso	jun-96	dec-46		100%	25,566	31,212	100%	26,636	26,636
Serraria	jun-96	dec-46		100%	17,655	21,554	100%	18,394	18,394
Barra	jun-96	dec-46		100%	49,385	60,233	100%	51,451	51,453
					<u>340,546</u>	<u>955,027</u>		<u>359,091</u>	<u>935,391</u>
Current						47,800			66,477
Non-current					340,546	907,227		359,091	868,914
					<u>340,546</u>	<u>955,027</u>		<u>359,091</u>	<u>935,391</u>

Management notes to the individual and consolidated financial statements as at December 31, 2022

In thousands of reais, unless stated otherwise

Hydropower plants / Companies	Concession start date	Concession end date	Payment start date	Rate	2022		2021	
					Intangible assets	Liabilities	Intangible assets	Liabilities
Salto Pilão	apr-02	jan-42	jan-10	60%	146,804	681,204	156,986	695,143
Salto do Rio Verdinho	dec-02	dec-44	oct-10	100%	5,890	30,823	6,246	30,662
Itupararanga	feb-04	feb-24	jan-04	100%	96	709	179	1,212
Piraju	dec-98	nov-38	feb-03	100%	700	7,601	763	7,794
Ourinhos	jul-00	nov-40	sep-05	100%	879	6,545	949	6,610
Fumaça	jun-96	dec-46		100%	53,050	65,567	55,270	55,271
França	jun-96	dec-46		100%	40,521	49,578	42,217	42,217
Porto Raso	jun-96	dec-46		100%	25,566	31,212	26,636	26,636
Serraria	jun-96	dec-46		100%	17,655	21,554	18,394	18,394
Barra	jun-96	dec-46		100%	49,385	60,233	51,452	51,452
Baesa - Energética Barra Grande	may-01	may-36	jun-07	15%	19,018	75,058	20,060	72,165
Enercan - Campos Novos Energia	may-00	may-35	jun-06				3,063	10,558
					359,564	1,030,084	382,215	1,018,114
Current						55,582		74,314
Non-current					359,564	974,502	382,215	943,800
					359,564	1,030,084	382,215	1,018,114

Management notes to the individual and consolidated financial statements.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**25 Equity**

**(a) Share capital**

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

At December 31, 2022 and December 31, 2021, the fully subscribed and paid-in capital amounts to R\$4,479,459, comprised 595,833,333 registered, book-entry common shares with no par value. The share capital is stated net of public offering expenses in the amount of R\$44,412 at December 31, 2022 (R\$44,150 at December 31, 2021).

The share capital breaks down as follows:

	2022		2021	
	Common shares		Common shares	
	Number of shares	(%)	Number of shares	(%)
<b>Controlling shareholders</b>				
Votorantim S.A.	404,483,333	67.89%	452,083,333	75.87%
Other shareholders	191,350,000	32.11%	143,750,000	24.13%
	<u>595,833,333</u>	<u>100.00%</u>	<u>595,833,333</u>	<u>100.00%</u>

**(b) Dividends**

The dividends are calculated at a rate of 25% of the net income for the year less the legal reserve, in accordance with our bylaws.

	2022	2021
Net income for the year	867,549	742,944
Absorption of accumulated losses		(502,440)
Legal reserve calculation basis	867,549	240,504
Legal reserve - 5%	(43,377)	(12,025)
Dividend calculation basis	824,172	228,479
Minimum dividends - 25% in accordance with bylaws	206,043	57,120
Weighted average number of shares, in thousands	595,833	887,440
Dividends per thousand share	<u>345.81</u>	<u>64</u>

**(c) Legal reserve and profit retention**

The legal reserve is formed by appropriating 5% of the net income for the financial year or the remaining balance, limited to 20% of the share capital, which can only be used to increase the share capital or to absorb accumulated losses.

The profit retention reserve consists of the retention of the remaining balance of retained earnings, in order to meet the business growth project in the Company's investment plan.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**(d) Asset and liability valuation adjustments**

	<b>Attributable to owners of the parent</b>
<b>At January 1, 2021</b>	<b>(400,795)</b>
Operating hedge accounting	21,412
Deferred taxes	(9,780)
Share of other comprehensive income of investees	1,269
<b>At December 31, 2021</b>	<b>(387,894)</b>
<b>At January 1, 2022</b>	<b>(387,894)</b>
Operating hedge accounting	259,447
Deferred taxes	(85,414)
Share of other comprehensive income of investees	888
Acquisition of Alux do Brasil Indústria e Comércio Ltda.	(70,053)
<b>At December 31, 2022</b>	<b>(283,026)</b>

**(e) Basic and diluted net income (loss) per share**

The basic earnings per share are calculated by dividing the profit attributable to the company's shareholders by the weighted average number of common shares issued during the financial year ending December 31.

On June 21, 2021 the Extraordinary General Meeting approved the proposal for the grouping of all the shares issued by the Company, with every 2.31257955519536 shares now equal to 1 common share. As required by IAS 33/CPC 41, the amount of shares presented in the calculated earnings per share for the current and comparative period were affected by this grouping.

There were no dilutive effects at the end of the year.

	<b>Parent company</b>	
	<b>2022</b>	<b>2021</b>
Profit attributable to the owners of the parent company	867,549	742,944
Weighted average number of shares, in thousands	595,833	887,440
Basic and diluted earnings per thousand shares	1,456	837

## 26 Net revenue from goods sold and services rendered

### Accounting policy

Revenue is recognized when control of the product or service is transferred to the client. As CBA's sales are carried out through various forms of transportation, revenue can be recognized when the product is made available at the port of departure, when it is loaded onto the vessel, at the port of unloading, or upon delivery to the customer's warehouse, for example.

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

The five-step model establishes that the entity must record revenue when the transfer of goods or services promised to customers reflects the amount of consideration that the entity expects to be entitled to in exchange for such goods or services.

### Identifying performance obligations and the term for satisfying performance obligations.

The Company has two different performance obligations in certain aluminum sales agreements, namely: i) the commitment to supply goods to its customers, and ii) the commitment to provide shipping services to its customers.

Commitment to supply goods - this performance obligation is satisfied when the control over such goods is transferred to the end client.

Commitment to provide goods and shipping services - this performance obligation is satisfied when the acquisition of the goods and shipping services is contracted by the customer, and the product is delivered to the agreed destination.

The Company's energy sales contracts take place in Brazil's free and regulated systems, as it is fully registered with the CCEE, the agent responsible for accounting for and settling transactions across the entire national integrated system (SIN).

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

To determine whether performance obligations have been satisfied at a specific moment in time, the Company considers: whether it has a present right to payment for the item; whether the customer has legal title to the item; whether the Company has transferred physical possession of the item; and whether the customer holds the significant risks and rewards of ownership of the item.

The company consider the terms of the contract and its customary business practices to determine the transaction price. The transaction price is the amount that the entity expects to receive in exchange for transferring the promised goods or services to a client.

The transaction price is allocated to each performance obligation based on the relative stand-alone price. The recognition of revenue from these sales was not significantly affected by IFRS 15.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

The Company does not have contracts under which the period between the transport of the goods and services promised to the customer and the making of payment by the latter exceeds one year. Consequently, the company does not adjust its transaction prices to reflect changes in the value of money over time.

The prices of the products traded by the Company are indexed to aluminum tonnage prices on the London Metal Exchange. Any changes in prices depend on various external factors, such as global production capacity and demand, and the market strategies adopted by the leading producers.

**(a) Revenue reconciliation**

	<b>2022</b>				
	<u>Aluminium</u>	<u>Nickel</u>	<u>Energy</u>	<u>Eliminations</u>	<u>Consolidated</u>
Sale of primary aluminum	3,968,725				3,968,725
Sale of processed aluminum	3,140,066				3,140,066
Recycling	981,946				981,946
Other aluminum products and services	1,232,497				1,232,497
Eliminations among the aluminum segment	(627,080)				(627,080)
Strategic hedge	(138,816)				(138,816)
Electric power			634,435	(387,652)	246,783
Others		20,506			20,506
<b>Net revenue from products sold and services provided</b>	<b>8,557,338</b>	<b>20,506</b>	<b>634,435</b>	<b>(387,652)</b>	<b>8,824,627</b>

	<b>2021</b>				
	<u>Aluminium</u>	<u>Nickel</u>	<u>Energy</u>	<u>Eliminations</u>	<u>Consolidated</u>
Sale of primary aluminum	3,749,459				3,749,459
Sale of processed aluminum	2,958,966				2,958,966
Recycling	509,077				509,077
Other aluminum products and services	1,983,554				1,983,554
Eliminations among the aluminum segment	(344,982)				(344,982)
Strategic hedge	(837,714)				(837,714)
Electric power			727,406	(348,496)	378,910
Others		25,910			25,910
<b>Net revenue from products sold and services provided</b>	<b>8,018,360</b>	<b>25,910</b>	<b>727,406</b>	<b>(348,496)</b>	<b>8,423,180</b>

In order better to understand the aluminum segment, the Company splits it into the following subsegments:

