



**Nexa Resources S.A.
Consolidated financial statements at
December 31, 2022 and report of
independent registered public
accounting firm**

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Consolidated income statement

Years ended on December 31

All amounts in thousands of US dollars, unless otherwise stated

	Note	2022	2021	2020
Net revenues	6	3,033,990	2,622,110	1,950,929
Cost of sales	7	(2,395,180)	(1,989,019)	(1,576,159)
Gross profit		638,810	633,091	374,770
Operating expenses				
Selling, general and administrative	7	(145,543)	(133,803)	(139,391)
Mineral exploration and project evaluation	7 and 8	(98,862)	(85,043)	(57,201)
Impairment loss of long-lived assets	31	(32,512)	-	(557,497)
Other income and expenses, net	9	(2,674)	31,948	(19,164)
		(279,591)	(186,898)	(773,253)
Operating income (loss)		359,219	446,193	(398,483)
Results from associates' equity				
Share in the results of associates	4 (ii)	1,885	-	-
		1,885	-	-
Net financial results				
Financial income	10	25,018	11,472	11,168
Financial expenses		(168,694)	(142,275)	(159,759)
Other financial items, net		9,949	(6,099)	(129,584)
		(133,727)	(136,902)	(278,175)
Income (loss) before income tax		227,377	309,291	(676,658)
Income tax	11 (a)	(150,983)	(153,204)	24,152
Net income (loss) for the year		76,394	156,087	(652,506)
Attributable to NEXA's shareholders		49,101	114,332	(559,247)
Attributable to non-controlling interests		27,293	41,755	(93,259)
Net income (loss) for the year		76,394	156,087	(652,506)
Weighted average number of outstanding shares – in thousands		132,439	132,439	132,439
Basic and diluted earnings (losses) per share – USD	30 (f)	0.37	0.86	(4.22)

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

Consolidated statement of comprehensive income

Years ended on December 31

All amounts in thousands of US dollars, unless otherwise stated

	Note	2022	2021	2020
Net income (loss) for the year		76,394	156,087	(652,506)
Other comprehensive income (loss), net of income tax - items that can be reclassified to the income statement				
Cash flow hedge accounting	16 (c)	(1,329)	488	(98)
Deferred income tax		998	(161)	101
Translation adjustment of foreign subsidiaries	30 (e)	65,243	(64,575)	(138,840)
		64,912	(64,248)	(138,837)
Other comprehensive loss, net of income tax - items that will not be reclassified to the income statement				
Changes in fair value of financial liabilities related to changes in the Company's own credit risk	24 (c)	521	(5,066)	(787)
Deferred income tax		(178)	(2,375)	(88)
Changes in fair value of investments in equity instruments		(3,608)	(2,632)	-
		(3,265)	(10,073)	(875)
Other comprehensive income (loss) for the year, net of income tax		61,647	(74,321)	(139,712)
Total comprehensive income (loss) for the year		138,041	81,766	(792,218)
Attributable to NEXA's shareholders		105,972	43,828	(682,132)
Attributable to non-controlling interests		32,069	37,938	(110,086)
Total comprehensive income (loss) for the year		138,041	81,766	(792,218)

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

Consolidated balance sheet

As at December 31

All amounts in thousands of US dollars, unless otherwise stated

Assets	Note	2022	2021
Current assets			
Cash and cash equivalents	15	497,826	743,817
Financial investments		18,062	19,202
Other financial instruments	16 (a)	7,380	16,292
Trade accounts receivables	17	223,740	231,174
Inventory	18	395,197	372,502
Recoverable income tax		2,455	8,703
Other assets	19	75,486	81,119
		1,220,146	1,472,809
Non-current assets			
Investments in equity instruments	14 (c)	7,115	3,723
Other financial instruments	16 (a)	63	102
Deferred income tax	11 (b)	166,983	168,205
Recoverable income tax		4,914	4,223
Other assets	19	134,474	98,584
Investments in associates	4 (ii)	38,990	-
Property, plant and equipment	21	2,295,275	2,087,730
Intangible assets	22	1,016,927	1,056,771
Right-of-use assets	23 (a)	6,895	12,689
		3,671,636	3,432,027
Total assets		4,891,782	4,904,836
Liabilities and shareholders' equity			
Current liabilities			
Loans and financings	24 (a)	50,840	46,713
Lease liabilities	23 (b)	3,661	16,246
Other financial instruments	16 (a)	11,435	22,684
Trade payables	25	413,856	411,818
Confirming payables	26	216,392	232,860
Dividends payable		7,922	11,441
Asset retirement and environmental obligations	27	23,646	31,953
Contractual obligations	29	26,188	33,156
Salaries and payroll charges		79,078	76,031
Tax liabilities		40,610	65,063
Other liabilities		25,136	41,317
		898,764	989,282
Non-current liabilities			
Loans and financings	24 (a)	1,618,419	1,652,602
Lease liabilities	23 (b)	1,360	3,393
Other financial instruments	16 (a)	20,416	241
Asset retirement and environmental obligations	27	242,673	232,197
Provisions	28	43,897	36,828
Deferred income tax	11 (b)	199,499	208,583
Contractual obligations	29	105,972	114,076
Other liabilities		50,528	23,354
		2,282,764	2,271,274
Total liabilities		3,181,528	3,260,556
Shareholders' equity			
	30		
Attributable to NEXA's shareholders		1,442,245	1,386,273
Attributable to non-controlling interests		268,009	258,007
		1,710,254	1,644,280
Total liabilities and shareholders' equity		4,891,782	4,904,836

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

Consolidated statement of cash flows

Years ended on December 31

All amounts in thousands of US dollars, unless otherwise stated

	Note	2022	2021	2020
Cash flows from operating activities				
Income (loss) before income tax		227,377	309,291	(676,658)
Impairment loss of long-lived assets	31	32,512	-	557,497
Depreciation and amortization	21, 22 and 23	290,937	258,711	243,925
Share in the results of associates		(1,885)	-	-
Interest and foreign exchange effects		126,545	143,496	157,806
Loss on sale of property, plant and equipment and intangible assets	9	698	4,891	2,268
Changes in accruals and other assets impairments		84,393	21,325	13,159
Changes in fair value of loans and financings	24 (c)	1,472	(19,380)	8,058
Changes in fair value of derivative financial instruments	16 (c)	(14,947)	26,408	7,809
Changes in fair value of offtake agreement	16 (d)	(24,267)	-	-
Contractual obligations	29 (a)	(20,873)	(25,729)	(20,679)
GSF recovered costs	22 (a)	-	(19,407)	-
Decrease (increase) in assets				
Trade accounts receivables		2,223	(9,375)	(68,896)
Inventory		(75,071)	(102,068)	8,883
Other financial instruments		8,648	(14,936)	(7,809)
Other assets		(72,607)	(47,312)	30,557
Increase (decrease) in liabilities				
Trade payables		(32,476)	44,880	21,589
Confirming payables		(16,348)	87,565	62,525
Other liabilities		(17,448)	2,759	58,481
Cash provided by operating activities		498,883	661,119	398,515
Interest paid on loans and financings	24 (c)	(109,263)	(121,112)	(69,906)
Interest paid on lease liabilities	23 (b)	(994)	(1,415)	(1,385)
Premium paid on bonds repurchase	24 (b)	(3,277)	-	(14,481)
Income tax paid		(118,719)	(45,607)	(21,043)
Net cash provided by operating activities		266,630	492,985	291,700
Cash flows from investing activities				
Additions of property, plant and equipment		(382,468)	(485,204)	(323,688)
Additions of intangible assets		(4,595)	-	-
Net sales of financial investments		10,647	20,076	(47,522)
Proceeds from the sale of property, plant and equipment		751	2,210	2,014
Investments in equity instruments	14 (c)	(7,000)	(6,356)	-
Acquisition of additional shares in associates	4 (ii)	(4,136)	-	-
Dividends received from associates		7,867	-	-
Net cash used in investing activities		(378,934)	(469,274)	(369,196)
Cash flows from financing activities				
New loans and financings	24 (c)	95,621	59,771	1,296,496
Debt issue costs	24 (c)	(63)	(178)	(9,921)
Payments of loans and financings	24 (c)	(24,639)	(251,044)	(542,983)
Prepayment of fair value debt	24 (c)	-	(90,512)	-
Bonds repurchase	24 (c)	(128,470)	-	(214,530)
Payments of lease liabilities	23 (b)	(17,091)	(9,827)	(9,100)
Dividends paid	30 (g)	(68,466)	(52,344)	(55,964)
Payments of share premium	30 (g)	(6,126)	-	-
Dividends not withdrawn		-	-	1,009
Capital reduction of subsidiary – non-controlling interests		-	-	(13,392)
Net cash (used in) provided by financing activities		(149,234)	(344,134)	451,615
Foreign exchange effects on cash and cash equivalents		15,547	(21,923)	(16,070)
Other high liquid short term investments		-	-	29,496
(Decrease) increase in cash and cash equivalents		(245,991)	(342,346)	387,545
Cash and cash equivalents at the beginning of the year		743,817	1,086,163	698,618
Cash and cash equivalents at the end of the year		497,826	743,817	1,086,163

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

Consolidated statement of cash flows

Years ended on December 31

All amounts in thousands of US dollars, unless otherwise stated

Non-cash investing and financing transactions				
Additions to right-of-use assets	23 (a)	(2,018)	(5,174)	(5,785)
Additions to intangible assets related to GSF recovered costs	22 (a)	-	(19,407)	-
Write-offs of property, plant and equipment		1,449	3,343	-
Additions to intangible assets related to offtake agreement and other intangibles	22 (a)	(52,934)	-	-
Increase in investment in associates	4 (ii)	(32,456)		
Derecognition of Nexa's share of Enercan's property, plant and equipment, intangible assets and financial investments	4 (ii)	46,858	-	-
(Decrease) increase in dividends payable		4,961	6,885	(1,418)
Decrease in loans and financings at fair value		-	(14,314)	-

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

Nexa Resources S.A.

Consolidated statement of changes in shareholders' equity
At and for the years ended on December 31
All amounts in thousands of US dollars, unless otherwise stated

	Capital	Treasury shares	Share premium	Additional paid in capital	Retained earnings (cumulative deficit)	Accumulated other comprehensive loss	Total NEXA's shareholders	Non-controlling interests	Total shareholders' equity
At January 1, 2020	133,320	(9,455)	1,043,755	1,245,418	(196,855)	(106,606)	2,109,577	372,609	2,482,186
Net loss for the year	-	-	-	-	(559,247)	-	(559,247)	(93,259)	(652,506)
Other comprehensive loss for the year	-	-	-	-	-	(122,885)	(122,885)	(16,827)	(139,712)
Total comprehensive loss for the year	-	-	-	-	(559,247)	(122,885)	(682,132)	(110,086)	(792,218)
Dividends distribution to NEXA's shareholders - USD 0.38 per share	-	-	-	-	(50,000)	-	(50,000)	-	(50,000)
Cancellation of 881,902 treasury shares acquired for USD 9,455	(882)	9,455	-	-	(8,573)	-	-	-	-
Dividends distribution to non-controlling interests	-	-	-	-	-	-	-	(5,332)	(5,332)
Capital reduction of subsidiary - non-controlling interests	-	-	-	-	-	-	-	(13,392)	(13,392)
Total contributions by and distributions to shareholders	(882)	9,455	-	-	(58,573)	-	(50,000)	(18,724)	(68,724)
At December 31, 2020	132,438	-	1,043,755	1,245,418	(814,675)	(229,491)	1,377,445	243,799	1,621,244
Net income for the year	-	-	-	-	114,332	-	114,332	41,755	156,087
Other comprehensive loss for the year	-	-	-	-	-	(70,504)	(70,504)	(3,817)	(74,321)
Total comprehensive income (loss) for the year	-	-	-	-	114,332	(70,504)	43,828	37,938	81,766
Transfer of the changes in fair value of prepaid debt related to changes in the Company's own credit risk to retained earnings	-	-	-	-	(10,965)	10,965	-	-	-
Dividends distribution to NEXA's shareholders - USD 0.26 per share	-	-	-	-	(35,000)	-	(35,000)	-	(35,000)
Dividends distribution to non-controlling interests	-	-	-	-	-	-	-	(23,730)	(23,730)
Total contributions by and distributions to shareholders	-	-	-	-	(45,965)	10,965	(35,000)	(23,730)	(58,730)
At December 31, 2021	132,438	-	1,043,755	1,245,418	(746,308)	(289,030)	1,386,273	258,007	1,644,280

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

Nexa Resources S.A.

Consolidated statement of changes in shareholders' equity

At and for the years ended on December 31

All amounts in thousands of US dollars, unless otherwise stated

	Capital	Treasury shares	Share premium	Additional paid in capital	Retained earnings (cumulative deficit)	Accumulated other comprehensive loss	Total NEXA's shareholders	Non-controlling interests	Total shareholders' equity
At January 1, 2022	132,438	-	1,043,755	1,245,418	(746,308)	(289,030)	1,386,273	258,007	1,644,280
Net income for the year	-	-	-	-	49,101	-	49,101	27,293	76,394
Other comprehensive income for the year	-	-	-	-	-	56,871	56,871	4,776	61,647
Total comprehensive income for the year	-	-	-	-	49,101	56,871	105,972	32,069	138,041
Dividends distribution to NEXA's shareholders – USD 0.33 per share – note 30 (g)	-	-	-	-	(43,874)	-	(43,874)	-	(43,874)
Share premium distribution to NEXA's shareholders – USD 0.05 per share – note 30 (g)	-	-	(6,126)	-	-	-	(6,126)	-	(6,126)
Dividends distribution to non-controlling interests	-	-	-	-	-	-	-	(23,075)	(23,075)
Other equity movements	-	-	-	-	-	-	-	1,008	1,008
Total distributions to shareholders	-	-	(6,126)	-	(43,874)	-	(50,000)	(22,067)	(72,067)
At December 31, 2022	132,438	-	1,037,629	1,245,418	(741,081)	(232,159)	1,442,245	268,009	1,710,254

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

Notes to the consolidated financial statements
At and for the year ended on December 31, 2022
All amounts in thousands of US dollars, unless otherwise stated

1 General information

Nexa Resources S.A. ("NEXA") is a public limited liability company (société anonyme) incorporated and domiciled in the Grand Duchy of Luxembourg. Its shares are publicly traded on the New York Stock Exchange ("NYSE").

The Company's registered office is located at 37A, Avenue J. F. Kennedy in the city of Luxembourg in the Grand Duchy of Luxembourg.

NEXA and its subsidiaries (the "Company") have operations that include large-scale, mechanized underground and open pit mines and smelters. The Company owns and operates three polymetallic mines in Peru, and two polymetallic mines in Brazil and currently continues the ramp-up process at its third polymetallic mine in Aripuanã, Brazil. The Company also owns and operates a zinc smelter in Peru and two zinc smelters in Brazil.

NEXA's majority shareholder is Votorantim S.A. ("VSA"), which holds 64.68% of its equity. VSA is a Brazilian privately-owned industrial conglomerate that holds ownership interests in metal, steel, cement, and energy companies, among others.

2 Information by business segment

Business segment definition

The Company's Chief Executive Officer has been identified as the chief operating decision maker ("CODM") since the role encompasses authority over resource allocation decisions and performance assessment, mainly analyzing performance from the production obtained in the operations. The Company has identified two operating segments:

- Mining: consists of six long-life polymetallic mines, three located in the Central Andes of Peru and three located in Brazil (two in the state of Minas Gerais and one in the state of Mato Grosso). In addition to zinc, the Company produces substantial amounts of copper, lead, silver, and gold as by-products, which reduce the overall cost to produce mined zinc.
- Smelting: consists of three operating units, one located in Cajamarquilla in Peru and two located in the state of Minas Gerais in Brazil. The facilities recover and produce metallic zinc (SHG zinc and zinc alloys), zinc oxide and by-products, such as sulfuric acid.

Accounting policy

Segment performance is assessed based on Adjusted EBITDA, since net financial results, comprising financial income and expenses and other financial items, and income tax are managed at the corporate level and are not allocated to operating segments. This measure is presented to provide information to investors and other stakeholders about the Company's ability to generate cash flow from its core operations.

During December, 2022, the Company updated its definition of Adjusted EBITDA as follows: net income (loss) for the year, adjusted by (i) share in the results of associates; (ii) depreciation and amortization; (iii) net financial results; (iv) income tax; (v) (loss) gain on sale of investments; (vi) impairment and impairment reversals; (vii) (loss) gain on sale of long-lived assets; (viii) write-offs of long-lived assets; and (ix) remeasurement in estimates of asset retirement obligations. In addition, management may adjust the effect of certain types of transactions that in its judgment are not indicative of the Company's normal operating activities, or do not necessarily occur on a regular basis. For comparative purposes, the related 2021 and 2020 amounts have also been adjusted following this updated definition.

Notes to the consolidated financial statements
At and for the year ended on December 31, 2022
All amounts in thousands of US dollars, unless otherwise stated

The internal information used for making decisions is prepared using International Financial Reporting Standards ("IFRS") based on accounting measurements and management reclassifications between income statement lines items, which are reconciled to the consolidated financial statements in the column "Adjustments", as shown in the tables below. These adjustments include reclassifications of certain overhead costs and revenues from Other income and expenses, net to Net Revenues, Cost of sales and/or Selling, general and administrative expenses.

In 2022, the Company decided to stop reclassifying certain accounts to better approximate business segment information to the financial statements. These reclassifications included the effects of derivative financial instruments from Other income and expenses, net to Net revenues and Cost of sales. For comparative purposes, the related 2021 and 2020 amounts have also been reclassified.

The Company uses customary market terms for intersegment sales. The Company's corporate headquarters expenses are allocated to the operating segments to the extent they are included in the measures of performance used by the CODM.