- (i) Primary products: covers the range of products in the initial stage of production (ingots, molten aluminum and added value products – billets, rod and alloy ingots). All these products are manufactured at the Alumínio plant.
- (ii) Downstream products: covers products of the downstream family (foil, sheet and extruded products), all of which have added value. The Company produces its entire portfolio at a single site located in Alumínio-SP, and has a second rolling facility in Itapissuma-PE, as well as two solutions and service centers;
- (iii) Recycling: this includes the plants of the investees of the company Metalex and Alux, the tolling activities (converting client scrap into finished goods) at the Alumínio plant, and sales of domestic and international scrap and aluminum sludge.
- (iv) Other: covers ingot trading, trading of the Company's alumina in Alunorte, sales of bauxite, alumina and processing. The sales of alumina, hydrate and bauxite are surpluses in the Company's production chain, more precisely the Alumínio operation. Bauxite and alumina are raw materials for the production of aluminum;
- (v) Eliminations: covers aluminum purchases and sales between companies in the segment.
- (vi) Strategic hedge: In order to reduce cash flow volatility, the Company took out derivative financial instruments to make forward sales of the commodity in conjunction with the forward sale of US dollars. The Company stopped using this hedge in June 2021, and the current agreements expired in May 2022.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**(b) Information about geographies**

The breakdown of net revenue by destination is based on the client location. The Company's net revenue classified by destination and currency are shown below:

**(i) Net revenue by country of destination**

	Parent company		Consolidated	
	2022	2021	2022	2021
Brazil	6,352,780	5,873,287	7,484,080	6,812,109
United States	593,718	414,899	609,863	419,049
Iceland	88,649	187,322	88,649	187,322
Uruguay	73,651	64,155	78,919	64,595
Argentina	1,768	4,315	62,330	44,525
Switzerland	18,596	377,312	19,550	397,828
Mexico	16,021	207,956	17,078	207,956
Netherlands	7,360	80,263	7,360	80,263
Other	422,984	173,375	456,798	209,533
	<u>7,575,527</u>	<u>7,382,884</u>	<u>8,824,627</u>	<u>8,423,180</u>

**(ii) Net revenue by currency**

	Parent company		Consolidated	
	2022	2021	2022	2021
Brazilian Reais	6,352,780	5,873,287	7,484,080	6,812,109
US Dollar	1,222,747	1,509,597	1,340,547	1,611,071
	<u>7,575,527</u>	<u>7,382,884</u>	<u>8,824,627</u>	<u>8,423,180</u>

**27 Income breakdown by nature**

	Parent company			
	2022		2021	
	Cost of products and services (i)	Selling expenses	General and administrative expenses	Total
Raw materials, inputs and consumables	4,265,141	956	2,009	4,268,106
Employee benefit expenses	616,688	21,063	186,227	823,978
Depreciation, amortization and depletion	445,328	118	8,577	454,023
Transportation expenses	240,235		22	240,257
Maintenance and upkeep	249,315	141	805	250,261
Operating services	122,993			122,993
Third party services	89,810	4,920	122,950	217,680
Rentals and leases	54,925	307	1,539	56,771
Provision for impairment of trade receivables		5,614		5,614
Other expenses	114,167	8,925	29,431	152,523
	<u>6,198,602</u>	<u>42,044</u>	<u>351,560</u>	<u>6,592,206</u>

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

	Parent company			
	2021			
	Cost of products and services (i)	Selling expenses	General and administrative expenses	Total
Raw materials, inputs and consumables	4,539,496	954	1,328	4,541,778
Employee benefit expenses	526,975	20,653	130,537	678,165
Depreciation, amortization and depletion	413,542	405	12,061	426,008
Transportation expenses	215,455		16	215,471
Maintenance and upkeep	241,494	86	52	241,632
Operating services	35,684			35,684
Third party services	77,850	4,597	117,039	199,486
Rentals and leases	57,541	76	5,177	62,794
Renegotiation of hydrological risk	(188,047)			(188,047)
Reversal for impairment of trade receivables		(3,829)		(3,829)
Other expenses	251,966	7,341	27,887	287,194
	<u>6,171,956</u>	<u>30,283</u>	<u>294,097</u>	<u>6,496,336</u>

	Consolidated			
	2022			
	Cost of products sold and services rendered (i)	Selling	General and administrative expenses	Total
Raw materials, inputs and consumables	4,995,598	925	9,620	5,006,143
Employee benefit expenses	706,224	24,229	203,108	933,561
Depreciation, amortization and depletion	525,791	165	13,555	539,511
Transportation expenses	240,294		22	240,316
Maintenance and upkeep	283,398	141	620	284,159
Operating services	122,993			122,993
Third party services	101,263	5,038	141,336	247,637
Rentals and leases	54,925	311	2,191	57,427
Provision for impairment of trade receivables		6,731		6,731
Other expenses	144,879	11,811	34,607	191,297
	<u>7,175,365</u>	<u>49,351</u>	<u>405,059</u>	<u>7,629,775</u>

	Consolidated			
	2021			
	Cost of products sold and services rendered (i)	Selling	General and administrative expenses	Total
Raw materials, inputs and consumables	5,103,361	954	2,181	5,106,496
Employee benefit expenses	599,147	23,492	146,313	768,952
Depreciation, amortization and depletion	480,064	456	15,525	496,045
Transportation expenses	215,525		16	215,541
Maintenance and upkeep	251,424	164	384	251,972
Operating services	35,684			35,684
Third party services	82,012	5,480	135,601	223,093
Rentals and leases	57,541	140	6,745	64,426
Renegotiation of hydrological risk	(285,446)			(285,446)
Reversal for impairment of trade receivables		(3,814)		(3,814)
Other expenses	260,160	15,397	31,262	306,819
	<u>6,799,472</u>	<u>42,269</u>	<u>338,027</u>	<u>7,179,768</u>

- (i) The amount of R\$28,739 recorded in the parent company and consolidated statements as at December 31, 2022 (R\$32,011 at December 31, 2021) relates to the production idleness costs at the Niquelândia and São Miguel Paulista plants located in the municipalities of Niquelândia (Goiás state) and São Paulo (São Paulo state), respectively.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**28 Employee benefit expenses**

	Parent company		Consolidated	
	2022	2021	2022	2021
Direct compensation	462,081	383,225	522,061	431,984
Payroll charges	238,252	186,635	270,451	214,154
Benefits	123,645	108,305	141,049	122,814
	<u>823,978</u>	<u>678,165</u>	<u>933,561</u>	<u>768,952</u>

**(a) Retirement obligations**

The Company participates in pension plans managed by a closed private pension entity, which provide its employees with post-employment defined contribution benefits. A defined contribution plan is a pension plan under which the Company pays fixed contributions into a stand-alone entity. The Company has no legal or constructive obligation to pay additional contributions if the fund does not have sufficient assets to pay its employees.

**(b) Employee profit shares**

Provisions are recorded to recognize the expenses related to employee profit sharing. These provisions are calculated based on qualitative and quantitative targets established by management and recorded in profit or loss as “Employee benefits”, in the line item “Direct compensation”.

**(c) Defined contribution plan**

The Company and its subsidiaries sponsor private pension plans available to all Votorantim Group employees administered by Fundação Senador José Ermírio de Moraes (“FUNSEJEM”), a private, not-for-profit pension fund. Under the fund's regulations, the employees’ contributions to FUNSEJEM are matched by the sponsors in accordance with their compensation. For employees whose compensation is lower than the threshold established by the regulations, the Company matches the contributions up to the amount of 1.5% of their monthly remuneration. For employees whose compensation exceeds the threshold, the contribution is up to 6% of their monthly compensation.

Voluntary contributions can also be made to FUNSEJEM. Once the plan contributions are made, no additional contributions are required. The Company’s contributions to FUNSEJEM during the financial years ended December 31, 2022 and 2021 totaled R\$6,271 and R\$5,838, respectively.

**(d) Management compensation**

Expenses related to the compensation paid to key management personnel, including the Board of Directors and the Statutory Executive Board, recognized in the statement of profit or loss for the year for the period, are shown below:

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

	Consolidated	
	2022	2021
<b>Short-term compensation</b>		
Salary or management fees	12,118	8,515
Direct or indirect benefits	943	566
Variable salary	5,214	6,049
	18,275	15,130
<b>Long-term compensation</b>		
Long-term incentives	14,137	3,555
	14,137	3,555
	32,412	18,685

Short-term compensation includes: fixed compensation (salaries and fees, vacation pay and 13<sup>th</sup> month's salary), direct and indirect benefits (medical assistance, meal vouchers, food vouchers, life insurance, and private pension plans), and short-term variable compensation (profit sharing and bonuses).

**29 Other operating income (expenses), net**

	Parent company		Consolidated	
	2022	2021	2022	2021
Energy futures contracts (i)	(86,403)	183,105	(86,403)	183,105
Decrease in the provision for impairment of assets (Note 17)	226,006	603,945	226,007	603,945
Revenue from rentals and leases	6,397	22,505	6,398	22,506
Estimated loss on obsolete and low turnover inventory	9,483	1,864	8,877	1,864
Fair value - Investment property	7,960		7,960	
Gain (loss) on sales of property, plant and equipment	(1,644)	29,000	(1,688)	29,000
Recognition of gain from advantageous purchases in the acquisition of investments		17,143		17,143
Decrease in the sale of assets		(532,733)		(533,889)
Losses on sale of investment	(18,493)		(18,493)	
Adjustment to the fair value of assets available for sale	(47,522)		(47,522)	
Increase in provisions, net	(56,701)	(48,624)	(56,073)	(49,248)
Expenditure on projects not eligible for capitalization	(81,652)	(162,771)	(86,348)	(162,771)
Provision for impairment of taxes	(15,444)		(15,444)	
Other operating income (expenses), net	12,342	7,158	13,129	(13,856)
	(45,671)	120,592	(49,600)	97,799

- (i) Denotes the recognition of future exposure based on the projected supply-load balance, greater than the realized financial instrument, as per Note 15.

**30 Net finance income/loss**

**Accounting policy**

These comprise interest on loans and short-term investments, monetary variance and various discounts that are recognized in profit or loss for the year on an accruals basis. Financial income from financial assets measured at amortized cost is recorded according to the passage of time since the transactions, using the effective interest rate.

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

	Parent company		Consolidated	
	2022	2021	2022	2021
<b>Finance income</b>				
Gains on financial investments	97,005	40,486	129,406	48,026
Interest on financial assets	89,814	1,342	94,735	1,569
Inflation adjustments of assets	17,644	10,226	17,644	10,586
Reversal of inflation adjustments of provisions	16,325	23,811	16,325	23,811
Interest on transactions with related parties (Note 14)	7,625	8,804	9,390	10,976
Other financial income	290	9,709	2,968	14,848
	<u>228,703</u>	<u>94,378</u>	<u>270,468</u>	<u>109,816</u>
<b>Finance costs</b>				
Interest and inflation adjustments - UBP	(70,349)	(67,628)	(82,047)	(85,297)
Capitalization of interest on borrowing – CPC 20	7,257	(2,622)	7,257	(2,622)
Interest on borrowing and debentures (Note 20)	(173,652)	(157,257)	(176,343)	(159,419)
Inflation adjustments to provisions	(73,406)	(31,230)	(75,080)	(32,382)
Adjustment to present value – CPC 12	(66,580)	(57,043)	(66,580)	(57,043)
Charges for discount operations	(52,697)	(25,432)	(62,505)	(27,996)
PIS and COFINS on finance result	(12,932)	(9,418)	(14,674)	(9,878)
Interest on transactions with related parties (Note 14)	(9,416)	(18,681)	(11,278)	(22,826)
Funding costs	(5,365)	(6,103)	(7,532)	(9,675)
Income tax on remittances of interest abroad	(5,189)	(16,092)	(5,447)	(16,564)
Other finance costs	(9,444)	(34,730)	(18,202)	(37,798)
	<u>(471,773)</u>	<u>(426,236)</u>	<u>(512,431)</u>	<u>(461,500)</u>
<b>Gains (losses) on derivative financial instruments (Note 6.2)</b>	162,419	(67,344)	194,805	(70,289)
<b>Foreign exchange gains (losses)</b>	50,196	(74,468)	45,097	(74,554)
	<u>(30,455)</u>	<u>(473,670)</u>	<u>(2,061)</u>	<u>(496,527)</u>

### 31 Assets held for sale

#### Accounting policy

These are classified as available-for-sale if their carrying amounts can be recovered, primarily through sale, and when the sale is considered highly probable.

The asset or group of assets to be classified as held for sale should be measured upon initial recognition at the lower of its carrying amount if it had not been thus classified and its fair value less selling expenses. If the asset (or disposal group) is acquired as part of a business combination, it shall be measured at its fair value less selling costs. When the sale is expected to occur later than one year from the transaction date, the entity shall measure the selling costs at present value. Any increase in the present value of the selling costs that arises from the passage of time shall be presented in profit or loss as a financing cost.

The depreciation of disposal assets ceases when a group of assets is designated as available-for-sale. The assets and liabilities in the discontinued assets group are stated in single lines in assets and liabilities.

Held-for-sale assets are shown below:

	12/31/2022
Asset held for sale - Mineração Rio do Norte S.A. (Note 1.1 (I))	52,177
Property for sale	25,960
<b>Total net assets held for sale</b>	<u>78,137</u>

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

**32 Segment reporting**

The Company's activities are carried out through the following operating segments: Aluminum, Energy and Nickel.

**Aluminum**

Comprises the operations of the aluminum production chain, from bauxite mining to the production of primary and downstream products.

**Energy**

Comprises the sale of surplus energy to the market only.

**Nickel**

This segment considers the operations of the Nickel and Legado Verdes do Cerrado Plants.

Operating segments are reported consistently with the internal reports provided to the chief operating decision-maker, responsible for allocating resources and assessing the performance of the operating segments, in this case the Executive Board, which is also responsible for making the Company's strategic decisions, using adjusted EBITDA as a performance metric.

The information presented to senior management with the respective performance of each segment is obtained from the records maintained in accordance with the accounting policies, with certain reallocations between the segments.

	<b>2022</b>				
	<b>Aluminum</b>	<b>Nickel</b>	<b>Energy</b>	<b>Eliminations (i)</b>	<b>Consolidated</b>
Net revenue from products sold and services provided	8,557,338	20,506	634,435	(387,652)	8,824,627
Cost of sales	(6,756,543)	(54,952)	(751,522)	387,652	(7,175,365)
<b>Gross profit (loss)</b>	<b>1,800,795</b>	<b>(34,446)</b>	<b>(117,087)</b>		<b>1,649,262</b>
Selling expenses	(49,349)	(2)			(49,351)
General and administrative expenses	(374,028)	(15,046)	(15,985)		(405,059)
Other income (expenses), net	(100,775)	149,535	(98,360)		(49,600)
<b>Operating profit (loss)</b>	<b>1,276,643</b>	<b>100,041</b>	<b>(231,432)</b>		<b>1,145,252</b>
Depreciation, amortization and depletion	504,876	4,934	29,701		539,511
Other additions (exclusions) and exceptional items	33,387	(177,935)	86,403		(58,145)
Energy futures contracts			86,403		86,403
Losses on sales of investment		18,493			18,493
Recognition at fair value of assets held for sale	47,522				47,522
Provision for devaluation of taxes (impairment)	15,444				15,444
Reversal for devaluation of assets (impairment)	(29,579)	(196,428)			(226,007)
<b>Adjusted EBITDA</b>	<b>1,814,906</b>	<b>(72,960)</b>	<b>(115,328)</b>		<b>1,626,618</b>
<b>EBITDA margin</b>	<b>21.21%</b>	<b>-355.80%</b>	<b>-18.18%</b>		<b>18.43%</b>

**Management notes to the individual and consolidated financial statements as at December 31, 2022**

In thousands of reais, unless stated otherwise

	2021				
	Aluminum	Nickel	Energy	Eliminations (i)	Consolidated
Net revenue from products sold and services provided	8,018,361	25,909	727,406	(348,496)	8,423,180
Cost of sales	(6,586,536)	(51,472)	(509,960)	348,496	(6,799,472)
<b>Gross profit (loss)</b>	<b>1,431,825</b>	<b>(25,563)</b>	<b>217,446</b>		<b>1,623,708</b>
Selling expenses	(39,769)	(2,500)			(42,269)
General and administrative expenses	(307,960)	(22,124)	(7,943)		(338,027)
Other income (expenses), net	(142,502)	85,815	154,486		97,799
<b>Operating profit</b>	<b>941,594</b>	<b>35,628</b>	<b>363,989</b>		<b>1,341,211</b>
Depreciation, amortization and depletion	462,429	3,149	30,467		496,045
Other additions (exclusions) and exceptional items	(21,612)	(95,582)	(183,105)		(300,299)
Energy futures contracts			(183,105)		(183,105)
Recognition of gains due to advantageous purchases of investments	(17,143)				(17,143)
Gains on sales of property		(29,000)			(29,000)
Provision for devaluation of assets (impairment)	(4,469)	(66,582)			(71,051)
<b>Adjusted EBITDA</b>	<b>1,382,411</b>	<b>(56,805)</b>	<b>211,351</b>		<b>1,536,957</b>
<b>EBITDA margin</b>	<b>17.24%</b>	<b>-219.25%</b>	<b>29.06%</b>		<b>18.25%</b>

- (i) The eliminations above correspond to the energy generated and consumed by the Company's reportable segments.

### 33 Insurance coverage

The Company and its subsidiaries have insurance coverage for property risks, civil liability and other risks protecting against possible losses due to production stoppages, damage to third parties, property and D&O civil liability. These policies have coverage and limits considered by Management as adequate given the risks inherent to its operations.

As at December 31, 2022 the Company had the following insurance policies from first-line insurers:

		2022
Insurance policy	Coverage	Amount covered
Equity	Material damages and loss of profits to property	850,000,000
Civil Liability	Damage caused to third parties	250,000,000
Directors & Officers	Complaints from third parties to the Company's individuals	135,000,000
National Transport	Material damage caused during transport	10,000,000
Transport Import	Material damage caused during transport	52,100,000
Transport Export	Material damage caused during transport	52,100,000
		1,349,200,000

The information above represents the consolidation for reporting purposes only of the maximum compensation ceilings of the Company's main policies.

### 34 Subsequent events

#### (a) BNDES borrowing

The releases were made on February 7, 2023 under the loan agreements entered into in December 2022 with BNDES (Note 20 (g)). The amount received by the Company and the subsidiary Metalex totals R\$179,012.



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# MANAGEMENT REPORT

# 2022

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# MESSAGE FROM MANAGEMENT

The year 2022 will be remembered for the progress the Company made in its growth strategy, such as completing the acquisition of 80% of Alux's share capital in January and subsequently 20% of the remaining capital in November, reinforcing CBA's positioning in the recycling market and aluminum production with an ever lower carbon footprint. Further progress was the reconnection of Pot Room 3 in 3Q22, increasing our molten aluminum production capacity by 26,000 tons per year.