The presentation of segments results and reconciliation to income before income tax in the consolidated income statement is as follows:

	2022				
	Mining	Smelting	Intersegment sales	Adjustments	Consolidated
Net revenues	1,248,027	2,466,967	(683,583)	2,579	3,033,990
Cost of sales	(905,241)	(2,190,903)	683,583	17,381	(2,395,180)
Gross profit	342,786	276,064	-	19,960	638,810
Selling, general and administrative	(64,444)	(60,435)	-	(20,664)	(145,543)
Mineral exploration and project evaluation	(88,947)	(9,915)	-	-	(98,862)
Impairment loss of long-lived assets	(32,276)	(236)	-	-	(32,512)
Other income and expenses, net	(32,787)	43,049	-	(12,936)	(2,674)
Operating income	124,332	248,527	-	(13,640)	359,219
Depreciation and amortization	204,514	78,727	-	7,696	290,937
Miscellaneous adjustments	110,993	(825)	-	-	110,168
Adjusted EBITDA	439,839	326,429	-	(5,944)	760,324
Change in fair value of offtake agreement (i)					24,267
Impairment loss of long-lived assets					(32,512)
Aripuaña's pre-operating expenses and ramp-up impacts (ii)					(87,540)
Impairment of other assets					(9,302)
Loss on sale of long-lived assets					(698)
Remeasurement in estimates of asset retirement obligations					6,182
Remeasurement adjustment of streaming agreement (iii)					(10,565)
Miscellaneous adjustments					(110,168)
Depreciation and amortization					(290,937)
Share in the results of associates					1,885
Net financial results					(133,727)
Income before income tax					227,377

Notes to the consolidated financial statements
At and for the year ended on December 31, 2022
All amounts in thousands of US dollars, unless otherwise stated

2021					
	Mining	Smelting	Intersegment sales	Adjustments	Consolidated
Net revenues	1,165,584	2,021,787	(636,212)	70,951	2,622,110
Cost of sales	(726,653)	(1,842,704)	636,212	(55,874)	(1,989,019)
Gross profit	438,931	179,083	-	15,077	633,091
Selling, general and administrative	(64,739)	(51,635)	-	(17,429)	(133,803)
Mineral exploration and project evaluation	(75,550)	(9,493)	-	-	(85,043)
Other income and expenses, net	(32,286)	70,874	-	(6,640)	31,948
Operating income	266,356	188,829	-	(8,992)	446,193
Depreciation and amortization	174,891	78,861	-	4,959	258,711
Miscellaneous adjustments	35,697	3,234	-	-	38,931
Adjusted EBITDA	476,944	270,924	-	(4,033)	743,835
Aripuaña's pre-operating expenses (ii)					(8,753)
Loss on sale of long-lived assets					(4,891)
Remeasurement in estimates of asset retirement obligations					(6,371)
Remeasurement adjustment of streaming agreement (iii)					(19,580)
Other adjustments					664
Miscellaneous adjustments					(38,931)
Depreciation and amortization					(258,711)
Net financial results					(136,902)
Income before income tax					309,291

2020					
	Mining	Smelting	Intersegment sales	Adjustments	Consolidated
Net revenues	748,462	1,547,398	(375,402)	30,471	1,950,929
Cost of sales	(627,372)	(1,310,206)	375,402	(13,983)	(1,576,159)
Gross profit	121,090	237,192	-	16,488	374,770
Selling, general and administrative	(70,223)	(54,021)	-	(15,147)	(139,391)
Mineral exploration and project evaluation	(48,555)	(5,466)	-	(3,180)	(57,201)
Impairment loss of long-lived assets	(512,706)	(44,791)	-	-	(557,497)
Other income and expenses, net	(21,815)	8,831	-	(6,180)	(19,164)
Operating (loss) income	(532,209)	141,745	-	(8,019)	(398,483)
Depreciation and amortization	159,984	82,650	-	1,291	243,925
Miscellaneous adjustments	527,582	45,893	-	-	573,475
Adjusted EBITDA	155,357	270,288	-	(6,728)	418,917
Impairment loss of long-lived assets					(557,497)
Aripuaña's pre-operating expenses (ii)					(1,885)
Loss on sale of long-lived assets					(2,268)
Remeasurement in estimates of asset retirement obligations					(4,012)
Remeasurement adjustment of streaming agreement (iii)					(7,813)
Miscellaneous adjustments					(573,475)
Depreciation and amortization					(243,925)
Net financial results					(278,175)
Loss before income tax					(676,658)

(i) This amount represents the change in the fair value of the offtake agreement described in note 16, which is being measured at Fair value through profit and loss ("FVTPL"). This change in the fair value is a non-cash item and has been included in the Company's Adjusted EBITDA calculation.

Notes to the consolidated financial statements
At and for the year ended on December 31, 2022
All amounts in thousands of US dollars, unless otherwise stated

(ii) These amounts include Aripuanã's pre-operating expenses and ramp-up impacts; considering that these items do not reflect the Company's normal operating activities, they have been adjusted from its EBITDA. For the year 2022, this amount includes USD 42,785 related to the idleness of Aripuanã mine's and plant's capacity (without depreciation), USD 8,916 related to other pre-operating expenses and USD 35,838 related to the provision of Aripuanã's inventory to its net realizable value (without depreciation). For comparative purposes, the related 2021 and 2020 amounts have also been adjusted.

(iii) This amount includes the annual remeasurement adjustment of the Company's silver streaming revenues previously recognized given the changes in long-term prices and in the mine plan for the Cerro Lindo mining unit. This remeasurement is a non-cash item and has been included in the Company's Adjusted EBITDA calculation.

3 Basis of preparation of the consolidated financial statements

These consolidated financial statements have been prepared in accordance with IFRS and interpretations issued by the IFRS Interpretations Committee applicable to companies reporting under IFRS, as issued by the International Accounting Standards Board ("IASB").

The consolidated financial statements have been prepared under the historical cost convention, except for certain financial assets and financial liabilities (including other financial instruments) measured at fair value at the end of each reporting period.

The consolidated financial statements of the Company for the year ended December 31, 2022, were approved for issue in accordance with a resolution of the Board of Directors on February 15, 2023.

4 Principles of consolidation

The consolidated financial statements comprise the financial statements of NEXA and its subsidiaries. The main entities included in the consolidated financial statements are:

	Percentage of shares 2022	2021	Company controls	Headquarter	Activities
Subsidiaries					
Nexa Recursos Minerais S.A. "NEXA BR"	100	100	Directly	Brazil	Mining / Smelting
Nexa Resources Cajamarquilla S.A. "NEXA CJM"	99.99	99.99	Directly	Peru	Smelting
Nexa Resources US. Inc.	100	100	Directly	United States	Trading
Exploraciones Chimborazo Metals & Mining	100	100	Directly	Ecuador	Holding and others
L.D.O.S.P.E. Geração de Energia e Participações Ltda. - "L.D.O.S.P.E."	100	100	Indirectly	Brazil	Energy
L.D.Q.S.P.E. Geração de Energia e Participações Ltda. - "L.D.Q.S.P.E."	100	100	Indirectly	Brazil	Energy
L.D.R.S.P.E. Geração de Energia e Participações Ltda. - "L.D.R.S.P.E."	100	100	Indirectly	Brazil	Energy
Mineração Dardanelos Ltda. - "Dardanelos"	100	100	Indirectly	Brazil	Mining projects
Mineração Santa Maria Ltda.	99.99	99.99	Indirectly	Brazil	Mining projects
Pollarix S.A. - "Pollarix" (i)	33.33	33.33	Indirectly	Brazil	Holding and others
Karmin Holding Ltda.	100	100	Indirectly	Brazil	Holding and others
Mineração Rio Aripuaña Ltda.	100	100	Indirectly	Brazil	Holding and others
Votorantim Metals Canada Inc.	100	100	Indirectly	Canada	Holding and others
Nexa Resources El Porvenir S.A.C.	99.99	99.99	Indirectly	Peru	Mining
Minera Pampa de Cobre S.A.C	99.99	99.99	Indirectly	Peru	Mining
Nexa Resources Perú S.A.A. - "NEXA Peru"	83.55	83.55	Indirectly	Peru	Mining
Nexa Resources Atacocha S.A.A. - "NEXA Atacocha"	66.62	66.62	Indirectly	Peru	Mining
Nexa Resources UK Ltd. - "NEXA UK"	100	100	Indirectly	United Kingdom	Mining
Joint-operations					
Campos Novos Energia S.A. - "Enercan" (ii)	-	20.98		Brazil	Energy
Cia. Minera Shalipayco S.A.C	75	75		Peru	Mining projects

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(i) NEXA BR owns all the common shares of Pollarix, which represents 33.33% of its total share capital. The remaining shares are preferred shares with limited voting rights, which are indirectly owned by NEXA's controlling shareholder, VSA.

(ii) On November 17th, 2022, NEXA, through Pollarix, acquired 1.46% of Enercan's additional shares for BRL 21,731 (USD 4,136) by exercising its proportional pre-emptive rights given the withdrawal of one of Enercan's previous shareholders. Prior to this date, NEXA and the other shareholders exercised joint control over Enercan's assets and liabilities. However, because of this withdrawal, Enercan's remaining shareholders exercised their option to acquire these additional shares, resulting in the loss of joint control by NEXA. Since this date, NEXA ceased recognizing its share of Enercan's jointly held assets, liabilities, revenues and expenses and began to account for it as an investment in an associate, through the equity method, since it still holds significant influence over this entity.

The following table shows the amounts in each balance sheet line that were derecognized since December 2022.

Assets	November 30, 2022
Current assets	
Cash and cash equivalents	1
Financial investments	8,260
Trade accounts receivables	9,137
Other assets	275
	17,674
Non-current assets	
Deferred income tax	1,320
Recoverable income tax	126
Other assets	299
Property, plant and equipment	29,216
Intangible assets	9,382
	40,342
Total assets	58,016
Liabilities and shareholders' equity	
Current liabilities	
Trade payables	1,014
Dividends payable	8,745
Salaries and payroll charges	35
Tax liabilities	7,917
Other liabilities	788
	18,499
Non-current liabilities	
Provisions	311
Deferred income tax	4,658
Other liabilities	2,093
	7,062
Total liabilities	25,561
Shareholders' equity	
Attributable to NEXA's shareholders	32,456

As of December 31, 2022, the total investment of NEXA in Enercan is USD 38,990, which is composed of: (i) USD 32,456 related to the net effect of the derecognition of its share of Enercan's jointly controlled assets and liabilities; (ii) USD 4,136 related to the amount paid by NEXA for the additional shares; (iii) USD 1,885 related to NEXA's share in Enercan's results; and (iv) USD 513 related to foreign exchange effects.

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(a) Subsidiaries

Subsidiaries include all entities over which the Company has control. The Company controls an entity when it (i) has the power over the entity; (ii) is exposed, or has the right, to variable returns from its involvement with the entity; and (iii) has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Company, except when the predecessor basis of accounting is applied. Subsidiaries are unconsolidated from the date that control ceases.

Accounting policies of subsidiaries are usually consistent with the policies adopted by the Company. If there are differences, to ensure the accounting policies' standardization, an adjustment is performed in the consolidation process.

Non-controlling interests in the subsidiaries' equity and results are shown separately in the consolidated balance sheet, income statement, statement of comprehensive income and statement of changes in shareholders' equity. A change in a subsidiary's ownership interest, without loss of control, is accounted for as an equity transaction.

If the Company loses control over a subsidiary, it derecognizes the related assets, liabilities, non-controlling interests and other equity components and any resultant gain or loss is recognized in the income statement. Any investment retained is recognized at fair value.

In general, there is a presumption that a majority of voting rights results in control. When the Company has less than a majority of the voting rights of an investee, it considers all relevant facts and circumstances to determine whether it has power over this investee. This may include contractual arrangements with the other holders of voting rights in the investee; rights arising from other contractual arrangements; and the Company's voting rights and potential voting rights that will give it the practical ability to direct the relevant activities of the investee unilaterally.

Intercompany transactions, balances, and unrealized gains on transactions between companies in the consolidated group are eliminated in full on consolidation. Unrealized losses are also eliminated unless the transaction indicates impairment of the transferred asset.

(b) Joint operations

The Company recognizes its direct right to the assets, liabilities, revenues and expenses of joint operations and its share of any jointly held assets or incurred liabilities or revenues and expenses. These have been included in the consolidated financial statements under the appropriate headings.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

(c) Associates

Associates are initially recognized at cost and adjusted thereafter for the equity method, being increased, or reduced from its interest in the investee's income after the acquisition date.

For an entity to become an associate the Company must have significant influence, which is the power to participate in the financial and operating policy decisions of the investee, without having its control or joint control of those policies.

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(d) Transactions with non-controlling interests

Transactions with non-controlling interests that do not result in a loss of control are recognized within shareholders' equity as transactions with equity owners of the consolidated group. A change in ownership interest results in an adjustment between the carrying amounts of the controlling and non-controlling interests to reflect their relative interests in the subsidiary. Any difference between the amount of the adjustment to non-controlling interests and any consideration paid or received is recognized in Additional paid in capital within shareholders' equity.

(e) Foreign currency translation

(i) Functional and presentation currency

Items included in the financial statements of each of the Company's entities are measured using the currency of the primary economic environment in which each entity operates ("the functional currency"). The Company's consolidated financial statements are presented in US Dollars ("USD"), which is NEXA's functional currency and the Company's reporting currency.

(ii) Transactions and balances

Foreign currency transactions are initially recorded by each of the Company's entities at their respective functional currency spot rates at the date the transaction is recognized. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at the functional currency spot rates at the end of each reporting period are recognized in the income statement. Non-monetary items that are measured at historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transaction. Translation differences on assets and liabilities carried at fair value are reported as part of the fair value gain or loss.

(iii) Consolidated entities

The results of operations and financial position of the Company's entities that have a functional currency different from the Company's reporting currency are translated into the reporting currency as follows:

- Assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;
- Income and expenses for each income statement and statement of comprehensive income presented are translated at average exchange rates for the annual period of that income statement and statement of comprehensive income, which are a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates; and

All resulting exchange differences are recognized in other comprehensive income and accumulated in a separate component of shareholders' equity.

5 Changes in the main accounting policies and disclosures

(a) New standards and amendments – applicable as of January 1, 2022 or thereafter

There were some new standards and amendments effective for annual periods commencing on January 1, 2022. The adoption of these new standards and amendments did not have a material impact on the Company's financial statements. The Company has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective and does not expect that the adoption of such issued but not early adopted standard, interpretation or amendment will have a material impact on the Company's financial statements.

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(b) Critical estimates, assumptions and judgments

The preparation of the Company's consolidated financial statements requires the use of estimates, assumptions and judgments that affect the reported amounts of revenues, expenses, assets and liabilities, the accompanying disclosures, and the disclosure of contingent liabilities at the date of the consolidated financial statements. Critical estimates, assumptions and judgments, by definition, will seldom equal the actual results and are continually evaluated to reflect changing expectations about future events. Management also needs to exercise judgment in applying the Company's accounting policies.

This note provides an overview of the areas that involve a higher degree of judgment or complexity, and of items which are more likely to be materially adjusted due to estimates and assumptions turning out to be wrong due to their uncertainty. Detailed information about each of these estimates, assumptions and judgments is included in other notes together with information about the basis of calculation for each affected item in the financial statements.

The critical accounting estimates, assumptions and judgments applied by the Company in the preparation of these financial statements are as follows:

- estimation of current and deferred income taxes – note 11
- estimation of fair value of financial instruments – note 14
- estimation of impairment of trade accounts receivables – note 17
- estimation of the net realizable value of inventories – note 18
- estimation of quantification of mineral reserves and resources for useful life calculation – note 22
- estimation of asset retirement and environmental obligations – note 27
- estimation of provisions for legal claims – note 28
- estimation of contractual obligations – note 29
- estimation of impairment of long-lived assets – note 31

Estimates, assumptions and judgments are continuously evaluated. They are based on historical experience and other factors, including expectations of future events that may have a financial impact on the Company and that are believed to be reasonable under the circumstances.

Among others, the Company has considered the effects of the Environmental, Social and Governance ("ESG") commitments when making its critical estimates, assumptions and judgments based on the long-term ESG commitments announced by NEXA on October 6, 2022. Events and changes in circumstances arising after December 31, 2022 will be reflected in management's estimates for future periods.

Ukraine war impacts on NEXA's financial statements and operations

The invasion of Ukraine by Russia, the resulting conflict, and retaliatory measures by the global community have created global security concerns and economic uncertainty, including the possibility of expanded regional or global conflict, which have had, and are likely to continue to have, adverse impacts around the globe. Potential ramifications include disruption of the supply chain, which may impact production, investment, and demand for the Company's products, higher and more volatile prices for oil and gas, volatility in commodity prices, and disruption of global financial markets, further exacerbating overall macroeconomic trends including inflation and rising interest rates. As of the date of issuance of these consolidated financial statements, we have not identified any material impacts on the Company's operations, financial condition, or cash flows related to this war. However, NEXA cannot predict any future impact that this war could have on its business and operations and continues to closely monitor the developments related to it.

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Peruvian political instability impact on the Company's consolidated financial statements and operations

As of the date of the issuance of these consolidated financial statements, there have been no identified impacts on the Company's operations, financial condition, or cash flows that could be related to this political situation. However, the Company cannot predict any future impact that this situation could have on its business and operations and continues to closely monitor the developments related to it, mainly considering that the Peruvian mining sector, as well as other economic sectors have been affected in some ways, such as logistics and personnel transport.

6 Net revenues

Accounting policy

Revenues represent the amount of the consideration received or receivable for the sale of goods in the ordinary course of the Company's activities. Revenues are shown net of value-added tax, returns, rebates and discounts, after eliminating sales between the consolidated companies.

The Company recognizes revenues when a performance obligation is satisfied by transferring a promised good or service to a customer. The asset is transferred when the customer obtains control of that asset. To determine the point in time at which a customer obtains control of a promised asset the Company considers the following indicators: (i) the Company has a present right to payment for the asset; (ii) the customer has legal title to the asset; (iii) the Company has transferred physical possession of the asset; (iv) the customer has the significant risks and rewards of ownership of the asset; (v) the customer has accepted the asset.

Identification and timing of satisfaction of performance obligations

The Company has two distinct performance obligations included in certain sales contracts:

(i) the promise to provide goods to its customers; and (ii) the promise to provide freight and insurance services to its customers.

Promise to provide goods: this performance obligation is satisfied when the control of such goods is transferred to the final customer, which is substantially determined based on the Incoterms agreed upon in each of the contracts with customers.

Promise to provide freight and insurance services: this performance obligation is satisfied when the freight and insurance services contracted to customers are completed.

As a result of the distinct performance obligations identified, part of the Company's revenues is presented as revenues from services. Cost related to revenues from services is presented as Cost of sales. Revenues from the sale of goods and from freight and insurance services are recognized at a point in time when control is transferred and when contracted services are provided. It is at this point that a trade receivable is recognized because only the passage of time is required before the consideration is due. The Company does not have any contract assets, which give right to consideration in exchange for goods or services that the Company has transferred to the customer, since all rights to consideration of the contracts are unconditional.

Deferred revenues are related to contractual obligations that are an entity's obligation to transfer goods or services to a customer for which the entity has received consideration from the customer (or the payment is due) but the transfer has not yet been completed. For contracts where performance obligations are satisfied over a period of time, the stage of completion is required to calculate how much revenue should be recognized to date and revenue shall be deducted from the prepayment to the extent that performance obligations are delivered. Refer to note 29 for the specific accounting policy and information related to NEXA's contractual obligations.

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Determining the transaction price and the amounts allocated to performance obligations

The Company considers the terms of the contract and its customary business practices to determine the transaction price. The transaction price is the amount of consideration that the Company expects to be entitled to receive in exchange for transferring promised goods or services to its customers. Transaction price is allocated to each performance obligation on a relative standalone selling price basis.

The transaction prices included in the Company's sales contracts are mainly based on international prices references and subject to price adjustments based on the market price at the end of the relevant quotation period stipulated in the sales contract. These are referred to as provisional pricing arrangements which are subject to a monthly price adjustment as per the London Metal Exchange (LME) quotation periods. As of December 31, 2022, the pending price adjustments to be made were not material.