Also regarding CBA's strategy, which aims to maintain a focus on the core business of the aluminum industry, the transaction for the purchase and sale of the São Miguel Paulista nickel refinery with Australian company Jervois Global Limited was completed in July. The Company is looking into alternatives for its other Nickel assets.

One year after its initial public offering (IPO), CBA also made progress in the capital market, increasing its free-float to 32.1% after the conclusion of a secondary offering (follow-on) in May 2022, with the sale of 47,600,000 shares of the controlling shareholder Votorantim S.A., aiming to improve the liquidity of CBA's shares, which had an average daily trading volume (ADTV) of R\$ 50.1 million in 2022 vs. an average ADTV of R\$ 31.9 million in 2021. This progress was undoubtedly the boost needed for the share (CBAV3) to enter the B3 IBrX100 index in September, placing it among the 100 most traded and important assets in the Brazilian stock market.

Thanks to its results in FY 2022, CBA also joined the B3 Business Sustainability Index (ISE) in 2023, occupying 6<sup>th</sup> position in a portfolio composed of shares of 69 companies recognized as top performers for corporate sustainability. The Company also joined other B3 Sustainability indices, such as the Carbon Efficient Index (ICO2), demonstrating its commitment to the transparency of its emissions and providing insight into how it is preparing for a low-carbon economy, and the IGPTW Index, showing that CBA is among the companies with the best work environments, as certified by Great Place To Work.

Another important result was the achievement of an "A" rating for leadership in corporate transparency and performance on Climate Change from the CDP, positioning CBA in a select group of companies spearheading actions to protect the environment and climate effects.

Also on this front, in August CBA and Reservas Votorantim announced the first issuance of carbon credits under the REDD+ (Reducing Emissions from Deforestation and Forest Degradation) certification project in the Brazilian Cerrado. The initiative aims to leverage the conservation of standing forest and foster the carbon market in Brazil, which is why CBA was selected again to present this project on the "Aluminum's Contributions to a Low Carbon Economy" panel at the 27<sup>th</sup> Conference of the Parties (COP27) to the United Nations Framework Convention on Climate Change.

Elsewhere in ESG, in the Governance category, the change was announced in November to the Company's organizational structure, which will take effect after the Annual General Assembly in April 2023, by which the current CFO and Investor Relations Officer, Luciano Alves, will assume the position of CEO, succeeding Ricardo Carvalho, who will join the Company's Board of Directors. Our current General Finance Manager, Camila Abel, will assume the position of CFO and Investor Relations Officer.

Last but not least, 2022 was challenging for the aluminum market, beset by inflationary pressures, interest rate hikes, the Chinese economic slowdown due to Covid-zero measures, conflicts between Russia and Ukraine, among other factors, resulting in volatility in aluminum market fundamentals and international prices and premiums.

Nevertheless, CBA ended the year with an aluminum sales volume virtually unchanged on 2021, with a consolidated net revenue of R\$ 8.8 billion vs. R\$ 8.4 billion in the previous year. Despite the cost inflation throughout the year, which drove up consolidated costs to R\$ 7.2 billion in 2022 compared with R\$ 6.8 billion in 2021, the Company achieved a record net profit in 2022 of R\$ 957 million and a record adjusted EBITDA in 2022 of R\$ 1.6 billion and an EBITDA margin of 18%.

CBA continues to withstand these headwinds, advancing in its strategy and developing more and more in ESG fronts. In 2023 we therefore remain focused on the Company's results and growth, with an unrivaled capacity to deliver and playing a leading role in building a better society, with the mission of always offering aluminum solutions that transform lives.

Management.

## Company Overview

### Aluminum

Controlled by Votorantim S.A., Companhia Brasileira de Alumínio, CBA, is currently the only integrated aluminum company in Brazil. Its activities range from bauxite mining to the production of a complete portfolio of primary and downstream aluminum products, in addition to recycling activities.

Our vertical integration, with self-sufficiency in bauxite, alumina and energy, provides the Company operational flexibility to adjust to market dynamics, keeping us in the top quartile of the industry's global cost curve.

Our main plant in Alumínio, southeastern Brazil, within an alumina refining capacity of 800,000 metric tons, accounted for 79% of our aluminum sales in 2022. 430,000 metric tons of primary aluminum after the expansion projects; 440,000 metric tons of casting output; 115,000 metric tons of foil and sheet; 55,000 metric tons of extrusions and 162,000 metric tons of recycling throughput.

The Itapissuma plant (CBA Itapissuma in Pernambuco state) has an annual foil and sheet production capacity of 50,000 tons, which accounted for approximately 11% of the Company's aluminum sales in 2022. This plant is near Suape port. The Company's strategy is to concentrate downstream product exports on this site and serve the domestic market from the site in Alumínio (SP).

Located in Araçariguama (SP), Metalex recycles aluminum scrap to produce billets, which accounted for approximately 6% of the Company's aluminum sales in 2022. It has an annual production capacity of 90,000 tons of billets.

Based in Nova Odessa in São Paulo state, Alux do Brasil has an installed capacity of 46,000 metric tons a year for secondary alloys. The acquisition of Alux in 2022 reinforces

CBA's strategy of expanding its footprint in recycled aluminum. Since its acquisition in February, Alux's sales accounted for 4% of CBA's aluminum sales in 2022.

The Company's product portfolio is deep and includes:

- Primary products: ingots, molten aluminum and value added cast products, such as billets, rod and alloy ingots.
- Downstream products: foil, sheet and extruded profiles, all value added products.

The Company also produces slabs and caster rolls, consumed internally to produce foil and sheet. The Company also produces co-engineering products and solutions in partnership with its clients, based on their requirements.

The Company's main markets are: Transportation, Civil Construction, Packaging, Consumer Goods, Energy and others.

## Energy

The Company has proprietary hydroelectric plants and participates in joint operations, meeting all of its electricity consumption requirement for producing molten aluminum, guaranteeing excellent cost competitiveness (energy cost accounts for approximately 33% of the total molten aluminum production cost on average, while at CBA this figure is 20%), in addition to guaranteeing greater supply predictability and security, enabling us to produce low-carbon aluminum.

Until 2022, CBA's portfolio remained 100% hydroelectric, with 23 powerplants in 6 Brazilian states, 17 of which are owned by the company and 6 through joint operations, totaling 1.4GW. 77% of the portfolio comes from plants linked to the National Interconnected Grid (SIN), with the remaining capacity directly connected to CBA, which is 100% renewable and has an average capacity factor of 53%, adjusted for the company's interest in the assets. From 2023, part of CBA's energy supply will come from the Ventos de Santo Anselmo and Ventos de Santo Isidoro wind farms, which will power not only the Alumínio plant in São Paulo, but also the Itapissuma unit in Pernambuco, with an installed capacity of 171.6MW, accounting for 11% of CBA's electricity needs and equivalent to 74.4MW of assured energy.

The energy consumed to produce aluminum at CBA is allocated to the aluminum business. The entire sale of surplus electricity is allocated to the energy business, along with the results of the joint operations. CBA's electricity was marketed through Votener - Votorantim Comercializadora de Energia (now Auren Comercializadora) until February 2022. Since February 2022, CBA itself has been managing its energy assets and marketing its energy.

## Market Performance

### Aluminum | Global Market Overview

2022 will be remembered for various significant political and macroeconomic developments, such as inflationary pressures, interest rate hikes, the Chinese economic slowdown due to Covid-zero measures, conflicts between Russia and Ukraine, among other factors, resulting in volatility in aluminum market fundamentals and international prices and premiums.

At the beginning of the year, LME aluminum was driven by recovering demand and especially by fears of a ban on Russian metal, reaching almost USD 4,000/t. As the ban did not materialize and because concerns about global growth worsened in the second half, LME prices began falling, almost reaching USD 2,100/t. On average for the year, LME was USD 2,703/t, 9% growth on 2021. Regional premiums also rose, amid tightening physical market conditions and rising logistics costs. In the United States, the Midwest premium (Duty Unpaid) ended 2022 at an average of USD 361/t, a 14% increase; and the average Rotterdam premium (Duty Unpaid) was USD 377/t, a 71% increase over the period.

In 2022, demand for aluminum continued to be driven by important segments such as construction, transportation and renewable energy, especially in the first half of 2022. The civil construction industry, especially in emerging countries, experienced an increase in demand, reflecting primarily the increase in infrastructure spending by governments. The automotive industry also fueled demand, with car manufacturers seeking weight reductions to improve fuel efficiency and reduce emissions. According to the consultants CRU, global vehicle production rose 3.7% in 2022, in addition to the continuous growth of electric vehicles, especially in China. Besides, the renewable energy sector has been a leading aluminum consumer, using the metal to make solar panels and electrification infrastructure.

On the supply side, a hugely critical factor was the rise in electricity prices, particularly in Europe, due to the Russia Ukraine war. This exerted massive pressure on smelter margins, resulting in closures of primary aluminum capacity. The energy crisis in China also impacted production in the country, resulting in closures in regions such as Yunnan, although supply still managed to grow in the year in provinces less affected by energy restrictions.