Additionally, the Company has a contractual obligation related to a long-term silver streaming arrangement linked to specific production of its Cerro Lindo mine. The Company received an upfront payment in advance of this specific production. The transaction price is linked to the silver production and spot market prices, which change over time and, therefore, it is accounted for as variable consideration. For more details about this streaming transaction see note 29.

(a) Composition

(i) Gross billing reconciliation

	2022	2021	2020
Gross billing	3,440,863	2,974,850	2,138,786
Billing from products	3,330,975	2,898,210	2,074,203
Billing from freight and insurance services	109,888	76,640	64,583
Taxes on sales	(402,064)	(347,311)	(184,714)
Return of products sales	(4,809)	(5,429)	(3,143)
Net revenues	3,033,990	2,622,110	1,950,929

(ii) Net revenues breakdown

	2022	2021	2020
Zinc	2,093,105	1,844,632	1,323,287
Lead	276,438	223,341	161,964
Copper	290,519	305,793	197,756
Silver	57,921	69,691	58,568
Other products	206,119	102,013	144,771
Freight and insurance services	109,888	76,640	64,583
Net revenues	3,033,990	2,622,110	1,950,929
Taxes on sales	402,064	347,311	184,714
Return of products sales	4,809	5,429	3,143
Gross billing	3,440,863	2,974,850	2,138,786

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

The geographical areas are determined based on the location of the Company's customers. The net revenues of the Company, classified by geographical location and currency, are as follows:

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(i) Net revenues by geographical location

	2022	2021	2020
Peru	859,760	774,735	485,850
Brazil	827,173	753,280	583,141
United States	174,526	119,564	116,717
Singapore	166,412	56,879	76,724
Switzerland	124,726	78,770	68,912
Chile	120,060	54,044	48,969
Luxembourg	95,252	97,462	76,072
Argentina	94,433	93,107	56,165
Japan	71,370	58,296	46,719
Taiwan	65,036	53,752	28,764
Colombia	64,013	54,325	34,768
South Africa	55,864	25,126	-
Turkey	54,955	34,493	25,005
Austria	48,676	45,057	35,197
South Korea	32,406	118,596	77,429
Malaysia	26,032	25,681	13,948
Belgium	17,905	13,690	30,174
Ecuador	15,433	15,652	9,095
Netherlands	13,623	17,693	11,740
Italy	9,586	14,834	9,895
Vietnam	8,396	14,555	10,798
Other	88,353	102,519	104,847
Net revenues	3,033,990	2,622,110	1,950,929

(ii) Net revenues by currency

	2022	2021	2020
USD	2,251,866	1,914,905	1,388,746
Brazilian Real ("BRL")	782,124	707,205	562,183
Net revenues	3,033,990	2,622,110	1,950,929

7 Expenses by nature

Accounting policy

Cost of sales mainly consists of the cost of manufacturing the products sold by the Company and is recognized in the income statement on the date of delivery to the customer at the same time revenue is recognized from the related sale.

Selling, general and administrative expenses are recognized on the accrual basis and, if applicable, in the same period in which the income they are related to is recognized.

				2022	2021	2020
	Cost of sales (i)	Selling, general and administrative	Mineral exploration and project evaluation	Total	Total	Total
Raw materials and consumables used	(1,463,472)	-	-	(1,463,472)	(1,189,728)	(856,300)
Third-party services	(449,373)	(30,878)	(65,041)	(545,292)	(467,071)	(407,695)
Depreciation and amortization	(282,968)	(4,064)	(37)	(287,069)	(258,711)	(243,925)
Employee benefit expenses	(182,609)	(58,909)	(18,030)	(259,548)	(223,115)	(213,865)
Others	(16,758)	(51,692)	(15,754)	(84,204)	(69,240)	(50,966)
	(2,395,180)	(145,543)	(98,862)	(2,639,585)	(2,207,865)	(1,772,751)

(i) Includes USD 52,215 (including depreciation of USD 16,377) related to the provision of Aripuanã's inventory to its net realizable value, for both its ore stockpile and its produced concentrates, as explained in note 18. This amount also includes USD 15,681 (including depreciation of USD 5,911) related to the idleness of the Aripuanã mine's and plant's capacity since November given the start of the unit's

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revenues. Before November, 2022 these idleness costs were recorded within Other income and expenses, net.

8 Mineral exploration and project evaluation

Accounting policy

Mineral exploration and project evaluation costs are expensed in the year in which they are incurred.

Mineral exploration activities involve the search for mineral resources from potential areas up to the determination of commercial viability and technical feasibility of an identified resource. Mineral exploration costs include gathering exploration data through geological and geophysical studies, conducting exploratory drilling and sampling, and determining and examining the volume and grade of the identified resources.

Project evaluation costs are mainly related to scoping, pre-feasibility and feasibility studies for greenfield and brownfield projects. Additionally, these evaluation costs could also include costs incurred for studies related to other corporate projects, research, innovation, automation, and information technology projects.

Note 21 describes when mineral exploration and project evaluation costs begin to be capitalized.

Composition

	2022	2021	2020
Mineral exploration	(61,986)	(55,594)	(38,519)
Project evaluation	(36,876)	(29,449)	(18,682)
	(98,862)	(85,043)	(57,201)

9 Other income and expenses, net

	2022	2021	2020
ICMS tax incentives (i)	56,697	71,949	-
Changes in fair value of offtake agreement - note 16 (d)	24,267	-	-
Changes in fair value of derivative financial instruments - note 16 (c)	1,363	7,486	948
Loss on sale of property, plant and equipment	(698)	(4,891)	(2,268)
Remeasurement of asset retirement and environmental obligations	(1,512)	(6,664)	(900)
Slow moving and obsolete inventory	(11,511)	(985)	(1,057)
Provision of legal claims	(7,664)	(13,173)	(10,912)
Contribution to communities	(17,233)	(7,070)	(2,773)
Pre-operating expenses related to Aripuanã (ii)	(45,800)	(8,753)	(1,885)
Impairment of other assets (iii)	(9,302)	-	-
Others	8,719	(5,951)	(317)
	(2,674)	31,948	(19,164)

(i) In December 2021, the Company adhered to a Brazilian Law that states that government grants of the "Imposto circulação de mercadorias e serviços" ("ICMS") tax incentives are considered investment subsidies and should be excluded from taxable income for the purpose of calculating the Corporate Income Tax ("IRPJ") and the Social Contribution on Net Income tax ("CSLL"). In 2022, the Company received USD 56,697 of ICMS tax incentives, which were excluded from the corporate income taxes basis for the year and were considered a permanent difference reducing the income tax to pay in the amount of USD 19,277 as shown in note 11 (a). Additionally, based on this, the Company stopped presenting the expenses and revenues of the received ICMS tax incentives on a net basis and started to separate the expenses in Taxes on Sales and the corresponding revenues in Other income and expenses, net. The presentation on a gross basis became necessary to demonstrate the taxes on sales for Brazilian corporate tax deduction purposes.

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(ii) Related to Aripuanã's pre-operating expenses that mainly comprise USD 36,884 (including depreciation of USD 3,868) related to the idleness of the Aripuanã mine's and plant's capacity from January to October, the period before the unit started to generate revenues. Since November, these idleness costs were recorded within Cost of Sales.

(iii) Amounts mainly related to the write-off of some non-commercial account receivables and taxes, which the Company does not expect to recover.

10 Net financial results

Accounting policy

(i) Financial expenses

Financial costs of obligations are recognized as expenses when accrued, except for those directly attributable to the acquisition or the construction of qualifying assets, that is, assets that require a substantial time to be ready for use, which are capitalized at cost within Property, plant and equipment and/or Intangibles assets to which they relate.

(ii) Financial income

Financial income is mainly composed of interest income and is recognized on an accrual basis to reflect the asset's effective yield under the effective interest rate method.

(iii) Other financial items, net is composed by the net of the income and expenses related to the fair value of loans and financings, derivative financial instruments, and foreign exchange losses.

	2022	2021	2020
Financial income			
Interest income on financial investments and cash equivalents	16,913	6,074	7,295
Interest on tax credits	980	1,377	854
Other financial income	7,125	4,021	3,019
	25,018	11,472	11,168
Financial expenses			
Interest on loans and financings	(104,689)	(96,565)	(97,422)
Premium paid on bonds repurchase – note 24 (c)	(3,277)	-	(14,481)
Interest on other liabilities	(35,134)	(12,371)	(8,051)
Interest on contractual obligations - note 29 (a)	(5,801)	(6,936)	(6,182)
Interest on lease liabilities	(542)	(1,272)	(1,757)
Other financial expenses	(19,251)	(25,131)	(31,866)
	(168,694)	(142,275)	(159,759)
Other financial items, net			
Changes in fair value of loans and financings – note 24 (c)	(1,472)	19,380	(8,058)
Changes in fair value of derivative financial instruments – note 16 (c)	(83)	(5,640)	(717)
Foreign exchange gains (losses) (i)	11,504	(19,839)	(120,809)
	9,949	(6,099)	(129,584)
Net financial results	(133,727)	(136,902)	(278,175)

(i) The amounts for years 2022 and 2021 include USD 6,413 and USD (10,468), respectively, which are related to the outstanding USD denominated intercompany debt of NEXA BR with NEXA and to the accounts payables of NEXA BR with related parties. The exchange variation of NEXA BR's loans and account payables with its related parties are not eliminated in the consolidation process and both transactions were impacted by the volatility of the Brazilian Real ("BRL"), which appreciated against the USD during 2022.

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11 Current and deferred income tax

Accounting policy

The current income tax is calculated based on the tax laws enacted or substantively enacted as of the balance sheet date in the countries where the Company's entities operate and generate taxable income. Management periodically evaluates positions taken by the Company in the taxes on income returns with respect to situations in which the applicable tax regulations are subject to interpretation.

It establishes provisions, where appropriate, considering amounts expected to be paid to the tax authorities.

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

Deferred income tax is provided in full, using the balance sheet liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date. However, deferred tax liabilities are not recognized if they arise from the initial recognition of goodwill. Deferred income tax is also not accounted for if it arises from the initial recognition of an asset or liability in a transaction other than a business combination that, at the time of the transaction affects neither the accounting nor the taxable income or loss. Deferred income tax is determined using tax rates (and laws), of the Company's entities, that have been enacted or substantially enacted at the end of the reporting period and that are expected to be applied when the related deferred income tax asset is realized, or the deferred income tax liability is settled.

Deferred tax assets are recognized only to the extent it is probable that future taxable income will be available against which the temporary deductible differences and/or tax losses can be utilized. Deferred tax assets and liabilities are offset when there is a legally enforceable right and an intention to offset them in the calculation of current taxes, generally when they are related to the same legal entity and the same tax authority. Accordingly, deferred tax assets and liabilities in different entities or in different countries are generally presented separately, and not on a net basis.

Deferred tax liabilities and assets are not recognized for temporary differences between the carrying amounts and tax bases of investments in foreign operations where the Company is able to control the timing of the reversal of the temporary differences and it is probable that the differences will not be reversed in the foreseeable future.

Critical accounting estimates, assumptions and judgments

The Company is subject to income tax in all countries in which it operates where uncertainties arise in the application of complex tax regulations. Significant estimates, assumptions and judgments are required to determine the amount of deferred tax assets that would be recovered since this amount may be affected by factors including, but not limited to: (i) internal assumptions on the projected taxable income, which are based on production and sales planning, commodity prices, operational costs and planned capital costs; (ii) macroeconomic environment; and (iii) trade and tax scenarios.

In addition, there are many transactions and calculations for which the ultimate tax determination is uncertain. The Company also exercises judgment in the identification of these uncertainties over income tax treatments which could impact the consolidated financial statements as the Company operates in a complex multinational environment.

The Company and its subsidiaries are subject to reviews of income tax filings and other tax payments, and disputes can arise with the tax authorities over the interpretation of the applicable laws and regulations.

Notes to the consolidated financial statements
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(a) Reconciliation of income tax (expense) benefit

	2022	2021	2020
Income (loss) before income tax	227,377	309,291	(676,658)
Statutory income tax rate	24.94%	24.94%	24.94%
Income tax (expense) benefit at statutory rate	(56,708)	(77,137)	168,759
ICMS tax incentives permanent difference – note 9	19,277	24,463	-
Tax effects of translation of non-monetary assets/liabilities to functional currency	6,279	(32,998)	(28,174)
Withholding tax over subsidiary capital reduction (i)	(5,263)	(10,526)	-
Impairment of goodwill	(18,247)	-	(78,866)
Special mining levy and special mining tax	(13,321)	(17,279)	(5,909)
Difference in tax rate of subsidiaries outside Luxembourg (ii)	(10,319)	(3,179)	36,390
Unrecognized deferred tax on net operating losses (iii)	(66,069)	(36,577)	(35,849)
Other permanent tax differences	(6,612)	29	(32,199)
Income tax (expense) benefit	(150,983)	(153,204)	24,152
Current	(146,869)	(122,081)	(63,192)
Deferred	(4,114)	(31,123)	87,344
Income tax (expense) benefit	(150,983)	(153,204)	24,152

(i) On July 13, 2022, NEXA and the other shareholders of NEXA CJM approved a capital reduction of USD 105,350 (2021: USD 210,703), which was paid on August 30, 2022. Given this capital reduction, the Company recognized USD 5,263 of tax expenses (2021: USD 10,526) given that the tax withheld by NEXA CJM on the corresponding participation of NEXA in its capital was considered as not recoverable.

(ii) NEXA's subsidiaries had a higher taxable profit in 2022 which explains their higher income tax for the year.

(iii) On December 31, 2022, Nexa has not recognized deferred tax on net operating losses over a taxable basis of USD 211,780 (2021: USD 134,156), after an assessment made by management considering the future recoverability of these net operating losses.

(b) Analysis of deferred income tax assets and liabilities

	2022	2021
Tax credits on net operating losses (i)	127,016	116,284
Uncertain income tax treatments	(10,980)	(5,279)
Tax credits on temporary differences		
Environmental liabilities	15,764	13,923
Asset retirement obligations	18,175	17,698
Inventory provisions	10,569	7,224
Tax, labor and civil provisions	8,882	7,797
Provision for employee benefits	7,099	7,138
Revaluation of derivative financial instruments	754	506
Other	12,144	15,652
Tax debits on temporary differences		
Capitalized interest	(10,504)	(9,261)
Foreign exchange gains	(25,542)	(16,365)
Depreciation, amortization and asset impairment	(178,041)	(189,799)
Other	(7,852)	(5,896)
	(32,516)	(40,378)
Deferred income tax assets	166,983	168,205
Deferred income tax liabilities	(199,499)	(208,583)
	(32,516)	(40,378)

(i) As a result of adopting the Law described in note 9, there was also an increase in the amount of USD 19,277 in the balance of tax losses for the year, amount which is included in the tax credits on net operating losses.

Notes to the consolidated financial statements
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(c) Effects of deferred tax on income statement and other comprehensive income

	2022	2021	2020
Balance at the beginning of the year	(40,378)	3,188	(48,212)
Effect on income (loss) for the year	(4,114)	(31,123)	87,344
Effect on other comprehensive income (loss) – Fair value adjustment	820	(2,536)	13
Prior years uncertain income tax treatment payment	1,923	-	4,706
Effect on other comprehensive income – Translation effect included in Cumulative translation adjustment	8,481	(9,907)	(40,663)
Derecognition of Nexa's share of Enercan's deferred income taxes - note 4 (ii)	3,338	-	-
Others movements of deferred income tax	(2,586)	-	-
Balance at the end of the year	(32,516)	(40,378)	3,188

(d) Summary of uncertain tax positions on income tax

There are discussions and ongoing disputes with tax authorities related to uncertain tax positions adopted by the Company in the calculation of its income tax, and for which management, supported by its legal counsel, concluded that the risk of loss is not more likely to occur, and then, it is not probable that an outflow of resources will be required. In such cases, a provision is not recognized. As of December 31, 2022, the main legal proceedings are related to: (i) the interpretation of the application of Cerro Lindo's stability agreement; and (ii) the carryforward calculation of net operating losses. The estimated amount of these contingent liabilities on December 31, 2022 is USD 349,322 which increased compared to that estimated on December 31, 2021 of USD 134,804, mainly due to the closing of tax audits in Peru and the beginning of certain administrative proceedings in 2022 regarding (i) the stability agreement of Cerro Lindo for the years 2014, 2015 and 2016; and (ii) the result of the Nexa CJM tax audit regarding income tax and transfer pricing for the fiscal year 2016.

12 Financial risk management

Financial risk factors

The Company's activities expose it to a variety of financial risks: a) market risk (including currency risk, interest rate risk and commodities risk); b) credit risk; and c) liquidity risk.

A significant portion of the products sold by the Company are commodities, with prices pegged to international indices and denominated in USD. Part of the production costs, however, is denominated in BRL and Peruvian Soles ("PEN"), and therefore, there is a mismatch of currencies between revenues and costs. Additionally, the Company has debts linked to different indices and currencies, which may impact its cash flows.

In order to mitigate the potential adverse effects of each financial risk factor, the Company follows a Financial Risk Management Policy that establishes governance and guidelines for the financial risk management process, as well as metrics for measurement and monitoring. This policy establishes guidelines and rules for: (i) Commodities Exposure Management, (ii) Foreign Exchange Exposure Management, (iii) Interest Rate Exposure Management, (iv) Issuers and Counterparties Risk Management, and (v) Liquidity and Financial Indebtedness Management. All strategies and proposals must comply with the Financial Risk Management Policy guidelines and rules, be presented to and discussed with the Finance Committee of the Board of Directors, and, when applicable, submitted for the approval of the Board of Directors, under the governance structure described in such Policy.

(a) Market risk

The purpose of the market risk management process and all related actions are intended to protect the Company's cash flows against adverse events, such as changes in foreign exchange rates, interest rates and commodity prices, to maintain the ability to pay financial obligations, and to comply with liquidity and indebtedness levels defined by management.

Nexa Resources S.A.

Notes to the consolidated financial statements

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(i) Sensitivity analysis

Presented below is a sensitivity analysis of the main risk factors that affect the pricing of the outstanding financial instruments related to cash and cash equivalents, financial investments, loans and financings, and other financial instruments. The main sensitivities are the exposure to changes in the USD exchange rate, the Interbank Deposit Certificate ("CDI") interest rates, the National Broad Consumer Price Index ("IPCA") and the commodity prices. The scenarios for these factors are prepared using market sources and other relevant sources, in compliance with the Company's policies. The scenarios on December 31, 2022 are described below:

- Scenario I: considers a change in the market forward yield curves and quotations as of December 31, 2022, according to the base scenario defined by the Company for March 31, 2023.
- Scenario II: considers a change of + or -25% in the market forward yield curves as of December 31, 2022.
- Scenario III considers a change of + or -50% in the market forward yield curves as of December 31, 2022.