According to the consultants CRU, despite rising supply and demand in 2022, the higher consumption led to a deficit of 240kt in the global aluminum market. As a result, the primary aluminum market has now suffered a deficit in 7 out of the last 10 years, and consequently, total inventories were only sufficient for 48 days of consumption at one point, the lowest level since 2007.

Lastly, the average global production cost of aluminum rose sharply by 24%, from USD 1,744/t in 2021 to USD 2,163/t in 2022 (CRU Business Cost), due to the widespread increase in input prices, mainly alumina, carbon products, and energy. Despite inflationary pressure, CBA remained positioned in the 1<sup>st</sup> quartile of the cost curve, favored by its vertical integration.

## Aluminum | Brazilian Market Overview

In 2022, domestic demand dipped, reflecting inflationary pressures, high interest rates and the phasing out of emergency benefits. The reduction occurred mainly in the consumer goods segment, with a drop in demand for extruded products and especially sheet, which are used in the production of pots, appliances, bicycles, ladders, parasols, deckchairs and other products. It's worth noting that demand in 2021 was historically high, driven by income transfer programs, resulting in a correction in consumption levels throughout 2022.

The packaging market, except for cans, recorded growth, with a focus on flexible packaging (e.g., coffee packaging, sauce sachets, chocolates, juice sachets) and aseptic packaging (e.g., milk, juice, yogurt cartons). This spurred the consumption of aluminum foil, reinforcing the sector's resilience and the increasing preference for aluminum in packaging production due to its physical and sustainable characteristics, such as recyclability.

Demand in the construction sector increased in 2022, driven by fittings in properties launched and sold in previous years. The final stage of construction is when aluminum consumption occurs, in interior finishing, windows and frames. However, consumption by residential renovations dropped, due to the ending of emergency benefits and rising inflation.

In transportation, consumption recorded growth in 2022, driven by higher bus production as people once again began circling after the pandemic and the resumption of light vehicle production, which was favored by an improving supply chain, such as the easing of the semiconductor chip crisis. In road implements, there was a decline in aluminum consumption due to higher financing rates, lower demand for e-commerce deliveries, and slower growth in agribusiness compared to 2021.

Premiums in Brazil rose in line with international premiums, influenced by resilient demand and increased logistics costs. DDP SE (Platts), for example, rose from USD 355/t in 2021 to USD 424/t in 2022, an increase of 19%.

## Energy | Overview of Brazil's Electricity Sector

The year 2022 was marked by the recovery of the reservoir levels in the SIN (National Interconnected Grid). Since the last quarter of 2021, a rapid improvement in the inflow and volumes of the reservoirs has been observed.

Throughout 2022, lower-than-expected SIN consumption, the continued heavy rainfall and the contribution of solar and wind power to meeting the SIN demand contributed to the reservoir levels reaching their highest volumes in the last 10 years. The Southeast/Midwest reservoirs closed the year at 53% of their maximum capacity, 26% more than the end of 2021.

Amid this abundance of resources, the Difference Settlement Price (PLD) did not exceed R\$ 76.90/MWh (August/22), remaining at the regulatory floor price since October/22. Also as a result of the surplus resources, there was a low collection of System Service Charges (ESS) and the GSF - Generation Scaling Factor closed 2022 at 85%, 8 percentage points higher than in 2021.

## Operating and Financial Performance

R\$ millions	2022	2021	2022 vs. 2021
<b>Aluminum Sales Volume (thousand tons)</b>	<b>474</b>	<b>485</b>	<b>-2%</b>
Primary	235	252	-7%
Downstream	131	147	-10%
Recycling	108	86	25%
<b>Net revenue</b>	<b>8,825</b>	<b>8,423</b>	<b>5%</b>
<b>Aluminum</b>	<b>8,557</b>	<b>8,018</b>	<b>7%</b>
Primary	3,969	3,750	6%
Downstream	3,140	2,962	6%
Recycling	982	509	93%
Other	1,233	1,985	-38%
Strategic Hedge	(139)	(845)	-84%
Eliminations	(627)	(343)	86%
<b>Energy</b>	<b>634</b>	<b>727</b>	<b>-13%</b>
<b>Energy Eliminations<sup>2</sup></b>	<b>(388)</b>	<b>(348)</b>	<b>12%</b>
<b>Nickel</b>	<b>21</b>	<b>26</b>	<b>-21%</b>
<b>Cost of goods sold</b>	<b>(7,175)</b>	<b>(6,799)</b>	<b>6%</b>
<b>Operating expenses</b>	<b>(454)</b>	<b>(380)</b>	<b>19%</b>
Sales	(49)	(42)	17%
General and administrative	(405)	(338)	20%
<b>Other operating (revenue) expenses</b>	<b>(49)</b>	<b>98</b>	<b>-</b>
<b>Depreciation, amortization and depletion</b>	<b>540</b>	<b>496</b>	<b>9%</b>
<b>Other additions and exceptional items</b>	<b>(58)</b>	<b>(300)</b>	<b>-81%</b>
<b>Adjusted EBITDA<sup>1</sup></b>	<b>1,627</b>	<b>1,538</b>	<b>6%</b>
<b>EBITDA Margin</b>	<b>18%</b>	<b>18%</b>	<b>-</b>

<sup>1</sup> Adjustments reflect equity income and nonrecurrent events in profit and loss, including the Mark-to-Market (MtM) of future energy contracts.

<sup>2</sup> Elimination of energy sales for the aluminum business and interest in energy joint operations, also included in the COGS above

## Aluminum Sales Volume

CBA's total aluminum volume sold was 474,000 tons in 2022, showing a slight decrease of 2% compared to 2021. The cooling of domestic demand, especially in the consumer goods and home improvement sectors, coupled with higher inventory levels in the supply chain, all contributed to the decline.

The primary segment recorded sales of 235,000 tons, a reduction of 7% compared to the previous year. The decline in residential renovations and the weaker performance of the aluminum can market were critical factors that contributed to the lower sales volume. However, it is worth noting that despite the lower volume, the average premium for primary aluminum did rise, and CBA was able to increase its market share in the P1020 ingot and rod market.

In the downstream segment, the sales volume was 131,000 tons, about 10% lower than in 2021. Sales of sheet and extruded products fell, especially in the consumer goods and construction sectors. Contrastingly, sales of packaging foil increased, led by the core segment flexible packaging. As in primary aluminum, the average premium for downstream products also rose on 2021, benefiting business margins.

Recycling sales grew 25% compared to the previous year, totaling 108,000 tons. In 2022, all Alux do Brasil's volumes were integrated, allowing us to enter a new market, that of secondary alloys. One of the main segments served by Alux do Brasil is the automotive sector, which recorded growth in 2022 after the semiconductor chip crisis eased.

## Net Revenue

CBA's consolidated net revenue was R\$ 8.8 billion in 2022, an increase of 5% compared to 2021, due to the R\$ 539 million increase in net revenue from aluminum sales, rising from R\$ 8.0 billion in 2021 to R\$ 8.6 billion in 2022.

The 7% increase in net revenue from aluminum sales in 2022 compared with 2021 was due to the 11% YoY increase in average LME prices (USD 2,707/metric ton in 2022 vs. USD 2,437/metric ton in 2021), and a reduced negative effect from strategic hedging of R\$ 139 million in 2022 (vs. R\$ 845 million in 2021), with the Company discontinuing strategic hedging in June 2021 and its remaining derivatives contracts expiring by May 2022. Note that the net revenue from aluminum sales would have been even higher in 2022 were it not for a R\$ 752 million reduction in revenue from other segments due to an 82% decrease in the ingot trading sales volume (a strategy of purchasing ingots for resale).

Elsewhere in the aluminum business, the recycling segment stood out, achieving net revenue of R\$ 982 million in 2022 compared to R\$ 509 million in 2021, a significant increase due to the integration of Alux in February 2022, which contributed revenue of R\$ 364 million.

Net revenue from our energy business shrank by 13% to R\$ 634 million in 2022 from R\$ 727 million in 2021, due to a lower volume of energy sales contracts in the compared periods, as a result of the bilateral contracts expiring.

## Cost of Goods Sold

CBA's consolidated cost of goods sold was R\$ 7.2 billion in 2022, an increase of 6% on 2021. This growth was driven by a R\$ 241 million increase in energy business costs, impacted by the 10% inflation in the average cost of energy contracts.

The aluminum business cost also increased by R\$ 170 million in 2022 compared to 2021, due to rising input prices in the industry.

The average production cost of molten aluminum increased by 29% in the compared years, mainly influenced by the higher alumina cost (+37%), especially due to the increase in prices of key inputs for production, such as soda (+82%) and gas (+63%), in addition to the increase in anodic paste cost (+60%), due to the increase in the price of coal-tar pitch (+37%) and petroleum coke (+61%).

## Power Balance

The energy business's power output of 654MWh in 2022 was 5% higher than the 620MWh reported in 2021, due to better streamflow throughout the year. Moreover,

the surplus volume of energy sales contracts in 2022 (171MWh) was 34% lower than the volume in 2021 (259MWh) due to the expiration of bilateral energy contracts.

The average per-unit cost under these agreements was R\$ 332/MWh in 2022, 15% higher than the R\$ 288/MWh in the previous year, due to the high inflation used to restate long-term contracts.