			Impacts on income statement						Impacts on statement of comprehensive income				
			Scenarios II and III						Scenarios II and III				
Risk factor	Quotation at December 31, 2022	Amount	Changes from 2022	Scenario I	-25%	-50%	+25%	+50%	Scenario I	-25%	-50%	+25%	+50%
Cash and cash equivalents and financial investments													
Foreign exchange rates													
BRL	5.2177	61,919	2.06%	-	-	-	-	-	1,274	(15,479)	(30,959)	15,479	30,959
EUR	1.0674	12	(6.01%)	(1)	(3)	(6)	3	6	-	-	-	-	-
PEN	3.7895	32,963	(5.41%)	(1,783)	(8,240)	(16,480)	8,240	16,480	-	-	-	-	-
CAD	1.3536	641	2.46%	-	-	-	-	-	16	(160)	(321)	160	321
NAD	16.9647	1,862	6.19%	-	-	-	-	-	115	(466)	(931)	466	931
Interest rates													
BRL - CDI - SELIC	13.65%	61,341	(1) bps	(8)	(2,093)	(4,187)	2,093	4,187	-	-	-	-	-

			Impacts on income statement						Impacts on statement of comprehensive income				
			Scenarios II and III						Scenarios II and III				
Risk factor	Quotation at December 31, 2022	Amount	Changes from 2022	Scenario I	-25%	-50%	+25%	+50%	Scenario I	-25%	-50%	+25%	+50%
Loans and financings													
Foreign exchange rates													
BRL	5.2177	277,852	2.06%	-	-	-	-	-	(5,717)	69,463	138,926	(69,463)	(138,926)
PEN	3.7895	443	(5.41%)	24	111	222	(111)	(222)	-	-	-	-	-
Interest rates													
BRL - CDI - SELIC	13.65%	78,904	(1) bps	10	2,693	5,385	(2,693)	(5,385)	-	-	-	-	-
USD - LIBOR	4.77%	182,067	6 bps	(106)	2,169	4,339	(2,169)	(4,339)	-	-	-	-	-
IPCA - TLP	5.79%	176,269	(29) bps	511	2,551	5,103	(2,551)	(5,103)	-	-	-	-	-
TJLP	7.37%	22,634	17 bps	(38)	417	834	(417)	(834)	-	-	-	-	-

Nexa Resources S.A.

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			Impacts on income statement						Impacts on statement of comprehensive income				
			Scenarios II and III						Scenarios II and III				
Risk factor	Quotation at December 31, 2022	Amount	Changes from 2022	Scenario I	-25%	-50%	+25%	+50%	Scenario I	-25%	-50%	+25%	+50%
Other financial instruments													
Foreign exchange rates													
BRL	5,2177	(292)	2.06%	(6)	73	146	(73)	(146)	-	-	-	-	-
Interest rates													
BRL - CDI - SELIC	13.65%	(292)	(1) bps	41	986	2,114	(867)	(1,633)	-	-	-	-	-
USD - LIBOR	4.77%	(2,283)	6 bps	(2)	140	280	(140)	(280)	(0)	(36)	(71)	36	71
Commodities price													
Zinc	3,025	(2,283)	1.79%	18,733	20,988	41,976	(20,988)	(41,976)	(4,174)	(4,676)	(9,353)	4,676	9,353
Copper	8,387	(21,833)	(8.49%)	(14,153)	(4,483)	(360)	(55,027)	(97,498)	-	-	-	-	-

Notes to the consolidated financial statements

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(ii) Foreign exchange risk

Foreign exchange risk is managed through the Company's Financial Risk Management Policy, which states that the objectives of derivative transactions are to reduce cash flow volatility, hedge against foreign exchange exposure and minimize currency mismatches.

Presented below are the financial assets and liabilities in foreign currencies on December 31, 2022. These mainly result from NEXA BR's operations, for which the functional currency is the BRL.

Intercompany loans balances are fully eliminated in the consolidated financial statements. However, the related foreign exchange gain or loss is not, and is presented as foreign exchange effects.

USD amounts of foreign currency balances	2022	2021
Assets		
Cash, cash equivalents and financial investments	97,397	95,320
Derivative Financial Instruments	143	314
Trade accounts receivables	19,132	34,858
	116,672	130,492
Liabilities		
Loans and financings	276,634	272,353
Derivative Financial Instruments	435	380
Trade payables and other liabilities	182,275	200,983
Lease liabilities	2,738	7,921
Use of public assets	23,263	24,384
	485,345	506,021
Net exposure	(368,673)	(375,529)

(iii) Interest rate risk

The Company's interest rate risk arises mainly from long-term loans. Loans at variable rates expose the Company to cash flow interest rate risk. Loans at fixed rates expose the Company to fair value risk associated with interest rates. For further information related to interest rates, refer to note 24.

The Company's Financial Risk Management Policy establishes guidelines and rules to hedge against changes in interest rates that impact the Company's cash flows. Exposure to each interest rate is projected until the maturity of the assets and liabilities exposed to this index. Occasionally the Company enters into floating to fixed interest rate swaps to manage its cash flow interest rate risk. In the case of loans and financings contracted together with swaps, the Company accounts for them under the fair value option to eliminate the accounting mismatch that would arise if amortized cost were used.

(iv) Commodity price risk

The commodity price risk is related to the volatility in the prices of the Company's commodities. Prices fluctuate depending on demand, production capacity, inventory levels, commercial strategies adopted by large producers, and the availability of substitutes for these products in the global market.

The Company's Financial Risk Management Policy establishes guidelines to mitigate the risk of fluctuations in commodity prices that could impact the Company's cash flows. The exposure to the price of each commodity considers the monthly production projections, inputs purchases and the maturity flows of hedges associated with them.

Commodity prices hedge transactions are classified into the following hedging strategies:

Notes to the consolidated financial statements**At and for year ended on December 31, 2022****All amounts in thousands of US dollars, unless otherwise stated**

Hedges for sales of zinc at a fixed price (Customer Hedge)

The objective is to convert fixed priced sales to floating prices, observed on the London Metal Exchange (LME). The purpose of the strategy is to maintain the revenues of a business unit linked to the LME prices. These transactions usually relate to purchases of zinc for future settlement on the over-the-counter market.

Hedges for mismatches of quotational periods (Hedge Book)

The objective is to hedge quotational periods mismatches arising between the purchases of metal concentrate or processed metal and the sale of the processed metal. These transactions usually relate to purchases and sales of zinc for future trading on the over-the-counter market.

(b) Credit risk

Trade receivables, derivative financial instruments, term deposits, bank deposit certificates ("CDBs") and government securities create exposure to credit risk with respect to the counterparties and issuers. The Company has a policy of making deposits in financial institutions that have, at least, a rating from two of the following international rating agencies: Fitch, Moody's or Standard & Poor's. The minimum rating required for counterparties is determined as follows:

- Onshore operations: rating "A", or equivalent, on a local scale by two rating agencies. In the case of foreign financial institutions that have a local rating by only one rating agency, it should be at least "AA-", and its headquarters should have a rating "A" minimum on a global scale.
- Offshore operations: rating "BBB-", or equivalent, on a global scale by two rating agencies.

In the case of financial institutions in Peru or in Luxembourg, local ratings from local agencies associated with rating agencies approved in the Company's policy are accepted. In case that only a global rating is available, it will be eligible provided that it has a rating "BBB-" at least by one rating agency.

In the case of financial institutions that do not have a rating available for a specific country, it will be eligible provided that its headquarters follow the minimum ratings specified above.

The pre-settlement risk methodology is used to assess counterparty risks in derivative transactions.

This methodology consists of determining the risk associated with the likelihood (via Monte Carlo simulations) of a counterparty defaulting on the financial commitments defined by contract.

The global ratings were obtained from the rating agencies Fitch, Moody's or Standard & Poor's ratings and are related to commitments in foreign or local currency and, in both cases, they assess the capacity to honor these commitments, using a scale applicable on a global basis. Therefore, both ratings in foreign currency and in local currency are internationally comparable ratings.

The ratings used by the Company are always the most conservative ratings of the referred agencies.

In the case of credit risk arising from customer credit exposure, the Company assesses the credit quality of the customer, considering mainly the history of the relationship and financial indicators defining individual credit limits, which are continuously monitored.

The Company performs initial analyses of customer credit and, when deemed necessary, guarantees or letters of credit are obtained to mitigate the credit risk. Additionally, most sales to the United States of America, Europe and Asia are collateralized by letters of credit and credit insurance.

The carrying amount of the Company's financial instruments best represents the maximum exposure to their credit risk.

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The following table reflects the credit quality of issuers and counterparties for transactions involving cash and cash equivalents, financial investments and derivative financial instruments. The variations presented are mainly related to the Company's transactions in the year and not to changes in the counterparties' ratings.

	2022			2021		
	Local rating	Global rating	Total	Local rating	Global rating	Total
Cash and cash equivalents						
AAA	191,269	-	191,269	117,439	-	117,439
AA+	-	-	-	-	-	-
AA	10,259	-	10,259	19	-	19
AA-	-	15,958	15,958	-	21,252	21,252
A+	-	117,968	117,968	35,923	318,120	354,043
A	-	93,117	93,117	25,354	115,653	141,007
A-	-	54,737	54,737	-	104,528	104,528
No rating (i)	8,451	6,067	14,518	2,660	2,869	5,529
	209,979	287,847	497,826	181,395	562,422	743,817
Financial investments						
AAA	18,006	-	18,006	16,849	-	16,849
AA	-	-	-	2,353	-	2,353
No rating (i)	56	-	56	-	-	-
	18,062	-	18,062	19,202	-	19,202
Derivative financial instruments						
AAA	144	-	144	314	-	314
A+	-	3,061	3,061	-	8,491	8,491
A-	-	4,238	4,238	-	7,589	7,589
	144	7,299	7,443	314	16,080	16,394

(i) Refers to subsidiaries of international financial institutions that do not have a global rating available in the international rating agencies. According to the Company's policy, for these financial institutions, the rating of the financial institution controlling entities is assumed, which must be at least BBB-.

(c) Liquidity risk

Liquidity risk is managed through the Company's Financial Risk Management Policy, which aims to ensure the availability of funds to meet the Company's financial obligations. The main liquidity measurement and monitoring instrument is the cash flow projection, using a minimum projection period of 12 months from the benchmark date.

The table below shows the Company's financial obligations to be settled by the Company based on their maturity (the remaining period from the balance sheet up to the contractual maturity date). The amounts below represent the estimated undiscounted future cash flows, which include interests to be incurred and, accordingly, do not reconcile directly with the amounts presented in the consolidated balance sheet.

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2022	Less than 1 year	Between 1 and 3 years	Between 3 and 5 years	Over 5 years	Total
Loans and financings	136,348	391,201	981,759	704,944	2,214,252
Lease liabilities	4,105	1,410	-	-	5,515
Derivative financial instruments	9,712	215	86	5	10,018
Trade payables and other liabilities	413,856	12,154	-	-	426,010
Confirming payables	216,392	-	-	-	216,392
Salaries and payroll charges	79,078	-	-	-	79,078
Dividends payable	7,922	-	-	-	7,922
Related parties	487	546	-	-	1,033
Asset retirement and environmental obligations	19,360	29,625	28,868	241,258	319,111
Use of public assets	2,484	4,972	4,890	16,584	28,930
	889,744	440,123	1,015,603	962,791	3,308,261

2021	Less than 1 year	Between 1 and 3 years	Between 3 and 5 years	Over 5 years	Total
Loans and financings	114,240	443,780	247,226	1,439,295	2,244,541
Lease liabilities	17,340	3,744	-	-	21,084
Derivative financial instruments	22,684	146	71	24	22,925
Trade payables	411,818	-	-	-	411,818
Confirming payables	232,860	-	-	-	232,860
Salaries and payroll charges	76,031	-	-	-	76,031
Dividends payable	11,441	-	-	-	11,441
Related parties	321	71	-	-	392
Asset retirement and environmental obligations	31,953	64,752	85,021	243,076	424,802
Use of public assets	1,368	3,244	3,657	21,840	30,109
	920,056	515,737	335,975	1,704,235	3,476,003

(d) Capital management

The Company's objectives when managing capital are to safeguard its ability to continue as a going concern, so it can continue to provide returns for shareholders and benefits for other stakeholders; and to maintain an optimal capital structure to reduce the cost of capital.

To maintain or adjust the capital structure, the Company may adjust the dividends level paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt. The Company monitors capital mainly using the leverage ratio, calculated as net debt to Adjusted EBITDA.

Net debt and Adjusted EBITDA measures should not be considered in isolation or as a substitute for net income or operating income, as indicators of operating performance, or as alternatives to cash flow as measures of liquidity. Additionally, management's calculation of Adjusted EBITDA may be different from the calculation used by other companies, including competitors in the mining and smelting industry, so these measures may not be comparable to those of other companies.

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	Note	2022	2021	2020
Loans and financings	24 (a)	1,669,259	1,699,315	2,024,314
Derivative financial instruments	16 (a)	2,575	6,531	(5,106)
Lease liabilities	23 (b)	5,021	19,639	25,689
Cash and cash equivalents	15	(497,826)	(743,817)	(1,086,163)
Financial investments		(18,062)	(19,202)	(35,044)
Net debt (i)		1,160,967	962,466	923,690
Net income (loss) for the year		76,394	156,087	(652,506)
Plus (less):				
Depreciation and amortization	21, 22 and 23	290,937	258,711	243,925
Share in the results of associates		(1,885)		
Net financial results	10	133,727	136,902	278,175
Income tax expense (benefit)	11 (a)	150,983	153,204	(24,152)
Miscellaneous adjustments	2	110,168	38,931	573,475
Adjusted EBITDA (ii)		760,324	743,835	418,917
Leverage ratio (Net debt/Adjusted EBITDA)		1.53	1.29	2.20

(i) Net debt is defined as (a) loans and financings, plus lease liabilities, plus or minus (b) the fair value of derivative financial instruments, less (c) cash and cash equivalents, less (d) financial investments.

(ii) Adjusted EBITDA for capital management calculation uses the same assumptions described in note 2 for Adjusted EBITDA by segment.

13 Financial instruments

Accounting policy

Normal purchases and sales of financial assets are recognized on the trade date – the date on which the Company commits 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. Financial assets carried at fair value through profit or loss, if any, are initially recognized at fair value, and transaction costs are expensed in the income statement.

Financial assets are derecognized when the rights to receive cash flows from the investments have expired or the Company has transferred substantially all the risks and rewards of ownership. Financial assets at fair value through profit or loss and at fair value through other comprehensive income are subsequently carried at fair value. Financial assets at amortized costs are subsequently measured using the effective interest rate method.

Equity instruments may be irrevocably elected on their initial recognition for their fair value changes to be presented in other comprehensive income instead of in the income statement. Since the objective of the Company's equity instruments is to buy more participation in a project and not sell the investment, they are classified as fair value through other comprehensive income.

Then, the Company classifies its financial assets and liabilities under the following categories: amortized cost, fair value through profit or loss and fair value through other comprehensive income.

(i) Amortized cost

Financial assets measured at amortized cost are assets held within a business model whose objective is to hold financial assets to collect contractual cash flows and for which the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest ("SPPI") on the principal amount outstanding.

Notes to the consolidated financial statements

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Financial liabilities are measured at amortized cost, except for financial liabilities at fair value through profit or loss such as derivatives and some specific loans and financings.

(ii) Fair value through profit or loss

Financial assets measured at fair value through profit or loss are assets which an entity manages with the objective of realizing cash flows through the sale of such assets and financial assets that do not give rise to cash flows that are SPPI on the principal amount outstanding.

Financial liabilities measured at fair value through profit or loss are liabilities which were not measured at amortized cost, such as derivatives and loans and financings that are designated at fair value option when is necessary to eliminate the accounting mismatch that would arise if amortized cost were used. For these loans and financings, the portion of the variation in credit risk is recorded in the OCI.

(iii) Fair value through other comprehensive income

Financial assets measured at fair value through other comprehensive income are held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets and for which the contractual terms of the financial asset give rise on specified dates to cash flows that are SPPI on the principal amount outstanding. Investments in equity instruments are measured at fair value through other comprehensive income as mentioned before.

(a) Breakdown by category

The Company's financial assets and liabilities are classified as follows:

					2022
	Note	Amortized cost	Fair value through profit or loss	Fair value through other comprehensive income	Total
Assets per balance sheet					
Cash and cash equivalents	15	497,826	-	-	497,826
Financial investments		18,062	-	-	18,062
Other financial instruments	16 (a)	-	7,443	-	7,443
Trade accounts receivables	17	53,123	170,617	-	223,740
Investments in equity instruments	14 (c)	-	-	7,115	7,115
Related parties (i)	20 (a)	2	-	-	2
		569,013	178,060	7,115	754,188
2022					
	Note	Amortized cost	Fair value through profit or loss	Fair value through Other comprehensive income	Total
Liabilities per balance sheet					
Loans and financings	24 (a)	1,578,864	90,395	-	1,669,259
Lease liabilities	23 (b)	5,021	-	-	5,021
Other financial instruments	16 (a)	-	31,851	-	31,851
Trade payables	25	413,856	-	-	413,856
Confirming payables	26	216,392	-	-	216,392
Use of public assets (ii)		23,263	-	-	23,263
Related parties (ii)	20 (a)	1,033	-	-	1,033
		2,238,429	122,246	-	2,360,675

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					2021
Assets per balance sheet	Note	Amortized cost	Fair value through profit or loss	Fair value through Other comprehensive income	Total
Cash and cash equivalents	15	743,817	-	-	743,817
Financial investments		19,202	-	-	19,202
Other financial instruments	16 (a)	-	16,394	-	16,394
Trade accounts receivables	17	84,969	146,205	-	231,174
Investments in equity instruments	14 (c)	-	-	3,723	3,723
Related parties (i)	20 (a)	2	-	-	2
		847,990	162,599	3,723	1,014,312

					2021
Liabilities per balance sheet	Note	Amortized cost	Fair value through profit or loss	Fair value through Other comprehensive income	Total
Loans and financings	24 (a)	1,610,638	88,677	-	1,699,315
Lease liabilities	23 (b)	19,639	-	-	19,639
Other financial instruments	16 (a)	-	22,925	-	22,925
Trade payables	25	411,818	-	-	411,818
Confirming payables	26	232,860	-	-	232,860
Use of public assets (ii)		24,384	-	-	24,384
Related parties (ii)	20 (a)	393	-	-	393
		2,299,732	111,602	-	2,411,334

(i) Classified as Other assets in the consolidated balance sheet.

(ii) Classified as Other liabilities in the consolidated balance sheet.

14 Fair value estimates

Critical accounting estimates, assumptions and judgments

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

Although management has used its best judgment in estimating the fair value of its financial instruments, any technique for making said estimates and assumptions involves some level of inherent fragility.

(a) Analysis

The main financial instruments and the estimates and assumptions made by the Company for their valuation are described below:

- Cash and cash equivalents, financial investments, trade accounts receivables and other current assets – considering their nature, terms and maturity, the carrying amounts approximate their fair value.
- Financial liabilities – these instruments are subject to usual market interest rates. The fair value is based on the present value of expected future cash disbursements, at interest rates currently available for debt with similar maturities and terms and adjusted for the Company's credit risk. Loans and financings are measured at amortized cost, except for certain contracts for which the Company has elected the fair value option.

Notes to the consolidated financial statements

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- Other financial instruments – the fair value is determined by calculating their present value through yield curves at the closing dates. The curves and prices used in the calculation for each group of instruments are developed based on data from Brazilian Securities, Commodities and Futures Exchange – B3, Central Bank of Brazil, LME and Bloomberg, interpolated between the available maturities. The main derivative financial instruments are:
 - Swap contracts – the present value of both the assets and liabilities are calculated through the discount of forecasted cash flows by the interest rate of the currency in which the swap is denominated. The difference between the present value of the assets and the liabilities generates its fair value.
 - Forward contracts – the present value is estimated by discounting the notional amount multiplied by the difference between the future price at the reference date and the contracted price. The future price is calculated using the convenience yield of the underlying asset. It is common to use Asian non-deliverable forwards for hedging non-ferrous metals positions. Asian contracts are derivatives in which the underlying is the average price of certain asset over a range of days.
 - Option contracts – the present value is estimated based on the Black and Scholes model, with assumptions that include the underlying asset price, strike price, volatility, time to maturity and interest rate.

(b) Fair value by hierarchy

				2022
	Note	Level 1	Level 2	Total
Assets				
Other financial instruments	16 (a)	-	7,443	7,443
Trade accounts receivables		-	170,617	170,617
Investments in equity instruments (i)	14 (c)	7,115	-	7,115
		7,115	178,060	185,175
Liabilities				
Other financial instruments	16 (a)	-	31,851	31,851
Loans and financings designated at fair value (ii)		-	90,395	90,395
		-	122,246	122,246
				2021
	Note	Level 1	Level 2	Total
Assets				
Other financial instruments	16 (a)	-	16,394	16,394
Trade accounts receivables		-	146,205	146,205
Investments in equity instruments (i)	14 (c)	3,723	-	3,723
		3,723	162,599	166,322
Liabilities				
Other financial instruments	16 (a)	-	22,925	22,925
Loans and financings designated at fair value (ii)		-	88,677	88,677
		-	111,602	111,602

(i) To determine the fair value of the investments in equity instruments, the Company uses the share's quotation as of the last day of the reporting period.

(ii) Loans and financings are measured at amortized cost, except for certain contracts for which the Company has elected the fair value option.

The Company discloses fair value measurements based on their level on the following fair value measurement hierarchy:

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Level 1:

When fair value is calculated with quoted prices (unadjusted) in active markets for identical assets and liabilities traded in active markets at the balance sheet date. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by the Company is the current bid price.

Level 2:

When fair value is calculated with valuation techniques since the financial instruments are not traded in an active market and all of the significant inputs required to identify the fair value of an instrument are observable. Specific valuation techniques used to value financial instruments include:

- Quoted market prices or dealer quotes for similar instruments are used where available;
- The fair values of interest rate swaps are calculated at the present value of the estimated future cash flow based on observable yield curves; and
- The fair value of forward foreign exchange contracts is determined using forward exchange rates at the balance sheet date, with the resulting value discounted to present value.

Other techniques, such as discounted cash flows analysis, are used to determine the fair value of the remaining financial instruments.

Level 3:

When fair value is calculated with inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs). As of December 31, 2022, there were no financial assets and liabilities carried at fair value classified as Level 3.

(c) Investments in equity instruments – Increase of equity interest in Tinka Resources

In 2021, the Company acquired 9.0% of the issued and outstanding common shares of Tinka Resources Limited ("Tinka"), an exploration and development company which holds 100% of the Ayawilca zinc-silver project in Peru. On May 31, 2022, the Company subscribed to an additional 40,792,541 common shares in a private transaction at a price of CAD 0.22 per share (approximately USD 0.17) for a total consideration of CAD 8,974 thousand (USD 7,000). After this subscription, the Company holds 18.23% of the issued and outstanding common shares of Tinka. Similar to the original acquisitions made in 2021, this transaction has been accounted for as an investment in equity instruments at its acquisition cost and all are being subsequently measured at fair value through other comprehensive income.

15 Cash and cash equivalents

Accounting policy

Cash and cash equivalents include cash, bank deposits, and highly liquid short-term investments (investments with an original maturity less than 90 days), which are readily convertible into a known amount of cash and subject to an immaterial risk of changes in value. Bank overdrafts are shown within Loans and financings in current liabilities in the balance sheet.

(a) Composition

	2022	2021
Cash and banks	330,653	276,761
Term deposits	167,173	467,056
	497,826	743,817

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16 Other financial instruments**Accounting policy**

Derivatives are initially recognized at fair value as at the date on which a derivative contract is entered into and are subsequently measured at fair value. Derivatives are only used for risk mitigation purposes and not as speculative investments. When derivatives do not meet the hedge accounting criteria, they are classified as held for trading and accounted for at fair value through profit or loss.

For derivatives that meet the hedge accounting criteria, the Company documents at the inception of the hedging transaction the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking the hedge transactions. The Company also documents its assessment, both at hedge inception and on an ongoing basis, whether the derivatives that are used in hedging transactions and accounted for as hedge accounting were, and will continue to be, highly effective in offsetting changes in the fair value or cash flow of hedged items.

(i) Derivative financial instruments designated as cash flow hedge

Derivatives that are designated for hedge accounting recognition are qualified as cash flow hedges when they are related to a highly probable forecasted transaction. The effective portion of the changes in fair value is recognized in shareholders' equity in Accumulated other comprehensive income and is subsequently reclassified to the income statement in the same period when the hedged expected cash flows affects the income statement.

The reclassification adjustment is recognized in the same income statement line item affected by the highly probable forecasted transaction, while gains or losses related to the non-effective portion are immediately recognized as Other income and expenses, net.

When a hedging instrument expires, is sold or no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in shareholders' equity at that time remains in shareholders' equity and is recognized when the forecast transaction is ultimately recognized in the income statement. When a forecasted transaction is no longer expected to occur, the cumulative gain or loss that was previously accounted in shareholders' equity is immediately transferred to the income statement within Other income and expenses, net.

Currently, the Company classifies as cash flow hedge only some strategies related to mismatches of quotational periods.

(ii) Derivative financial instruments designated as fair value hedge

Derivatives that are designated for hedge accounting recognition are qualified as fair value hedges when they are related to assets or liabilities already recognized in the consolidated balance sheet. Changes in the fair values of derivatives that are designated and qualify as fair value hedges and changes in the fair value of the hedged item are recorded in the income statement in the same period.

Currently, the Company does not have any derivatives designated as fair value hedge.

(iii) Derivatives financial instruments not designated as hedge accounting

Changes in the fair value of derivative financial instruments not designated as hedge accounting are recognized in the income statement in the line affected by the related transaction.

Currently, the Company does not designate as hedge accounting some strategies related to mismatches of quotational periods, to sales of zinc at a fixed price, and to interest rate risk.

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(iv) Offtake agreement

On January 25, 2022, the Company signed an offtake agreement with an international offtaker (the "Offtaker") a subsidiary of a BBB rated company, in which it agreed to sell 100% of the copper concentrate to be produced by Aripuanã for a 5-year period starting in February 2023 up to a total of 30,810 tons, at the lower of current spot market prices or a price cap.

The offtake agreement resulted from negotiations with the Offtaker to sell the copper concentrate in lieu of paying future royalties related to the previous acquisition of the Aripuanã project mining rights from the Offtaker. The amount of USD 46,100, representing the fair value of the agreement at its inception date, was recognized as an intangible asset and will be amortized over the life of the mine according to the Units of Production ("UoP") method.

Additionally, the Company opted to voluntarily and irrevocably designate the entire offtake agreement at fair value through profit and loss within the scope of IFRS 9, rather than separate the value of the embedded derivative associated with the price cap, recognizing a non-cash accumulated gain of USD 24,267 in the income statement for period ended on December 31, 2022. Refer to note 22 for additional information about the offtake agreement accounting treatment.

(a) Composition

	2022	2021
Derivatives financial instruments		
Current assets	7,380	16,292
Non-current assets	63	102
Current liabilities	(9,711)	(22,684)
Non-current liabilities	(307)	(241)
Derivatives financial instruments, net	(2,575)	(6,531)
Offtake agreement measured at FVTPL		
Current liabilities	(1,724)	-
Non-current liabilities	(20,109)	-
Offtake agreement measured at FVTPL, net	(21,833)	-

(b) Derivative financial instruments: Fair value by strategy

			2022		2021
Strategy	Per Unit	Notional	Fair value	Notional	Fair value
Mismatches of quotational periods					
Zinc forward	ton	209,319	(2,357)	215,809	(9,898)
			(2,357)		(9,898)
Sales of zinc at a fixed price					
Zinc forward	ton	8,297	74	8,787	3,433
			74		3,433
Interest rate risk					
IPCA vs. CDI	BRL	226,880	(292)	226,880	(66)
			(292)		(66)
			(2,575)		(6,531)

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(c) Derivative financial instruments: Changes in fair value – At the end of each period

Strategy	Inventory	Cost of sales	Net revenues	Other income and expenses, net	Net financial results	Other comprehensive income	Realized (loss) gain
Mismatches of quotational periods	(1,014)	19,394	(2,868)	743	-	(1,329)	7,385
Sales of zinc at a fixed price	-	-	(2,859)	620	-	-	1,120
Interest rate risk – IPCA vs. CDI	-	-	-	-	(83)	-	143
2022	(1,014)	19,394	(5,727)	1,363	(83)	(1,329)	8,648
2021	1,146	(37,963)	9,709	7,486	(5,640)	488	(13,137)

(d) Offtake agreement measured at FVTPL: Changes in fair value

	2022	2021
Inception date	46,100	-
Changes in fair value	(24,267)	-
Balance at the end of year	21,833	-
Notional (ton)	30,810	-

17 Trade accounts receivables

Accounting policy

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

Trade accounts receivables are recognized initially at fair value and subsequently measured at:

(i) Fair value through profit or loss when are related to the Company's accounts receivables portfolio outstanding at the balance sheet date that is designated at inception to be included in a forfaiting program whereby the Company, at its discretion, can discount certain outstanding trade accounts receivables and receive payments in advance. The program is used to meet short-term liquidity needs. Trade accounts receivables within this program are derecognized since all risks and rewards, control of the assets and contractual rights to receive the assets cash flows are transferred to the counterparty.

(ii) Fair value through profit or loss when are related to sales that are subsequently adjusted to changes in LME prices, which is recorded on net revenues. These accounts receivable do not meet the SPPI criteria because there is a component of commodity price risk that modifies the cash flows that otherwise would be required by the sales contract.

(iii) Amortized cost using the effective interest rate method, less impairment, when the receivables do not meet the aforementioned classifications.

Credit risk can arise from non-performance by counterparties of their contractual obligations to the Company. To ensure an effective credit risk evaluation, management applies procedures related to the application for credit granting and approvals, renewal of credit limits, continuous monitoring of credit exposure in relation to established limits and events that trigger requirements for secured payment terms. As part of the Company's process, the credit exposures with all counterparties are regularly monitored and assessed.

The Company applies the IFRS 9 simplified approach to measure the impairment losses for trade accounts receivables. This approach requires the use of the lifetime expected credit losses on its trade accounts receivables measured at amortized cost. To calculate the lifetime expected credit losses the Company uses a provision matrix and forward-looking information. The additions to impairment of trade

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accounts receivables are included in selling expenses. Trade accounts receivables are generally written off when there is no expectation of recovering additional cash.

(a) Composition

	2022	2021
Trade accounts receivables	227,265	233,623
Related parties - note 20	801	1,016
Impairment of trade accounts receivables	(4,326)	(3,465)
	223,740	231,174

(b) Changes in impairment of trade accounts receivables

	2022	2021
Balance at the beginning of the year	(3,465)	(3,179)
Additions	(1,793)	(1,586)
Reversals	1,005	1,206
Foreign exchange (losses) gains	(73)	94
Balance at the end of the year	(4,326)	(3,465)

(c) Analysis by currency

	2022	2021
USD	204,608	196,316
BRL	18,740	34,464
Other	392	394
	223,740	231,174

(d) Aging of trade accounts receivables

	2022	2021
Current	212,814	222,083
Up to 3 months past due	10,495	9,201
From 3 to 6 months past due	2,181	51
Over 6 months past due	2,576	3,304
	228,066	234,639
Impairment of trade accounts receivable	(4,326)	(3,465)
	223,740	231,174

18 Inventory

Accounting policy

Inventory is stated at the lower of cost and net realizable value. Cost is determined using the weighted average cost method. The cost of finished goods and work in progress comprises raw materials, direct labor, other direct costs and related fixed production overheads (based on normal operating capacity). Variable production overhead costs are included in inventory costs based on the actual production level. Imports in transit are stated at the accumulated cost of each import. At the end of the reporting period, the net realizable value of inventories is assessed and a provision for non-realizable, losses on obsolete or slow-moving inventory may be recognized.

The provision for net realizable value is estimated considering the current selling price in the ordinary course of business, less any additional selling expenses. The write-downs and reversals are recognized within Cost of sales.

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A provision for obsolete inventory, finished products, semi-finished products, raw materials and auxiliary materials is recognized when items cannot be used in normal production or sold because they are damaged or do not meet the Company's specification and is recognized as Other income and expenses.

Slow-moving provision is recognized for inventory items that are in excess of the expected normal use or sale. The amount of slow-moving provision recognized is determined based on 20% of the carrying amount for each six-month period without use or sale and is recognized as Other income and expenses.

(a) Composition

	2022	2021
Finished products	142,935	157,285
Semi-finished products (i)	163,805	60,315
Raw materials	68,497	90,087
Auxiliary materials and consumables	115,562	94,564
Inventory provisions	(95,602)	(29,749)
	395,197	372,502

(i) Semi-finished products in December 2022 include the stockpile produced during Aripuanã's commissioning phase in the total amount of USD 40,303. In 2021, the amount of USD 23,009 of the ore stockpile that was included in raw material was reclassified as a semi-finished products.

(b) Changes in the provision of the year

	2022	2021
Balance at the beginning of the year	(29,749)	(29,074)
Additions (i)	(69,761)	(15,094)
Reversals	4,634	13,986
Exchange variation (losses) gains	(726)	433
Balance at the end of the year	(95,602)	(29,749)

(i) The main amount is related to the provision of Aripuanã's inventory to its net realizable value for both its ore stockpile and its produced concentrates in the total amount of USD 52,215 (including depreciation of USD 16,377) as of December 31, 2022.

19 Other assets

	2022	2021
Other recoverable taxes	139,168	128,377
Advances to third parties	7,057	8,545
Prepaid expenses	9,858	10,361
Judicial deposits	16,753	5,446
Works-for-taxes program	7,902	5,338
Other assets	29,222	21,636
	209,960	179,703
Current assets	75,486	81,119
Non-current assets	134,474	98,584

Nexa Resources S.A.

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20 Related parties

(a) Balances

	Trade accounts receivables		Related parties' assets		Trade payables		Dividends payable		Related parties' liabilities	
Assets and liabilities	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Parent										
Votorantim S.A.	-	-	2	2	765	1,102	-	-	-	-
Related parties										
Andrade Gutierrez Engenharia S.A.	-	-	-	-	3,353	1,890	-	-	-	-
Auren Comercializadora de Energia Ltda.	1	302	-	-	976	945	-	-	-	-
Campos Novos Energia S.A.	-	-	-	-	9,652	-	-	-	-	-
Companhia Brasileira de Alumínio	187	158	-	-	263	264	-	-	-	-
Votorantim Cimentos S.A.	607	551	-	-	163	64	-	-	-	-
Votorantim International CSC S.A.C	-	-	-	-	1	306	-	-	487	152
Other	6	5	-	-	164	240	7,922	11,441	546	241
	801	1,016	2	2	15,337	4,811	7,922	11,441	1,033	393
Current	801	1,016	-	-	15,337	4,811	7,922	11,441	-	-
Non-current	-	-	2	2	-	-	-	-	1,033	393
	801	1,016	2	2	15,337	4,811	7,922	11,441	1,033	393

Nexa Resources S.A.

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(b) Transactions

	Sales			Purchases		
Profit and loss	2022	2021	2020	2022	2021	2020
Parent						
Votorantim S.A.	-	-	-	4,704	3,735	4,378
Related parties						
Andrade Gutierrez Engenharia S.A. (ii)	-	-	-	38,907	41,498	26,280
Auren Comercializadora de Energia Ltda.	744	5,993	9,740	4,974	16,207	7,721
Campos Novos Energia S.A.	-	-	-	4,954	-	-
Companhia Brasileira de Alumínio	9,708	8,988	7,828	8,891	3,736	1,156
Votorantim Cimentos S.A.	-	-	-	3,078	661	524
Votorantim International CSC S.A.C	-	-	-	12,480	4,278	6,638
Other	-	113	11	1,157	1,120	582
	10,452	15,094	17,579	79,145	71,235	47,279

(i) As part of the execution of the Aripuanã project, in June 2019 the Company entered into a mining development services agreement with Andrade Gutierrez Engenharia S.A., in which one of the Company director's close family member may have significant influence at its holding level. Additionally, in June 2020, NEXA entered into one additional agreement with Consórcio Construtor Nova Aripuanã (a consortium of the Andrade Gutierrez group of companies) in connection with construction services for the Aripuanã project.

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(c) Key management compensation

Key management includes the members of the Company's global executive team and Board of Directors. Key management compensation, including all benefits, was as follows:

	2022	2021
Short-term benefits	7,371	6,602
Other long-term benefits	158	664
	7,529	7,266

Short-term benefits include fixed compensation, payroll charges and short-term benefits under the Company's variable compensation program. Other long-term benefits relate to the variable compensation program.

21 Property, plant and equipment

Accounting policy

Property, plant and equipment are stated at their historical cost of acquisition or construction less accumulated depreciation and any recognized impairment losses. Historical cost includes expenditures that are directly attributable to the acquisition and construction of the assets. The mining projects development costs that are registered within Property, plant and equipment include (i) direct and indirect costs attributed to building the mining facilities; (ii) financial charges incurred during the construction period; (iii) depreciation of other fixed assets used during construction; and (iv) estimated decommissioning and site restoration expenses.

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 flow to the Company and they can be measured reliably. The carrying amount of any component accounted for as a separate asset is derecognized when replaced. All other repairs and maintenance are charged to the income statement during the reporting period in which they are incurred.

Replacement costs are included in the carrying amount of the asset when it is probable that the Company will realize future economic benefits in excess of the benefits expected from the asset in its current condition. Replacement costs are depreciated over the remaining useful life of the related asset.

Land is not depreciated. Depreciation of other assets is calculated using the straight-line method to reduce their costs to their residual values over their estimated useful lives.

The assets' residual values and useful lives are reviewed annually and adjusted if appropriate.