### Adjusted EBITDA

In 2022 CBA recorded a record consolidated adjusted EBITDA of R\$ 1.6 billion and an adjusted EBITDA margin of 18% in the year, an increase of 6% and stability on 2021. The increase is primarily attributed to higher average aluminum prices in the period (+11%), reflecting higher LME aluminum prices, which was sufficient to offset the lower sales volume of primary products, downstream products and other segments.

In addition, in relation to the EBITDA adjustments, the R\$ 269 million improvement in future energy contracts substantially relates to the change in the assumption used in June 2021, with the fair value of future energy contracts now being measured through the mark-to-market for the entire contractual period

### Finance income/loss

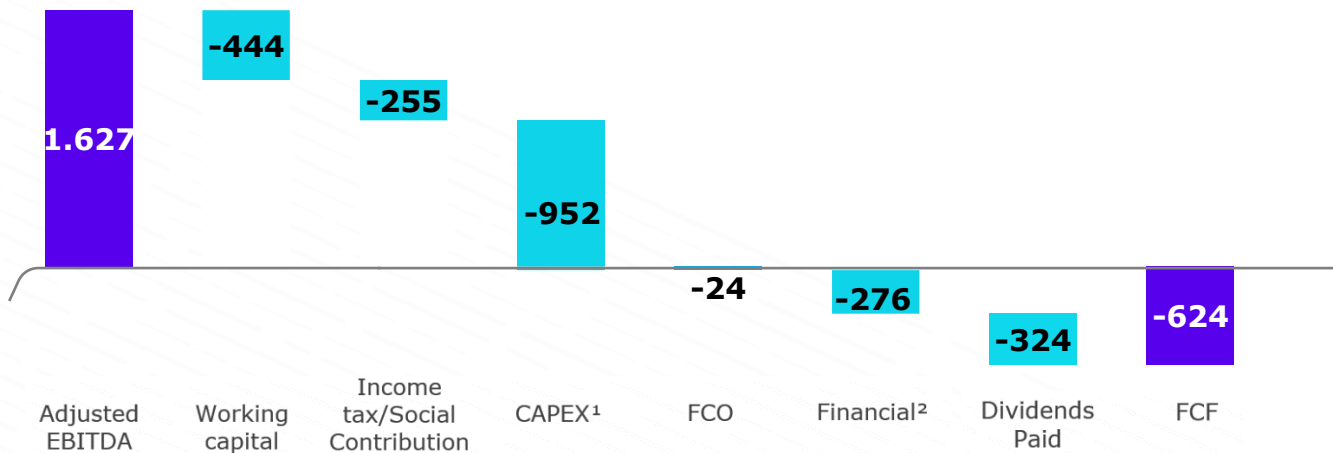
The financial result for 2022 improved by 100% compared to 2021, ending the year at a loss of R\$ 2 million compared to a loss of R\$ 497 million in the previous year.

The main effects include: (i) R\$ 265 million improvement in the mark-to-market of derivative instruments in the BNDES debt and wind energy contracts; (ii) increase of R\$ 160 million in short-term investment revenue, due to the increase in the CDI rate and higher cash balance in the period, (iii) exchange variance gain of R\$ 120 million due to the appreciation of the Brazilian real in 2022 (Dec/22: 5.22 vs. Dec/21: 5.58) compared to the devaluation of the Real in 2021 (Dec/22: 5.58 vs. Dec/21: 5.20), with a direct impact on foreign currency financing balances. Contrastingly, there was an 11% increase in loan interest, mainly due to the increase in interest rates and an increase of R\$ 34 million in finance costs related to monetary restatement during the period.

### Net income/loss

The Company achieved historic net income of R\$ 957 million in 2022 vs. R\$ 838 million in 2021, an increase of 15% mainly due to the improved financial result, partially offset by a decrease in income tax and social contribution of R\$ 174 million.

## Free Cash Flow



<sup>1</sup> Capex accrual basis

<sup>2</sup> Acquisition, sale of assets and net interest

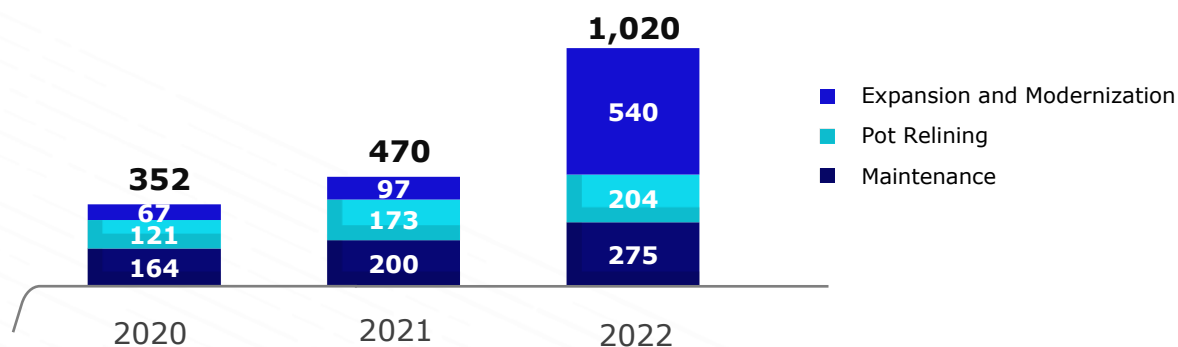
## Working Capital

Working capital was a negative R\$ 444 million in 2022, reflecting R\$ 448 million in positive effects, mainly:

- (a) the increase in payables of R\$ 326 million, where the higher consumption of the main inputs stands out; and
- (b) R\$ 112 million reduction in accounts receivable, mainly impacted by the reduction in sales volume compared to the previous year, combined with the reduction at LME.

There was also a negative impact of R\$ 892 million, with highlights including: (a) a reduction in the drawee risk balance payable of R\$ 348 million due to the discontinuation of the ingot trading operation; (b) an increase in inventory balance of R\$ 306 million due to the higher prices of main inputs, in addition to a larger volume of caster and ingot inventory for transformation; (c) strategic hedges negatively affected cash flows by R\$ 84 million; and (d) impact of R\$ 109 million due to the increase in income taxes, which was higher than the increase in recoverable ICMS credits.

## Capital Expenditure (CAPEX)



In 2022 Total CAPEX (cash basis) was 2.2x higher than in 2021, with 53% of investments going to modernization and expansion projects under multi-annual plans that are on track to meet the commitments under our IPO. The remaining CAPEX is concentrated at 27% on maintenance upgrades and 20% on furnaces.

There follows information about the projects and their respective status at the end of 2022:

- Restart of Pot Room 3: operation resumed in 3Q22, ahead of schedule (initially planned for 2023).
- Paste Plant Upgrade: an ongoing project, which is a prerequisite for the restart of Pot Room 1.
- Dry waste disposal project: in electromechanical assembly, with the start-up projected for 2024.
- Additional aluminum production from recycling:
  - ✓ ReAl: under implementation with startup scheduled for the second half of 2023.
  - ✓ Recycling expansion at Metalex: under implementation with startup scheduled for the second half of 2023.

## Indebtedness and Liquidity

Debt breakdown (RS Million)	Dec/22	Sep/22	Dec/21
Current	108	126	69
Noncurrent	2,861	2,917	3,037
<b>Gross debt</b>	<b>2,969</b>	<b>3,044</b>	<b>3,106</b>
(-) Cash, cash equivalents and short-term investments	1,189	1,634	1,787
(+) Derivative financial instruments	-104	-94	301
(+) Leasing	32	31	45
<b>Net debt</b>	<b>1,707</b>	<b>1,346</b>	<b>1,665</b>
<b>Adjusted EBITDA - Last 12 months</b>	<b>1,626</b>	<b>2,017</b>	<b>1,537</b>
<b>Net debt/Adjusted EBITDA</b>	<b>1.05x</b>	<b>0.67x</b>	<b>1.08x</b>
<b>Average cost USD (% p.a.)*</b>	<b>5.07%</b>	<b>5.19%</b>	<b>4.4%</b>
<b>Average term (years)</b>	<b>4.06</b>	<b>4.3</b>	<b>4.3</b>

\*Based on post-swap position

In December 2022 CBA's gross debt was R\$ 3 billion, 4% less than in December 2021 (R\$ 3.1 billion), mostly due to the Real rising from R\$ 5.58 to R\$ 5.22 against the US dollar at the end of the period.

In August and September 2022, the Company entered into three borrowing agreements under export credit facilities in the total of USD 96.5 million. These loans incur an average cost of SOFR + 3.03% p.a. with an average term of 5.6 years, with maturities in August and September 2027 and September 2029.

Aligned with CBA's commitment to sustainability, the loans are classified as Sustainability-Linked Loans, whose cost is conditioned to annual targets for reducing greenhouse gas emissions in primary aluminum production. Depending on the extent to which those targets are met, debt service costs may increase or decrease. The performance indicator underwent an external evaluation (Second Party Opinion) by Sustainalytics and is expected to be audited and reported annually by a specialist through the Green Bonds Report.