An asset's carrying amount is reduced to its recoverable amount when it is greater than the estimated recoverable amount, in accordance with the criteria adopted by the Company to determine the recoverable amount.

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

Loans and financings costs directly related to the acquisition, construction or production of a qualifying asset that requires a substantial period of time to prepare for its intended use or sale are capitalized as part of the cost of that asset when it is probable that future economic benefits associated with the item will flow to the Company and costs can be measured reliably.

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Stripping costs

In its surface mining operations, the Company must remove overburden and other waste to gain access to mineral ore deposits. The removal process is referred to as stripping. During the development of a mine, before production commences, when the stripping activity improves access to the ore body, the component of the ore body for which access has been improved can be identified and the costs can be measured reliably, a stripping activity asset is capitalized as part of the investment in the construction of the mine and is accounted for as part of Property, plant and equipment within Assets and projects under construction. Subsequently, when the operation starts, the stripping costs are transferred to Buildings and are depreciated by a linear calculation considering the asset's useful life.

Stripping costs incurred during the production phase of operations are treated as production costs and are part of the inventory cost.

Mining Projects

The Company starts to capitalize a project's mineral exploration and evaluation costs at the beginning of its feasibility study phase, following completion of a pre-feasibility study in which probability of economic feasibility has been established and where there is sufficient geologic and economic certainty of converting mineral resources into proven and probable mineral reserves at a development stage (construction or execution phase) or production stage based on various factors including the known geology, metallurgy and life-of-mine ("LOM") plans.

Capitalized costs incurred during a project's mineral exploration and evaluation stages are classified within Mining projects, under Property, plant and equipment until the project starts its development stage and are only depreciated by the UoP method once the development stage finishes and the project's operation starts.

Costs incurred during a project's development stage are also capitalized under Property, plant, and equipment but within Assets and projects under construction. In this way, the capitalized mineral exploration and evaluation costs will remain within Mining projects and will only be depreciated once the development stage finishes and the project's operation starts.

Once the development stage is finished and the project's operation starts, the capitalized development costs are reclassified to the appropriate group of assets considering their nature and are depreciated on a linear calculation based on the assets' useful life.

Based on the above, once a project begins operation, there will be depreciation coming from the project's capitalized mineral exploration and evaluation costs within the Mining projects account and based on the UoP method and from the project's capitalized development costs within the corresponding group of assets based on their useful life.

The carrying value of the capitalized mineral exploration and evaluation costs, which remain within Mining projects, and the capitalized development costs, which are within Assets and projects under construction, of the projects are assessed for impairment at least annually or whenever evidence indicates that the assets may be impaired in accordance with IFRS 6 and IAS 36. If the Company decides at any moment to discontinue the project, this could be an impairment indicator that will be assessed under the impairment test. For purposes of this impairment assessment, the projects are allocated to cash generating units ("CGUs") when applicable. The annual impairment test is disclosed in note 31.

Notes to the consolidated financial statements

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Refer to note 8 for the Company's accounting policy related to expensed mineral exploration and project evaluation costs for mining projects.

Costs to acquire exploration legal mining rights are included as Intangible within Rights to use natural resources as explained in note 22.

Asset retirement obligations

An asset retirement obligation is an obligation related to the permanent removal from service of a tangible long-lived asset that results from the acquisition, construction or development, or the normal operations of a tangible long-lived asset. At the initial recognition of an asset retirement obligation and at the periodical revisions of the expected disbursements and the discount rate, the changes in the liability are charged to Property, plant and equipment.

The capitalized amount recognized in Property, plant and equipment is depreciated based on the UoP method. Any reduction in the provision that exceeds the carrying amount of the asset, is immediately recognized in the income statement as Other income and expenses, net.

Impairment

Refer to note 31 for the Company's accounting policy related to impairment of Property, plant and equipment.

Nexa Resources S.A.

Notes to the consolidated financial statements

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All amounts in thousands of US Dollars, unless otherwise stated

(a) Changes in the year

							2022
	Dam and buildings	Machinery, equipment, and facilities	Assets and projects under construction	Asset retirement obligations	Mining projects (iii)	Other	Total
Balance at the beginning of the year							
Cost	1,054,413	2,330,748	874,776	202,242	181,528	35,266	4,678,973
Accumulated depreciation and impairment	(615,428)	(1,763,377)	(62,681)	(118,439)	(16,291)	(15,027)	(2,591,243)
Balance at the beginning of the year	438,985	567,371	812,095	83,803	165,237	20,239	2,087,730
Additions (ii)	4	706	381,223	22,252	479	56	404,720
Disposals and write-offs	(568)	(369)	(430)	-	-	(82)	(1,449)
Depreciation	(82,293)	(109,009)	-	(5,169)	(2,120)	(1,302)	(199,893)
Impairment (loss) reversal of long-lived assets - note 31	19,802	7,513	(6,168)	-	(39,910)	-	(18,763)
Derecognition of Nexa's share of Enercan's property, plant and equipment - note 4 (ii)	(19,688)	(8,711)	(634)	-	-	(183)	(29,216)
Foreign exchange effects	18,577	23,855	37,280	3,686	1,215	839	85,452
Transfers (v) - note 22	466,513	284,635	(767,561)	-	3,524	8,608	(4,281)
Remeasurement of asset retirement obligations	-	-	-	(29,025)	-	-	(29,025)
Balance at the end of the year	841,332	765,991	455,805	75,547	128,425	28,175	2,295,275
Cost	1,512,360	2,636,582	521,191	200,665	221,077	44,094	5,135,969
Accumulated depreciation and impairment	(671,028)	(1,870,591)	(65,386)	(125,118)	(92,652)	(15,919)	(2,840,694)
Balance at the end of the year	841,332	765,991	455,805	75,547	128,425	28,175	2,295,275
Average annual depreciation rates %	4	8	-	UoP	UoP		

Nexa Resources S.A.

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All amounts in thousands of US Dollars, unless otherwise stated

							2021
	Dam and buildings	Machinery, equipment, and facilities	Assets and projects under construction	Asset retirement obligation	Mining projects (iii)	Other	Total
Balance at the beginning of the year							
Cost	1,022,432	2,360,426	596,675	211,650	292,322	36,816	4,520,321
Accumulated depreciation and impairment	(567,829)	(1,734,232)	(69,143)	(124,838)	(108,698)	(17,285)	(2,622,025)
Net balance at the beginning of the year	454,603	626,194	527,532	86,812	183,624	19,531	1,898,296
Reclassification (i)	-	-	-	-	(31,851)	-	(31,851)
Net balance at the beginning of the year - adjusted	454,603	626,194	527,532	86,812	151,773	19,531	1,866,445
Additions (ii)	12	671	507,907	42,739	-	1,576	552,905
Disposals and write-offs	(567)	(7,663)	(454)	-	-	(1,751)	(10,435)
Depreciation	(56,493)	(110,895)	-	(6,436)	(2,062)	(1,143)	(177,029)
Foreign exchange effects	(15,963)	(23,188)	(40,278)	(2,452)	(1,027)	(631)	(83,539)
Transfers (iv)	57,393	82,252	(182,612)	-	16,553	2,657	(23,757)
Remeasurement of asset retirement obligations	-	-	-	(36,860)	-	-	(36,860)
Balance at the end of the year	438,985	567,371	812,095	83,803	165,237	20,239	2,087,730
Cost	1,054,413	2,330,748	874,776	202,242	181,528	35,266	4,678,973
Accumulated depreciation and impairment	(615,428)	(1,763,377)	(62,681)	(118,439)	(16,291)	(15,027)	(2,591,243)
Balance at the end of the year	438,985	567,371	812,095	83,803	165,237	20,239	2,087,730
Average annual depreciation rates %	4	7	-	UoP	UoP		

(i) Reclassification of USD 31,851 from Mining projects to Intangible assets (Rights to use natural resources), as explained in note 22 (a).

(ii) Additions include capitalized borrowing costs on Assets and projects under construction in the amount of USD 15,946 for the year ended on December 31, 2022 (December 31, 2021: USD 19,614).

(iii) Only the amounts related to the operating unit Atacocha are being depreciated under the UoP method.

(iv) Amount includes: (i) in 2021 a transfer from Assets and projects under construction to Inventories (raw materials) of USD 23,009 related to the ore pile costs that were incurred during Aripuanã's commissioning phase and which should already be included in the Company's inventory; and (ii) USD 748 thousand related to other intangibles.

(v) Mainly related to the transfers from Assets and projects under construction to the corresponding group of assets, given the ramp-up process in Aripuanã's mining unit as explained in note 1.

Notes to the consolidated financial statements**At and for the year ended on December 31, 2022****All amounts in thousands of US Dollars, unless otherwise stated****22 Intangible assets****Accounting policy****Goodwill**

Goodwill arising from business combinations is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net assets acquired. Goodwill is not amortized but is tested for impairment annually and whenever circumstances indicate that the carrying amount may not be recovered. Refer to note 31 for the Company's impairment accounting policy and critical estimates and assumptions and judgments.

Rights to use natural resources

The significant costs incurred for the acquisition of legal rights to explore mining concessions and develop mineral properties are capitalized and are amortized as production costs when the associated projects start their commercial operation using the UoP method over their useful lives. Useful lives consider the period of extraction for both mineral reserves and mineral resources, which includes a portion of the Company's inferred resources in the Company's mining operations. The costs for the acquisition of legal rights attributed to mining projects are not depreciated until the project becomes operational and production activities start.

The costs incurred are impaired if the Company determines that the projects and their mineral rights associated have no future economic value. For purposes of impairment assessment, rights to use natural resources are allocated to CGUs. Refer to note 31 for the Company's impairment accounting policy.

Critical accounting estimates, assumptions and judgments - Quantification of mineral reserves and resources for useful life calculation

The Company classifies proven and probable reserves, and measured, indicated and inferred resources based on the definitions of the United States Securities and Exchange Commission's (SEC) Modernized Property Disclosure Requirements for Mining Registrants as described in Subpart 229.1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations (S-K 1300) and Item 601 (b)(96) Technical Report Summary.

The useful life determination applied to the rights to use natural resources reflect the pattern in which the benefits are expected to be derived by the Company and is based on the estimated life of mine ("LOM"). Any changes to the LOM, based on new information regarding estimates of mineral reserves and mineral resources and mining plan, may affect prospectively the LOM and amortization rates.

The estimation process of mineral reserves and mineral resources is based on a technical evaluation, which includes geological, geophysics, engineering, environmental, legal and economic estimates and may have relevant impact on the economic viability of the mineral reserves and mineral resources. These estimates are reviewed periodically, and any changes are reflected in the expected LOM. Management is confident based on testing, continuity of the ore bodies and conversion experience that a part of the inferred resources will be converted into measured and indicated resources, and if they are economically recoverable, and such inferred resources may also be classified as proven and probable mineral reserves. Where the Company can demonstrate the expected economic recovery with a high level of confidence, inferred resources are included in the amortization calculation.

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However, the future conversion of inferred resources is inherently uncertain and involves estimates, assumptions and judgments that could have a material impact on the Company's results of operations.

(a) Changes in the year

	2022			
	Goodwill (iv)	Rights to use natural resources	Other	Total
Balance at the beginning of the year				
Cost	673,570	1,791,643	72,414	2,537,627
Accumulated amortization and impairment	(267,342)	(1,179,373)	(34,141)	(1,480,856)
Balance at the beginning of the year	406,228	612,270	38,273	1,056,771
Additions (ii)	-	57,529	-	57,529
Amortization	-	(76,695)	(5,639)	(82,334)
Impairment (loss) reversal of long-lived assets – note 31	(61,856)	48,107	-	(13,749)
Derecognition of Nexa's share of Enercan's intangible assets - note 4 (ii)	-	-	(9,382)	(9,382)
Foreign exchange effects	195	3,661	(45)	3,811
Transfers – note 21	-	2,546	1,735	4,281
Balance at the end of the year	344,567	647,418	24,942	1,016,927
Cost	611,909	1,855,014	65,246	2,532,169
Accumulated amortization and impairment	(267,342)	(1,207,596)	(40,304)	(1,515,242)
Balance at the end of the year	344,567	647,418	24,942	1,016,927
Average annual depreciation rates %	-	UoP	-	

	2021			
	Goodwill (iv)	Rights to use natural resources	Other	Total
Balance at the beginning of the year				
Cost	673,776	1,665,149	53,463	2,392,388
Accumulated amortization and impairment	(267,342)	(1,016,279)	(32,362)	(1,315,983)
Net balance at the beginning of the year	406,434	648,870	21,101	1,076,405
Reclassification (i)	-	31,851	-	31,851
	406,434	680,721	21,101	1,108,256
Additions (iii)	-	-	21,821	21,821
Disposals	-	-	(9)	(9)
Amortization	-	(67,829)	(3,550)	(71,379)
Foreign exchange effects	(206)	(622)	(1,838)	(2,666)
Transfers – note 21	-	-	748	748
Balance at the beginning of the year	406,228	612,270	38,273	1,056,771
Cost	673,570	1,791,643	72,414	2,537,627
Accumulated amortization and impairment	(267,342)	(1,179,373)	(34,141)	(1,480,856)
Balance at the end of the year	406,228	612,270	38,273	1,056,771
Average annual depreciation rates %	-	UoP	-	

(i) The Company identified USD 31,851 of legal mining rights that were being classified as Mining projects within Property, plant and equipment, instead of as Rights to use natural resources within Intangible assets. Given the nature of this reclassification, which is entirely between Property, plant and equipment and Intangible assets, the Company made an out-of-period adjustment, to account for the correct classification of those legal mining rights as of December 31, 2021.

(ii) The main addition is related to the offtake agreement signed on January 25, 2022 to sell 100% of the copper concentrate to be produced by Aripuanã for a specified period. As explained in note 16, this agreement replaced the obligation of future royalty payments arising from the acquisition of mining rights by the Company for the Aripuanã project. The fair value of this agreement on its

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inception date, in the amount of USD 46,100, was recognized as Rights to use natural resources within Intangible assets and should be amortized during the life of the mine by the UoP method.

(iii) As described in the audited consolidated financial statements for the year ended on December 31, 2021, in 2021, the Brazilian Electric Energy Chamber ("CCEE") finalized the necessary calculations for the extension of the concession period for the energy power plants that were affected by the increased costs related to the Generation Scaling Factor ("GSF"). After evaluating the amounts involved, NEXA agreed to accept the renegotiation agreement with the Brazilian Electricity Regulator Agency ("ANEEL") and to waive any future judicial claim related to the increased GSF costs. This had an impact of USD 19,407 (Picada – 5 years of extended concession period: USD 4,592; Armador Aguiar I – 6 years and 2 months of extended concession period: USD 3,293; Igarapava – 2 years and 7 months of extended concession period: USD 2,565; and Enercan – 3 years and 6 months of extended concession period: USD 8,957). These amounts were recorded as an Intangible asset against recovered energy costs in the income statement within Cost of sales, and will be amortized using the straight-line method until the end of the extended concession period without any direct cash benefit in 2021.

(iv) At December 31, 2022, the balances of the Company's recognized goodwill were: (i) USD 95,484 allocated to the Cajamarquilla CGU; and (ii) USD 249,082 allocated to the Mining Peru group of CGUs. In the third quarter of 2022, the recoverability of goodwill was tested, as explained in note 31.

23 Right-of-use assets and lease liabilities

Accounting policy

Right-of-use assets represent the right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease.

Lease terms are negotiated on an individual asset basis and contractual provisions contain a wide range of different terms and conditions. The lease agreements do not impose any covenants, but leased assets may not be used as security for borrowing purposes.

The Company accounts for non-lease components such as service costs separately, whenever applicable. The Company's lease terms may include options to extend or terminate the lease and when it is reasonably certain that we will exercise that option, the financial effect is included in the contract's measurement.

Measurement

Liabilities arising from a lease contract are initially measured on a present value basis, using the incremental borrowing rate approach. The incremental borrowing rate is determined by the Company based on equivalent financial costs that would be charged by a counterparty for a transaction with the same currency and a similar amount, term and risk of the lease contract. The finance cost charged to the income statement produces a constant periodic rate of interest over the lease term. On December 31, 2022, interest rates were between 5.87% to 11.39% for Brazil; and, 2.85% to 5.93% for Peru.

Lease contracts are recognized as a liability with a corresponding right-of-use asset at the date at which the leased asset is available for use by the Company. The right-of-use asset also includes any lease payments made and it is amortized over the shorter of the asset's useful life and the lease

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term on a straight-line basis. Amortization expenses are classified either in Cost of sales or Administrative expenses based on the designation of the related assets.

(a) Right-of-use assets - Changes in the year

	2022					2021
	Buildings	Machinery, equipment, and facilities	IT equipment	Vehicles	Total	Total
Balance at the beginning of the year						
Cost	5,731	17,560	5,427	21,286	50,004	47,562
Accumulated amortization	(3,844)	(12,757)	(5,427)	(15,286)	(37,314)	(28,693)
Balance at the beginning of the year	1,887	4,803	-	6,000	12,690	18,869
New contracts	1,547	189	282	-	2,018	5,174
Amortization	(1,235)	(2,330)	(84)	(5,061)	(8,710)	(10,303)
Remeasurement	563	(98)	-	(46)	419	(290)
Foreign exchange effects	71	148	-	259	478	(761)
Balance at the end of the year	2,833	2,712	198	1,152	6,895	12,689
Cost	7,300	18,106	282	18,830	44,518	50,003
Accumulated amortization	(4,467)	(15,394)	(84)	(17,678)	(37,623)	(37,314)
Balance at the end of the year	2,833	2,712	198	1,152	6,895	12,689
Average annual amortization rates %	31	34	33	34		

(b) Lease liabilities - Changes in the year

	2022	2021
Balance at the beginning of the year	19,638	25,689
New contracts	2,018	5,174
Payments of lease liabilities	(17,091)	(9,827)
Interest paid on lease liabilities	(994)	(1,415)
Remeasurement	419	(302)
Accrued interest – note 10	542	1,272
Foreign exchange effects	489	(952)
Balance at the end of the year	5,021	19,639
Current liabilities	3,661	16,246
Non-current liabilities	1,360	3,393

24 Loans and financings

Accounting policy

Loans and financings are initially recognized at fair value, net of transaction costs incurred, and are subsequently measured at amortized cost, unless they are designated as fair value option, if necessary to eliminate the accounting mismatch that would arise if amortized cost were used. Any difference between the proceeds (net of transaction costs) and the total amount payable is recognized in the income statement as interest expense over the period of the loans using the effective interest rate method, except for the loans measured at fair value.

Loans and financings are classified as current liabilities unless the Company has the unconditional right to defer repayment of the liability for at least 12 months after the reporting period.

Fees paid on the establishment of loan facilities are recognized as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the drawdown occurs.

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To the extent that there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalized as a prepayment for liquidity services and amortized over the period of the facility to which it relates.