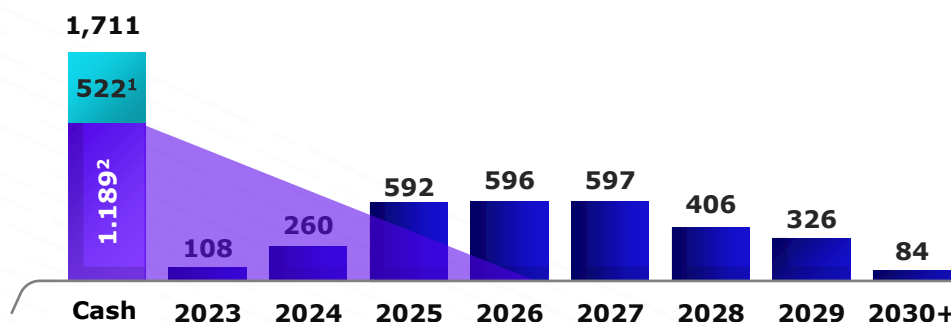
In November 2022, the Company signed a contract with Financiadora de Estudos e Projetos (FINEP) to finance research and development and innovation projects in ESG in the amount of R\$ 109 million. This loan has a total term of 10 years with a 3-year grace period. In December 2022 the first tranche was released in the amount of R\$ 36 million. The release of the remaining tranches is conditional upon demonstrating expenditure and will occur according to the disbursement schedule of the financed projects.

In December 2022 the Company signed two contracts with the Brazilian Development Bank (BNDES) to finance the upgrading of CBA smelters and implementing a new scrap processing line at Metalex in the total aggregate amount of R\$ 611 million. The financing was classified as environmental, resulting in lower interest and terms of 12 and 20 years. The release of funds is subject to demonstrating expenditure, which will occur over the implement of the projects. No disbursement had occurred as of December 31, 2022.

In September 2022 the Company redeemed the total outstanding balance of the bonds of USD 78.5 million to reduce maturity concentration in 2024 and optimize its debt profile. In June 2022, the Company had already bought back and canceled part of its bonds amounting to USD 11 million in the secondary market. Together, the principal paid on the two operations in the period was R\$ 462 million. These bonds are secured by Votorantim S.A.

After completing the transactions above, we further lengthened our debt profile to an average maturity period of 4 years, with no significant maturity concentration up to 2025, as shown in the chart below:

### Debt Amortization Schedule (R\$ million)



<sup>1</sup> Revolving green credit facility of USD 100mm converted at the Ptax closing rate 12/31/2022 (R\$ 5.2177)

<sup>2</sup> Includes cash, cash equivalents and financial investments as of 12/31/2022

Cash equivalents and short-term investments amounted to R\$ 1.2 billion in December 2022, with 62% denominated in Reais. CBA also has a Revolving Credit Facility it can draw on immediately in the total of USD 100 million, further reinforcing its liquidity, which it has not drawn yet.

Net debt was a total of R\$ 1.7 billion and financial leverage, measured as the ratio of net debt to TTM adjusted EBITDA, fell from 1.08x in December 2021 to 1.05x in December 2022. The primary factors contributing to this favorable change were: (i) R\$ 89 million increase in operating income for the last twelve months (ii) R\$ 137 million reduction in gross debt, mainly due to the exchange variance gain of 7% in the period and (iii) an improvement of R\$ 405 million in the mark-to-market of derivative instruments, of which R\$ 214.6 million is a reflection of the maturity of aluminum and US dollar forward sales (strategic revenue hedge) that the Company did not execute in 2021, and R\$ 191 million refers to the variation in the mark-to-market measurement of the swaps in force during the period (debt with BNDES and wind energy contracts). However, the cash position decreased by R\$ 598 million during the period.

## Capital Market

### CBAV3

CBA is listed under the symbol CBAV3, on the Novo Mercado of B3, the highest standard of governance, and is already part of all the following indices:

- IBRX 100 (Brasil 100 Index)
- IBRA (Brazil Broad-based Index)
- ISE (Corporate Sustainability Index)
- ICO2 (Carbon Efficient Index)
- IGPTW (GPTW Index)
- IMAT (Basic Material Index)
- SMLL (Small Cap Index)
- IGCX (Enhanced Corporate Governance Index)
- IGM (Novo Mercado Governance Index)
- IGCT (Corporate Governance Trade Index)
- ITAG (Special Tag Along Stock Index)

In the IPO on July 14, 2021 CBAV3 was priced at R\$ 11.20, and closed the year, on December 31, 2022, at R\$ 11.55, a gain of 3.1% compared with Ibovespa ("IBOV") devaluation of 14.5% over the same period. CBAV3's average daily trading volume (ADTV) in 2022 was R\$ 50.1 million.

## Ownership Structure

In May 2022, the Company concluded its secondary public offering (follow-on) by selling 47,600,000 shares. The Offering resulted in the Company having a free-float of 32.1%, with the parent company Votorantim S.A. directly and indirect holding 67.9% of the shares. As of December 31, 2022 the Company's capital was comprised of 595,833,333 common shares with a market value of R\$ 6.9 billion.

## ESG

### Environmental

CBA has one of the lowest CO<sub>2</sub> emissions in the industry. In 2022, the company continued its structural projects that will allow for an even greater reduction in its emissions. These include the accelerated restart of Pot Room 3, already applying the new feeding technology of the cells in most of the furnaces, which results in a 20% reduction in greenhouse gas emissions compared to conventional technology.

In the refinery stage, after implementing a biomass boiler in 2020 to replace the consumption of natural gas and oil, the company now has the lowest carbon emissions in the world in this stage, according to data from the consulting firm CRU. As a result, CBA received the ECO Amcham Brasil 2022 Award in the Sustainability Practices category, Processes for Large Companies, for this project.

For the electrolysis stage, CBA emits less than 4t CO<sub>2</sub>e/t molten aluminum, positioning itself as a low-carbon aluminum producer. With this, it launched the Alennium seal, which allows all manufacturers using CBA's low-carbon and 100% renewable and traceable electric energy products to ensure the traceability of sustainably produced aluminum.

Demonstrating its commitment to go beyond its decarbonization strategy, in 2022 CBA's carbon emission reduction targets were approved by the SBTi (Science Based Targets), making it the first primary metal manufacturer in the world to have its commitment validated by this organization. Led by organizations such as the CDP, the United Nations Global Compact, the WRI, and the WWF, the goal is to align the actions of all companies with the Paris Agreement and limit the average mean global temperature increase to less than 2 °C.

Another important result was the achievement of an "A" rating for leadership in corporate transparency and performance on Climate Change by the CDP. The Company has been awarded a leadership category rating in the CDP (A-) since its first participation in 2020, and for the first time has received the highest rating, joining the "A List". The rating was a historic achievement for the global aluminum industry and positions CBA in a select group of climate leaders. In the Water Resilience

questionnaire, the Company received a B rating in its first participation, the highest classification in the aluminum sector in the questionnaire.

Also in the agenda, CBA and Reservas Votorantim announced a new issuance of carbon credits via the REDD+ *Cerrado* program, the first Reducing Emissions from Deforestation and Forest Degradation (REDD+) program in Brazil's *Cerrado* biome. The program covers 11,500 hectares of land yielding an average of 50,000 carbon credits per year. The first issuance generated 316,000 carbon credits for the period 2017 to 2021. The initiative leverages the conservation of standing forest and foster carbon market in Brazil, which is why CBA was selected again to present this project on the "Aluminum's Contributions to a Low Carbon Economy" panel at the 27<sup>th</sup> Conference of the Parties (COP27) to the United Nations Framework Convention on Climate Change.

Strengthening even further the action on climate change, CBA joined important initiatives in 2022, among them the Net Zero Ambition Movement, an initiative of the Brazilian Network of the UN Global Compact, and the First Movers Coalition program, an innovative partnership between the World Economic Forum and the United States, in support of decarbonizing the industry. Both aim to engage businesses in incorporating the challenge of reducing greenhouse gas emissions as part of SDG 13 (Climate Actions) into their business strategies.

In biodiversity, we point out the Re flora Project, whose main goal is to recover ecosystems and incrementally increase Brazilian biodiversity. In partnership with Instituto Votorantim and Reservas Votorantim, in 2022, 21,150 seedlings were planted and 12.7 hectares were restored in Zona da Mata Mineira in 32 municipalities. Additionally, 311 hectares of new properties were enrolled in the initiative in 2023. Regarding water stewardship practices, CBA is committed to reducing water usage in all production stages and has further developed a roadmap for water resilience. The new closed-loop project is also at stage FEL3. The freshwater consumption indicator was 6.28 m<sup>3</sup>/t, a decrease of 7.1% on 2021.

With regards to dam safety, CBA conducted all planned drills. The Dam Drill is a fundamental step in implementing the Emergency Response Plan, in which the population is trained, and we test escape routes, muster points and sirens and points for improvement are identified.

## Social

Diversity, equity, and inclusion are cross-cutting themes supporting the culture of CBA. In 2022, the Company implemented structural actions on various fronts, such as the development of a long-term agenda for the CBA More Diverse program, conducting a diversity census, and hosting official events aimed at training and engaging CBA employees.

Another initiative of note in this front is the free technical training course for women, administered by CBA in partnership with SENAI, with a view to helping women enter and work in industry. In 2022 the program qualified 168 women in three different locations: Alumínio (SP), Itapissuma (PE) and Niquelândia (GO).

With occupational health and safety a non-negotiable value for CBA, our injury frequency rate was 2.26 (per 1,000,000 man-hours worked), employees and contractors) compared with 1.68 in 2021. CBA continually works to raise awareness of

its staff by carrying out safety campaigns to perceive risk, prevent falls and movement of suspended cargo.