(a) Composition

Type	Average interest rate	Current	Non-current	Total		Fair Value	
				2022	2021	2022	2021
				Total	Total	Total	Total
Eurobonds - USD	Pre-USD 5.84%	18,656	1,191,827	1,210,483	1,338,334	1,162,741	1,440,920
BNDDES	TJLP + 2.82 % SELIC + 3.10 % TLP - IPCA + 5.46 %	26,105	190,211	216,316	215,801	183,452	180,565
Export credit notes	LIBOR + 1.54 % 134.20% CDI SOFR + 2,5%	5,500	227,290	232,790	135,077	227,201	136,389
Debentures	107.5 % CDI	-	-	-	4,916	-	4,901
Other		579	9,091	9,670	5,187	7,054	4,192
		50,840	1,618,419	1,669,259	1,699,315	1,580,448	1,766,967

(b) Loans and financing transactions during the year ended on December 31, 2022

On March 18, 2022, the Company entered into an Export Credit Note agreement in the total principal amount of USD 90,000 (equivalent to BRL 459,468 thousand) with maturity in 2027, and an interest rate of 2.5% plus the 6-month TERM SOFR (Secured Overnight Financing Rate).

On March 28, 2022, the Company completed the early redemption and cancellation of all outstanding 4.625% Senior Notes due in 2023. Holders of the 2023 Notes tendered an aggregate principal amount of USD 128,470. In this transaction, the Company also paid an amount of USD 2,971 of accrued interest and USD 3,277 of premium paid over the notes, which was recognized in Net financial results (note 10).

(c) Changes in the year

	2022	2021
Balance at the beginning of the year	1,699,315	2,024,314
New loans and financings	95,621	59,771
Debt issue costs	(63)	(178)
Payments of loans and financings	(24,639)	(251,044)
Bonds repurchase	(128,470)	-
Prepayment of fair value debt	-	(90,512)
Foreign exchange effects	22,695	(21,066)
Changes in fair value of financing liabilities related to changes in the Company's own credit risk	(521)	5,066
Changes in fair value of loans and financings	1,472	(10,784)
Write-off of fair value of loans and financings	-	(8,596)
Interest accrual	110,679	113,456
Interest paid on loans and financings	(109,263)	(121,112)
Amortization of debt issue costs	2,433	-
Balance at the end of the year	1,669,259	1,699,315

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(d) Maturity profile

	2023	2024	2025	2026	2027	As from 2028	2022 Total
Eurobonds – USD (i)	18,656	(2,149)	(2,216)	(2,287)	698,561	499,918	1,210,483
BNDES	26,105	24,773	23,722	21,154	13,454	107,108	216,316
Export credit notes	5,500	88,907	48,382	-	90,000	1	232,790
Other	579	97	1,285	1,285	1,285	5,139	9,670
	50,840	111,628	71,173	20,152	803,300	612,166	1,669,259

(i) The negative balances refer to related funding costs (fee) amortization.

(e) Analysis by currency

	Current	Non-current	2022 Total	2021 Total
USD	21,861	1,370,764	1,392,625	1,426,962
BRL	28,535	247,655	276,190	270,571
Other	444	-	444	1,782
	50,840	1,618,419	1,669,259	1,699,315

(f) Analysis by index

	Current	Non-current	2022 Total	2021 Total
Fixed rate	19,144	1,191,828	1,210,972	1,340,247
LIBOR	1,474	88,937	90,411	88,677
TLP	14,348	160,924	175,272	170,324
BNDES SELIC	7,943	19,853	27,796	29,680
CDI	2,369	48,353	50,722	51,316
SOFR	1,657	90,000	91,657	-
TJLP	3,830	18,524	22,354	19,071
Other	75	-	75	-
	50,840	1,618,419	1,669,259	1,699,315

(g) Guarantees and covenants

The Company has loans and financings that are subject to certain financial covenants at the consolidated level, such as: (i) leverage ratio; (ii) capitalization ratio; and (iii) debt service coverage ratio. When applicable, these compliance obligations are standardized for all debt agreements. No changes to the contractual guarantees occurred in the period ended on December 31, 2022.

As of December 31, 2022, the Company was in compliance with all its financial covenants, as well as the Company was compliant with other qualitative covenants.

25 Trade Payables

Accounting policy

Trade payables represent liabilities for goods and services that were provided to the Company before the end of the financial year which are unpaid. Trade and other payables are presented as current liabilities unless payment is not due within 12 months after the reporting period. These amounts are recognized initially at their fair value and subsequently measured at amortized cost using the effective interest method.

(a) Composition

	2022	2021
Trade payables	398,519	407,007
Related parties - note 20	15,337	4,811
	413,856	411,818

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26 Confirming Payables

Accounting policy

The Company has contracts with some suppliers in which the commercial payment term is 180 days. In these contracts, the suppliers have the option to request a bank to advance the payment of their commercial invoice within 180 days, before the invoice matures. As a result of those contracts between the suppliers and the bank, the commercial terms agreed with the Company do not change. In accordance with the commercial agreement, the supplier communicates to the Company its interest in selling the invoice to the bank, and it is only the supplier who can decide to sell its invoice at any time during the commercial period. With this option, suppliers can improve their working capital position. The bank pays the supplier with an interest discount and the Company assumes part of the interest payment to the supplier.

Applying the concepts of IFRS 9, this transaction maintains its essence as a trade account payable since the Group has not derecognized the original liabilities to which the agreement applies because neither a legal release was obtained, nor the original liability was substantially modified in the execution of the agreement. The Company understands that the 180-day period can be considered common for the sector, as it is a specific product and the 90% of the outstanding balance of the concentrate belongs to these suppliers. The Company, however, understands that the separate presentation of these accounts within Confirming payables is relevant to the understanding of the entity's financial position.

Payments of the principal amounts and interest reimbursements are presented within the operating activities group in the Company's cash flow statement, in accordance with IAS 7.

The total amount of interests paid in the reverse factoring program in 2022 was of USD 932 (December 31, 2021: USD 1,290).

As of December 31, 2022, accounts payable of USD 216,392 were included in these contracts (December 31, 2021: USD 232,860; December 31, 2020: USD 145,295).

27 Asset retirement and environmental obligations

Accounting policy

Provision for asset retirement obligations include costs to restoration and closure of the mining assets and is recognized due to the development or mineral production, based on the net present value of estimated closure costs. Management uses its judgment and previous experience to determine the potential scope of rehabilitation work required and the related costs associated with that work, which are recognized as a Property, plant and equipment for asset retirement obligations relating to operating mining assets or as Other income and expenses, net for non-operating structures.

Environmental obligations include costs related to rehabilitation of areas damaged by the Company in its extractive actions (for example - soil contamination, water contamination, among others) or penalties. Therefore, it becomes an event that creates obligations when these environmental damages are detected by the Company, when a new law requires that the existing damage be rectified or when the Company publicly accepts any responsibility for the rectification, creating a constructive obligation. The costs to remedy an eventual unexpected contamination, which give rise

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to a probable loss and can be reliably estimated, must be recognized in Other income and expenses, net in income statement.

In addition, investments in infrastructure, machinery and equipment regarding operational improvements to avoid future environmental damage, are not provisioned, because it is expected that these assets will bring future economic benefits to the operating units, thus it is capitalized as Property, plant and equipment.

The cash flows are discounted to present value using a credit risk-adjusted rate that reflects current market assessments of the time value of the money and the specific risks for the asset to be restored. The interest rate charges relating to the liability are recognized as an accretion expense in the Net financial results. Difference in the settlement amount of the liability is recognized in the income statement.

Critical accounting estimates, assumptions and judgments

The initial recognition and the subsequent revisions of the asset retirement obligations and environmental obligations consider critical future closure and repairing costs and several assumptions such as interest rates, inflation, useful lives of the assets and the estimated moment that the expenditure will be executed. These estimates are reviewed annually by the Company or when there is a relevant change in these assumptions.

Cost estimates can vary in response to many factors of each site that include timing, expected LOM, changes to the relevant legal or government requirements and commitments with stakeholders, review of remediation and relinquishment options, emergence of new restoration techniques, among others.

External experts support the cost estimation process where appropriate. These factors either isolated or consolidated could significantly affect the future financial results and balance sheet position.

(a) Changes in the year

			2022	2021
	Asset retirement obligations	Environmental obligations	Total	Total
Balance at the beginning of the year	221,710	42,441	264,151	276,046
Additions (ii)	26,116	8,920	35,036	51,893
Payments	(14,879)	(10,514)	(25,393)	(26,255)
Foreign exchange effects	6,034	3,126	9,160	(7,851)
Interest accrual	20,014	3,648	23,662	9,667
Remeasurement - discount rate (i) / (ii)	(39,072)	(1,225)	(40,297)	(39,350)
Balance at the end of the year	219,923	46,396	266,319	264,150
Current liabilities	18,658	4,988	23,646	31,953
Non-current liabilities	201,265	41,408	242,673	232,197

(i) As of December 31, 2022, the credit risk-adjusted rate used for Peru was between 10.92% and 12.04% (December 31, 2021: 3.54% and 7.28%) and for Brazil was between 8.22% and 8.61% (December 31, 2021: 7.68% and 8.67%).

(ii) The change in the period ended on December 31, 2022, was mainly due to the time change in the expected disbursements on decommissioning obligations in certain operations, in accordance with updates in their asset retirement and environmental obligations studies, and by the increase in the discount rates, as described above. In this way, asset retirement obligations for operational assets, decreased in an amount of USD 6,773 (December 31, 2021: increase of USD 5,879) as shown in note 21; and asset retirement and environmental obligations for non-operational assets expense in USD 1,512 (December 31, 2021: expense of USD 6,664) as shown in note 9.

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28 Provisions

Accounting policy

Provisions for legal claims and judicial deposits

Provisions for legal claims are recognized when there is a combination of the following conditions: (i) the Company has a present legal or constructive obligation as a result of past events; (ii) it is probable (more likely than not) that an outflow of resources will be required to settle the obligation; and (iii) the amount can be reliably estimated. The provisions are periodically estimated, and the likelihood of losses is supported by the Company's legal counsel.

Provisions are measured at the present value of the expenditure expected to be required to settle the obligation using a discount rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to the passage of time is recognized as Financial expenses.

When a claim is secured by a judicial deposit, the Company offsets the provision with the judicial deposit amount in the consolidated balance sheet. However, the Company also has judicial deposits for claims for which the likelihood of loss is possible or remote and for which no provision is recognized. In such cases, these amounts are recognized as outstanding judicial deposits in the Company's assets.

Critical accounting estimates and assumptions – Provisions for legal claims

The Company is part of ongoing tax, labor, civil and environmental lawsuits which are pending at different court levels. The provisions for potentially unfavorable outcomes of litigation in progress are established and updated based on management evaluation and require a high level of judgment regarding the matters involved, supported by the positions of external legal advisors. Income tax claims are discussed at the current and deferred income tax section (note 11).

(a) Changes in the year

	2022				2021
	Tax	Labor	Civil	Environmental	Total
Balance at the beginning of the year	4,535	18,674	703	12,916	36,828
Additions (i)	4,282	5,016	724	3,126	13,148
Derecognition of Nexa's share of Enercan's provisions – note 4 (ii)	(311)	-	-	-	(311)
Reversals	(722)	(3,288)	(409)	(1,065)	(5,484)
Interest accrual	547	1,494	(383)	96	1,754
Payments	(802)	(1,936)	(1,180)	(666)	(4,584)
Foreign exchange effects	398	1,117	89	662	2,266
Other	232	(557)	700	(95)	280
Balance at the end of the year	8,159	20,520	244	14,974	43,897

(i) Brazilian Court of Justice ruled against the appeal filed by the Company related with a proceeding in which the tax authorities of the State of Minas Gerais charge VAT applied to interstate sales for manufactured goods with imported content. This decision resulted in a new assessment of the likelihood of this proceeding by the Company in 2022, changing from possible to probable, and according with this change in the evaluation a provision in the amount of USD 3,583 was registered. Currently the proceeding awaits decision by Brazilian Supreme Federal Court and Superior Court of Justice.

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(b) Breakdown of legal claims provisions

The provisions and the corresponding judicial deposits are as follows:

			2022			2021
	Judicial deposits	Provisions	Carrying amount	Judicial deposits	Provisions	Carrying amount
Tax	(1,200)	9,359	8,159	(1,528)	6,062	4,534
Labor	(3,399)	23,919	20,520	(2,752)	21,431	18,679
Civil	-	244	244	(751)	1,451	700
Environmental	-	14,974	14,974	-	12,915	12,915
Balance at the end of the year	(4,599)	48,496	43,897	(5,031)	41,859	36,828

The outstanding judicial deposits of the Company as of December 31, 2022 that are not presented net of the provisions are USD 16,753 (December 31, 2021: USD 5,446).

(c) Contingent liabilities

Legal claims that have a possible likelihood that an obligation will arise are disclosed in the Company's financial statements. The Company does not recognize a liability because it is not probable that an outflow of resources will be required or because the amount of the liability cannot be reliably calculated. These legal claims are summarized below:

	2022	2021
Tax (i)	134,637	156,779
Labor (ii)	41,454	36,215
Civil (iii)	16,946	14,618
Environmental (iv)	112,541	97,027
	305,578	304,639

(i) Comments on contingent tax liabilities

The main contingent liabilities relating to tax lawsuits are discussed below.

Income tax over transfers of shares in Peru

Relates to assessments issued by the SUNAT, where the Company was jointly and severally liable for the payment of income tax by a foreign investor, in a supposed capital gain on transfer of shares. The estimated financial effect of this contingent liability is USD 60,784.

Compensation for exploration for mineral resources

Relates to assessments issued by the Brazilian National Department of Mineral Production for the alleged failure to pay or underpayment of financial compensation for the exploration of mineral resources ("CFEM"). The estimated financial effect of this contingent liability is USD 11,219.

Indirect taxes on sales

Relates to assessments issued by the Brazilian Internal Revenues Service concerning certain credits taken by the Company when calculating those indirect taxes on sales. The estimated financial effect of this contingent liability is USD 3,802.

Value-added tax on sales

Relates to assessments issued by the tax authorities of the State of Minas Gerais concerning the following:

- Incidence of value-added tax on sales of certain energy contracts. The estimated financial effect of this contingent liability is USD 20,439.

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- The Company was challenged by the tax authorities regarding certain credits to the purchases of property, plant and equipment. The estimated financial effect of this contingent liability is USD 7,046.

(ii) Comments on contingent labor liabilities

Include several claims filed by former employees, third parties and labor unions and labor public attorney's office mostly claiming the payment of indemnities related to dismissals, such as overtime, work at night hours, commuting hours, health hazard premiums and hazardous duty premiums, as well as indemnity claims by former employees and third parties based on alleged occupational illnesses, work accidents and payment of social benefits. The individual amount of the claims are not material.

(iii) Comments on contingent civil liabilities

The main contingent civil liability is related to indemnity lawsuits against the Company alleging property, contractual and general damages/losses. The estimated financial effect of this contingent liability is USD 16,374.

(iv) Comments on contingent environmental liabilities

The main contingent environmental liabilities in Brazil were filed by fishermen communities against the Company for indemnification, compensation for material and moral damages due to alleged pollution of the São Francisco River close to the Company's Três Marias operation in Brazil. The estimated financial effect of these contingent liabilities is USD 76,386.

29 Contractual obligations**Accounting policy**

Contractual obligations consist of advance payments received by the Company under a silver streaming agreement, signed with a counterparty (the "Streamer") and by which referential silver contents found in the ore concentrates produced by the Company's Cerro Lindo mining unit are sold to the Streamer.

Determining the accounting treatment of silver streaming transactions requires the exercise of high degree of judgment.

The Company assesses whether those advances obtained under this agreement should be recognized as contractual obligations (a sale of a non-financial item) or as a financial liability. For that purpose, the Company takes into consideration factors such as which party is exposed to the operational risk, the risk of access to the resources, the price risk, and assesses whether the transaction involves a sale of an own use asset for the counterparty. In those cases, in which the Company concludes that, in essence, the Streamer shares substantially the operational risks, the resource access and price risks, it delivers a non-financial item that qualifies as an "own use" item; any advance payment obtained is recognized as a contractual obligation in the framework of IFRS 15: Revenue from contracts with customers. Otherwise, the Company would recognize a financial liability in the framework of the provisions of IFRS 9: Financial instruments.

When a contractual obligation is recognized, the balance is initially recognized at the amount received, and it is subsequently recognized as revenue when the control of the respective assets is transferred, that is, upon the physical delivery of the nonfinancial item (silver certificate). Contractual

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obligations are recognized within non-current liabilities, except for the portion of silver certificates that are estimated to be delivered over the 12 months following the balance sheet date.

The advance payment obtained under the silver streaming transaction entered by the Company in 2016 is recognized as contractual obligation to the extent that the risk assessment conducted by the management indicates the relevant risks are substantially shared with the Streamer and the qualifying conditions of a sale of an "own use" item are met.

Determination of the transaction price

The transaction price is the amount of consideration to which the Company expects to be entitled in return for transferring the promised goods to its counterparty. The transaction price is allocated to each performance obligation based on the relative standalone selling prices. In the silver streaming transaction, the Company has variable considerations related to the production capacity of the mine linked to its LOM and to the LME. IFRS 15 requires that for contracts containing variable considerations, the transaction price be continually updated and re-allocated to the transferred goods. For this purpose, the contractual obligations require an adjustment to the transaction price per unit each time there is a change in the underlying production profile of a mine or the expected metal prices. The change in the transaction price per unit results in a retroactive adjustment to revenues in the period in which the change is made, reflecting the new production profile expected to be delivered under the streaming agreement or the expected metal prices. A corresponding retroactive adjustment is made to accretion expenses, reflecting the impact of the change in the contractual obligation balance.

Critical accounting estimates, assumptions and judgments

The recognition of revenues and of the contractual obligation related to the silver transaction require the use of critical accounting estimates and assumptions including, but not limited to: (i) allocation of revenues on relative prices; (ii) estimate prices for determining the upfront payment; (iii) discount rates used to measure the present value of future inflows and outflows; and (iv) estimates of LOM, reserves and mineral production.

(a) Composition

In 2016, the Company entered a silver streaming arrangement, which consisted of an upfront payment of USD 250,000 for the anticipated sale of a portion of the silver contained in the ore concentrates produced by the Cerro Lindo mining unit. The advance payment was recognized as a Contractual obligation and the corresponding revenues are recognized as the silver is delivered, which is the time that the contractual performance obligations are satisfied.

The changes in the contractual obligation are shown below:

	2022	2021
Balance at the beginning of the year	147,232	166,025
Revenues recognition upon ore delivery	(31,438)	(45,309)
Remeasurement adjustment (i)	10,565	19,580
Accretion for the year – note 10	5,801	6,936
Balance at the end of year	132,160	147,232
Current	26,188	33,156
Non-current	105,972	114,076

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(i) In September 2022, the Company recognized a remeasurement adjustment in its contractual obligations of silver streaming with a corresponding reduction in revenues for an amount of USD 10,565 and an increase in accretion for an amount of USD 1,041 (September 30, 2021: USD 19,312 and USD 1,658, respectively), given the higher long-term prices and the updated mine plan for its Cerro Lindo Mining Unit. According to the Company's silver streaming accounting policy, prices and changes in the LOM given an update in mine plans are variable considerations and then, the recognized income under the streaming agreement should be adjusted to reflect the updated variables.