Regarding social projects, the company continues with various activities directly connected to the core business. Below are some of the social program highlights in the year:

- Partnership for Education (PVE): aimed at improving the quality of education in municipal school systems, supporting the challenge of minimizing learning gaps resulting from social isolation during the Covid-19 pandemic. In 2022, over 40,000 students and 370 managers from the department and school principals were involved in the activities developed in 14 municipalities.
- The ReDes project, aimed at supporting the structuring of inclusive businesses and driving greater income generation, we concluded the cycle of strengthening two organizations in the municipality of Niquelândia/GO in 2022. With the production and marketing of products derived from sugarcane and cassava, the enterprises generated a total revenue of R\$ 798,000, benefiting 63 families.
- Public Management Support (AGP): prioritizing health since 2020, it supported municipalities in dealing with the pandemic. In 2022, 13 municipalities benefited, and efforts were directed towards primary care and PreVine Brasil, a federal financing and resource transfer model for municipalities.
- Votorantim Program for Childhood and Adolescence (VIA): aimed at strengthening prevention and care policies of the Social Protection Network (SPN) and contributing to the safety and improvement of the quality of life of children and adolescents, this was conducted in Alumínio (SP), Chavantes (SP), Barro Alto (GO), Niquelândia (GO) and Muriaé (MG) in 2022.
- Agents of Citizenship: aimed at stimulating citizenship and youth participation in politics and social development of their communities, it conducted training workshops in 2022 for 30 young people, aged 16 to 29, from 8 locations in São Paulo and Minas Gerais, who developed projects aligned with the demands of their cities, applying and sharing the knowledge acquired.
- Recycling and Scrap Chain: in 2022, studies were conducted on the scrap chain in Brazil that supported the construction of a social strategy for working in the recycling chain of flexible and carton packaging, as well as a social investment plan for working in the scrap chain.

## Governance

In 2022 CBA's corporate governance framework was reinforced by creating a Finances Committee at CBA, consisting of 3 members, including an independent member, all with proven expertise in the field. The Committee is responsible for advising the Board of Directors on financial matters.

CBA has made significant progress in programs related to its ESG 2030 Strategy. In the Sustainable Procurement Program, 100% of strategic suppliers underwent an ESG assessment to identify their level of ESG maturity, a process that was also extended to other suppliers in the base.

Within its Ethics & Transparency Program as part of our ESG Strategy, CBA became an ambassador of the 100% Transparency Movement, an initiative linked to the Global Compact Network Brazil. The 100% Transparency Movement is aimed at promoting and empowering companies to exceed legal requirements and improve their corporate transparency and integrity mechanisms. By doing so, it helps to make companies more

resilient while providing a blueprint that others can follow. In November 2022 CBA launched a dedicated webpage to report on its progress within the Movement, which will be updated twice yearly.

The year was also marked by important recognitions. These include receiving the EXAME Magazine 2022 Best ESG company in the Mining, Metallurgy, and Steel category, highlighting the Company's commitment to generate real positive impact for all audiences and the industry. In addition to these initiatives, the Company has also joined the Leadership with ImPact Program in Brazil of the UN's Global Compact, which aims to attract, engage, raise awareness of and empower business leaders to expedite delivery of the SDGs (Sustainable Development Goals), established by the United Nations (UN), through 2030. As a result CBA CEO Ricardo Carvalho was assigned the mission of being the spokesperson of the SDG 17 – Partnerships for the goals, which has the target of strengthening the means of implementation and revitalizing the global partnership for sustainable development.

Regarding the Great Place to Work (GPTW), CBA was again certified, being among the 50 best large companies to work for in the national industry. The recognition was granted by the Brazil 2022 edition of GPTW, a global consulting firm that helps organizations get the best results with a culture of trust, high performance, and innovation.

Aligned with the ESG strategy, the Company has raised green funding to finance a range of sustainability-related projects, especially technologies to minimize greenhouse gas emissions. As mentioned in the Indebtedness chapter, in 2022 CBA raised USD 96.5 million through Sustainability-Linked Loans for financing its exports. These operations have their costs linked to the compliance with sustainability goals. In addition, the company has also accessed incentivized environmental facilities from national development banks such as the National Bank for Economic and Social Development (BNDES) and the Financing Agency for Studies and Projects (FINEP).

## People

CBA aspires to be a diverse, equitable, and inclusive company with an open and safe environment where opportunities are available to all. This is what guides the Company in its programs and initiatives for valuing its 6,639 professionals and all those who make up the communities in its geographies.

It is also part of the Company's 2030 ESG Strategy, along with the Diversity, Equity, and Inclusion program, which gained a new goal in 2022: to achieve 25% gender diversity among company executives by 2025. In 2022, this indicator was 21%, advancing 3% compared to the previous year.

To reach this aspiration and make this commitment reality, the Company implemented structuring measures in 2022. More than eight official events were held throughout the year with the aim of training all CBA employees. With the support of external consultants, affinity groups and a Diversity Committee, the Diversity Agenda 2030 was delivered, where aspirations, levers, and programs were identified. All this effort aims to give more consistency and professionalize diversity treatment. The diversity census was also conducted for the first time, providing knowledge of the profile of people and helping to direct and prioritize actions.

Diversity and inclusion were also extended to the health benefits provided to CBA employees in 2022 with the "Ser Família" parenting program, which includes adopted children and same-sex couples in benefits, as well as extending paternity leave to 30 days.

Other actions were also carried out for the health of professionals in 2022, including preventive, emotional, and hearing health campaigns, flu vaccination, guidance on STIs/AIDS and cancer prevention, as well as benefits to improve quality of life, such as access to Gympass and nutritional counseling.

Career management is also part of CBA's projects in valuing its people and encompasses attraction and recruitment processes, integration of new professionals, performance management and retention.

In 2022, the search for new professionals was linked to the Company's diversity objectives, prioritizing candidates who demonstrate skills connected to the Company's digital transformation movement and alignment with its ESG Strategy. Other projects were also ongoing during the year, such as the Apprentice Program, Internship Program, and Hiring youth trained by SENAI in Pernambuco.

Courses, training and other initiatives were also offered to promote professional development. The *Potenciar* program, for instance, accelerates young talents in an environment of collaboration, development, and innovation. It includes Votorantim investees and connects more than 100 people in different countries and states that participate in training weeks.

## Innovation & Technology

In 2022, several Market Development and Innovation projects and initiatives were conducted, seeking greater margins for CBA and its partners, as well as assisting customers and markets. A total of 18 new projects were launched and the current pipeline has 59 opportunities, 48% in Transportation and Automotive, 24% in construction Civil, 12% in packaging and 16% in new markets. With great pride, CBA announces that 35% of its projects have ESG attributes, consolidating the pillar of sustainability for all involved in the innovation ecosystem, including clients, partners and internal and external stakeholders.

One of the important projects this year is R&D in partnership with the Senai Institute of Electrochemistry Innovation to study the 1xxx series aluminum foil for use in lithium-ion batteries used in electronic devices such as smartphones, notebooks, and primarily in electric vehicles in the automotive and transportation segment.

The aluminum foil is a fundamental component for the full development of lithium-ion batteries, used as a current collector in the positive electrode of the battery and with a great influence on capacity and long-term stability. For the batteries to work properly, a great deal of care needs to be taken in their manufacture, using high-quality materials, in this case aluminum. This partnership will enable CBA to fully dominate this technology and local production through an innovative project. This is an important step towards developing the local supply chain in the lithium-ion battery segment.

It is also worth mentioning the progress in developing a specific alloy for brazed automotive radiators, also announced in MiBi (Made in Brasil Ilimitado), a cooperation program for the national industry. The Company has overcome technical challenges such as casting a new alloy, rolling two distinct alloys to form a single sheet/foil, and the technical production capacity of this new product was validated at the prototype scale.

There has been progress with major brand owners, associations, and clients in promoting the recycling of multilayer packaging through ReAl technology, leveraging new opportunities. Together with the Brazilian Coffee Industry Association (Abic) at its biennial forum, the advantages of aluminum packaging were showcased to the coffee market, particularly its circularity with ReAl. In the same year, there was an increase noticed among packaging converters for this application.

Another highlight was the Primora brand, focused on the construction market, which had approximately 1000 tons of aluminum sold for use in construction projects throughout the country in the year of its launch.

## Relations with our Independent Auditors

Pursuant to CVM Directive 381/03, CBA has formally consulted its independent auditors PricewaterhouseCoopers Auditores Independentes Ltda. ("PwC") to satisfy itself that the provision of any non-audit services will not affect the independence and objectivity required to perform independent audit services. The Company's policy for procuring independent audit services ensures there is no conflict-of-interests or loss of independence or objectiveness.

In the financial year ended December 31, 2022, PwC provided services related to the audit of the Company's consolidated financial statements, review of the Company's consolidated quarterly financial statements, statutory audits, and interim reviews of certain subsidiaries, as required by the legislation. Audit fees relate to services such as due diligence traditionally performed by an external auditor in acquisitions and consulting on accounting standards and transactions.

CBA lastly states that PwC, the Company's independent auditor, did not provide any other services unrelated to the audit during FY 2022.

## Officers' Representation

Pursuant to article 25 of CVM Directive 480/09, the executive officers of CBA declare that they have discussed, reviewed and agreed with the Company's individual and consolidated financial statements for the financial year ended December 31, 2022, and with the opinions expressed thereon in the audit report issued by PricewaterhouseCoopers Auditores Independentes Ltda. on March 09, 2022.