30 Shareholders' equity**Accounting policy**

Common shares are classified in shareholders' equity. Each time a share premium is paid to the Company for an issued share, the respective share premium is allocated to the share premium account. Each time the repayment of a share premium is decided, such repayment shall be done pro-rata to the existing shareholders.

The distribution of dividends to the Company's shareholders is recognized as a liability in the Company's consolidated financial statements in the period in which the dividends are approved by the Company's shareholders.

Shares repurchased under buyback programs that are not cancelled, are reported as treasury shares and are deducted from shareholders' equity. These shares are also deducted in the earnings per share calculation.

(a) Capital

As of December 31, 2022, the outstanding capital of USD 132,439 (2021: USD 132,439) is comprised of 132,439 thousand subscribed and issued common shares (2021: 132,439 thousand), with par value of US\$ 1.00 per share. In addition to the subscribed and issued common shares, NEXA also has an authorized, but unissued and unsubscribed share capital set at USD 231,925.

(b) Treasury shares

On June 4, 2020, at NEXA's Extraordinary General Meeting ("EGM"), the Company's shareholders approved the cancellation of the 881,902 shares held in treasury, purchased based on a share buyback program in prior years. For this reason, after the cancellation that occurred on June 4, 2020, VSA holds 64.68% of NEXA's equity.

(c) Share premium

The share premium, if any, may be distributed to the shareholders in accordance with Luxembourg Commercial Companies Act by a resolution of the Board of Directors.

(d) Additional paid in capital

Additional paid in capital arises from transactions recognized in equity that do not qualify as capital or share premium in accordance with Luxembourg Commercial Companies Act and, therefore, cannot be distributed to the shareholders of the Company.

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(e) Accumulated other comprehensive income

The changes in the accumulated other comprehensive income are as follows:

	Cumulative translation adjustment	Hedge accounting	Changes in fair value of financial instruments	Total
At January 01, 2020	(130,903)	1,263	-	(129,640)
Translation adjustment on foreign subsidiaries	(138,840)	-	-	(138,840)
Cash flow hedge accounting	-	3	-	3
Changes in fair value of financial liabilities related to changes in the Company's own credit risk	-	-	(875)	(875)
At December 31, 2020	(269,743)	1,266	(875)	(269,352)
Translation adjustment on foreign subsidiaries	(64,575)	-	-	(64,575)
Cash flow hedge accounting	-	327	-	327
Changes in fair value of financial liabilities related to changes in the Company's own credit risk	-	-	(7,441)	(7,441)
Changes in fair value of investments in equity instruments	-	-	(2,632)	(2,632)
At December 31, 2021	(334,318)	1,593	(10,948)	(343,673)
Translation adjustment on foreign subsidiaries	65,243	-	-	65,243
Cash flow hedge accounting	-	(331)	-	(331)
Changes in fair value of financial liabilities related to changes in the Company's own credit risk	-	-	343	343
Changes in fair value of investments in equity instruments	-	-	(3,608)	(3,608)
At December 31, 2022	(269,075)	1,262	(14,213)	(282,026)
Attributable to NEXA's shareholders				(243,124)
Attributable to non-controlling interests				(38,902)

(f) Earnings per share

Basic earnings per share are computed by dividing the net income attributable to NEXA's shareholders by the average number of outstanding shares for the year. Diluted earnings per share is computed in a similar way, but with the adjustment in the denominator when assuming the conversion of all shares that may be dilutive. The Company does not have any potentially dilutive shares and consequently the basic and diluted earnings per share are the same.

	2022	2021	2020
Net income (loss) for the year attributable to NEXA's shareholders	49,101	114,332	(559,247)
Weighted average number of outstanding shares – in thousands	132,439	132,439	132,439
Earnings (losses) per share - USD	0.37	0.86	(4.22)

(g) Dividend distribution

On February 15, 2022, the Company's Board of Directors approved, subject to ratification by the Company's shareholders at the 2023 annual shareholders' meeting in accordance with Luxembourg laws, a cash distribution to the Company's shareholders of USD 50,000. From this amount, USD 43,874 were distributed as dividends (cash dividend) and USD 6,126, as share premium (special cash dividend). This cash distribution was paid on March 25, 2022.

Additionally, the Company's subsidiary, Pollarix, declared dividends to non-controlling interests, owned by Auren Energia S.A. (formerly Votorantim Geração de Energia S.A.), which is a related party, in the amounts of (i) USD 14,951 (BRL 73,515), on April 29, 2022; (ii) USD 3,163 (BRL 16,622), on December 27, 2022; and (iii) USD 4,961 (BRL 25,883), on December 31, 2022. From these amounts and from dividends declared in previous periods, payments of USD 9,449 (BRL 46,458), USD 2,996 (BRL 15,714) and USD 12,147 (BRL 63,825) were made in May, September and December of 2022, respectively.

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(h) Non-controlling interests

Summarized balance sheet	NEXA PERU		Pollarix S.A.	
	2022	2021	2022	2021
Current assets	658,099	680,609	9,822	23,070
Current liabilities	260,980	288,736	8,820	13,279
Current net assets	397,119	391,873	1,002	9,791
Non-current assets	1,282,556	1,345,420	68,984	53,516
Non-current liabilities	409,106	566,059	-	-
Non-current net assets	873,449	779,361	68,984	53,516
Net assets	1,270,568	1,171,234	69,985	63,307
Accumulated non-controlling interests	217,167	213,997	50,842	44,011

Summarized income statement	NEXA PERU		Pollarix S.A.	
	2022	2021	2022	2021
Net revenues	892,389	828,571	6,906	20,996
Net income for the year	106,501	94,706	29,635	39,136
Other comprehensive income (loss)	7,308	(940)	9,686	(2,977)
Total comprehensive income for the year	113,809	93,766	39,321	36,159
Comprehensive income attributable to non-controlling interests	1,199	12,991	30,870	24,947
Dividends paid to non-controlling interests	-	-	24,592	23,730

Summarized statement of cash flows	NEXA PERU		Pollarix S.A.	
	2022	2021	2022	2021
Net cash provided by (used in) operating activities	196,850	179,842	4,474	(8,522)
Net cash used in investing activities	(86,969)	(93,632)	-	-
Net cash (used in) provided by financing activities	(137,426)	(92,905)	(6,945)	8,997
(Decrease) increase in cash and cash equivalents	(28,582)	(8,542)	(2,471)	475

31 Impairment of long-lived assets

Accounting policy

Impairment of goodwill

As part of the impairment testing procedures, the goodwill arising from a business combination is allocated to a CGU or groups of CGUs that are expected to benefit from the related business combination and is tested at the lowest level that goodwill is monitored by management. Goodwill is tested annually for impairment during the third quarter, regardless of whether there has been an impairment indicator or, more frequently, if circumstances indicate that the carrying amount may not be recovered.

Impairment of long-lived assets

The Company assesses at each reporting date, whether there are indicators that the carrying amount of an asset or CGU, including goodwill balance, may not be recovered. If any indicator exists, such as a change in forecasted commodity prices, a significant increase in operational costs, a significant decrease in production volumes, a reduction in LOM, the cancelation or significant reduction in the scope of a project, market conditions or unusual events that can affect the business, the Company estimates the recoverable amount of the assets or CGUs.

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The recoverable amount is estimated by reference to the higher of an asset's or CGU's fair value less cost of disposal ("FVLCD") and its value in use ("VIU"). The recoverable amount is determined for an individual asset unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets, in which case, the asset is tested as part of a larger CGU to which it belongs.

If the carrying amount of an asset or CGU exceeds its recoverable amount, the asset or CGU is considered impaired and is reduced to its recoverable amount. Non-financial assets other than goodwill that were adjusted due to impairment are subsequently reviewed for possible reversal of the impairment at each reporting date. Generally, the opposite of indicators that gave rise to an impairment loss would be considered indicators that impairment losses might have to be reversed. If the underlying reasons for the original impairment have been removed or the service potential of the asset or CGU has increased, an assessment of impairment reversals is performed by the Company. Reversals of impairment losses that arise simply from the passage of time or related with prior goodwill impairments are not recognized.

For individual assets, if there is any indicator that an asset become unusable by damage or a decision that would lead the asset to not contribute economically to the Company, it is impaired. In addition, greenfields, projects for which the Company decides to quit exploration and there is no expectation that in the future will bring cash inflows are also impaired.

Impairment of exploration and evaluation costs and development projects costs

Exploration assets representing mineral rights acquired in business combinations, mineral rights, and other capitalized exploration and evaluation costs, as well as development projects costs capitalized included in Property, plant and equipment are tested for impairment in aggregation with CGU or groups of CGUs that include producing assets or tested individually through FVLCD when there are indicators that capitalized costs might not be recoverable. The allocation of exploration and evaluation costs, and development project costs to CGUs or group of CGUs is based on 1) expected synergies or share of producing assets infrastructure, 2) legal entity level, and 3) country level. When testing a CGU or a group of CGUs that include exploration and evaluation costs and development project costs, the Company performs the impairment test in two steps. In the first step, producing assets or group of producing assets are tested for impairment on an individual basis. In the second step, exploration and evaluation costs and development project costs are allocated to a CGU or a group of CGUs and tested for impairment on a combined basis.

Valuation methods and assumptions for recoverable amount based on FVLCD

FVLCD

FVLCD is an estimate of the price that the Company would receive to sell an asset, CGU or group of CGUs in an orderly transaction between market participants at the measurement date, less the cost of disposal. FVLCD is not an entity-specific measurement but is focused on market participants' assumptions for a particular asset when pricing the asset. FVLCD is estimated by the Company using discounted cash flows techniques (using a post-tax discount rate) and market past transaction multiples (amount paid per ton of minerals for projects in similar stages) for greenfield projects for which resources allocation is under review, although the Company considers observable inputs, a substantial portion of the assumptions used in the calculations are unobservable. These cash flows are classified as level 3 in the fair value hierarchy. No CGUs are currently assessed for impairment by reference to a recoverable amount based on FVLCD classified as level 1 or level 2.

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VIU

VIU is determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset in its current condition and its residual value. VIU is determined by applying assumptions specific to the Company's continued use and does not consider enhancements or future developments. These assumptions are different from those used in calculating FVLCD and consequently the VIU calculation is likely to give a different result (usually lower) than a FVLCD calculation. Additionally, it is applied to the estimated future cash flows a pre-tax discount rate.

Forecast assumptions

The cash flow forecasts are based on management's best estimates of expected future revenues and costs, including the future cash costs of production, capital expenditure, and closure, restoration, and environmental costs. The resulting estimates are based on detailed LOM and long-term production plans. When calculating FVLCD, these forecasts include capital and operating expenditures related to expansions and restructurings of both brownfield and greenfield projects that a market participant would consider in seeking to obtain the highest and best use of the asset, considering their evaluation, eventual changes in their scope or feasibility, and their development stage.

The cash flow forecasts may include net cash flows expected to be realized from the extraction, processing and sale of material that does not currently qualify for inclusion in ore reserves. Such non-reserve material is only included when the Company has confidence it will be converted to reserves. This expectation is usually based on preliminary drilling and sampling of areas of mineralization that are contiguous with existing ore reserves, as well as on the historical internal conversion ratio. Typically, the additional evaluation required for conversion to reserves of such material has not yet been done because this would involve incurring evaluation costs earlier than is required for the efficient planning and operation of the producing mine.

For purposes of determining FVLCD from a market participant's perspective, the cash flows incorporate management's internal price forecasts that also reflects the view of market participants. The internal price forecasts are developed using a robust model that incorporates market-based supply, demand and cost data. The internal price forecasts used for ore reserve estimation testing and the Company's strategic planning are generally consistent with those used for the impairment testing.

Cost levels incorporated in the cash flow forecasts are based on the current LOM plan and long-term production plan for the CGU, which are based on detailed research, analysis and iterative modeling to optimize the level of return from investment, output and sequence of extraction. The mine plan considers all relevant characteristics of the orebody, including waste-to-ore ratios, ore grades, haul distances, chemical and metallurgical properties of the ore, process recoveries and capacities of processing equipment that can be used. The LOM plan and long-term production plans are, therefore, the basis for forecasting production output and production costs in each future year.

The discount rates applied to the future cash flow forecasts represent the Company's estimate of the rate that a market participant would apply to the time value of money and the risks specific to the asset for which the future cash flow estimates have not been adjusted. The Company's weighted average cost of capital is generally used for determining the discount rates, with appropriate adjustments for the risk profile of the countries in which the individual CGUs operate.

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With respect to the estimated future cash flows of capitalized exploration assets and development projects, for some assets the Company applies a price to net assets value ratio discount in order to reflect the inherent risk of such projects and that are neither adjusted in the discount rate nor in the future cash flows. The discount is based on the stage of the project and the type of metal.

Critical accounting estimates, assumptions and judgments - Impairment of long-lived assets

Impairment is assessed at the CGU level. A CGU is the smallest identifiable asset or group of assets that generates independent cash inflows. Judgment is applied to identify the Company's CGUs, particularly when assets belong to integrated operations, and changes in CGUs could impact impairment charges and reversals.

External and internal factors are quarterly monitored for impairment indicators. Judgment is required to determine, for example, whether the impact of adverse spot commodity price movements is significant and structural in nature. Also, the Company's assessment of whether internal factors, such as an increase in production costs and delays in projects, result in impairment indicators require significant judgment. Among others, the long-term zinc price and the discount rate may have a significant impact in the Company's impairment estimations.

The process of estimating the recoverable amount involves the use of assumptions, judgment and projections for future cash flows. These calculations use cash flow projections based on financial and operational budgets for a five-year period. After the five-year period, the cash flows are extended until the end of the useful LOM or indefinitely for the smelters. The smelters cash flows do not use growth rates in the cash flow projections of the terminal value. Management's assumptions and estimates of future cash flows used for the Company's impairment testing of goodwill and long-lived assets are subject to risk and uncertainties, including metal prices and macroeconomic conditions, which are particularly volatile and partially or totally outside the Company's control. Future changes in these variables may differ from management's expectations and may materially change the recoverable amounts of the CGUs.

Impairment test analysis

During September 2022, the Company performed its annual impairment test for the CGUs to which goodwill has been previously allocated (Mining Peru group of CGUs: Cerro Pasco and Cerro Lindo; and Cajamarquilla), considering available key assumptions included in the strategic planning process which is performed during the third quarter of every year, as well as other variables discussed in such process, and did not identify any net material impairment loss or reversal to be recognized. For Brazilian CGUs (Três Marias System and Juiz de Fora), no impairment indicators were identified, and no impairment test was required for these CGUs.

As of December 31, 2022, the Company identified impairment indicators mainly related to: (i) a CAPEX and costs increase in the Cerro Pasco CGU given the review process started by management in October; and (ii) the Company's decision not to maintain in its portfolio two of its greenfields projects (Shalipayco and Pukaqaqa) which are included in the Cerro Lindo CGU which is also part of the Mining Peru group of CGUs. The Company also identified impairment reversal indicators related to the performance of metal prices during the fourth quarter of 2022 which led the Company's sensitivities over the estimated metal price to increase.

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All amounts in thousands of US Dollars, unless otherwise stated

The impairment assessment as of December 31, 2022, resulted in the recognition of an impairment reversal of USD 79,529 in the Cerro Pasco CGU, and of an impairment loss of USD 61,856 in the Mining Peru Group of CGUs (goodwill) identified for year 2022. In addition to these economic impairments, the Company recognized individual assets impairments in the amount of USD 10,275, mainly within Assets and projects under construction, and in the amount of USD 39,910, within Mining projects and in relation to the greenfields (Shalipayco and Pukaqaqa) mentioned above. As a result, a net impairment loss of USD 32,512 (after-tax USD 30,971) was registered for the year.

For the year ended on December 31, 2021, the Company performed its annual impairment test, and did not identify impairment provisions or reversals for the period.

For the year ended on December 31, 2020, the Company recognized an impairment loss of USD 557,497.

(a) Key assumptions used in impairment test

The recoverable amounts for each CGU were determined based on the FVLCD method, which were higher than those determined based on the VIU method.

The Company identified long-term metal prices, discount rate and LOM as key assumptions for the recoverable amounts determination, due to the material impact such assumptions may cause on the recoverable value. Part of these assumptions are summarized below:

	2022	2021	2020
Long-term zinc price (USD/t)	2,787	2,724	2,449
Discount rate (Peru)	6.93%	6.22%	7.22%
Brownfield projects - LOM (years) (i)	From 5 to 14	from 4 to 13	From 5 to 14

(i) As part of the Cerro Lindo CGU recoverable amount, the Company has included the value of its greenfield projects based on market multiples as disclosed above in the FVLCD section. No impairment indicator was identified for these greenfield projects, other than for Shalipayco and Pukaqaqa.

(b) Impairment reversal – Cerro Pasco CGU

As mentioned above, the impairment reversal was identified at the CGU level, not being directly related to a single asset. Then, the gain was allocated on a pro rata basis to the following assets:

	Carrying amount prior to impairment reversal	Impairment reversal	Carrying amount after impairment reversal
Property, plant and equipment	124,576	31,258	155,834
Intangible assets	167,913	48,272	216,185
Other net liabilities	(100,379)	-	(100,379)
	192,110	79,529	271,640

Notes to the consolidated financial statements
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The Company performed a stress test on the key assumptions used for the calculation of the recoverable amount of the CGU Cerro Pasco. A decrease of 5% in the long-term LME zinc price to USD 2,648 per ton compared to management's estimation as of December 31, 2022, would have resulted in an impairment reversal of USD 31,061 (or a decrease in the impairment reversal of USD 48,468). Also, an increase of 5% in the discount rate compared to management's estimation as of December 31, 2022, would have resulted in an impairment reversal of USD 70,010 (or a decrease in the impairment reversal of USD 9,519).

(c) Impairment loss - Mining Peru group of CGUs Goodwill

Before the impairment test performed on December 31, 2022, the Mining Peru group of CGU's included a goodwill of USD 310,938. After the impairment loss mentioned above, the goodwill, included in Intangible assets, has a balance of USD 249,082.

	Carrying amount prior to impairment	Impairment	Carrying amount after impairment
Goodwill- Mining Peru	310,938	(61,856)	249,082

The Company performed a stress test on the key assumptions used for the calculation of the recoverable amount of the Mining Peru group of CGUs. A decrease of 10% in the long-term LME zinc price to USD 2,508 per ton compared to management's estimation as of December 31, 2022, would have resulted in an impairment loss of USD 88,437 (or an additional impairment loss of USD 26,581).

(d) Impairment results – Other CGUs

The impairment reversal indicator, identified during the year, also led to an increase in the recoverable amount of the other CGUs included in the Mining Peru group of CGUs.

The Company estimated the amount by which the value assigned to the key assumptions must change in order for the assessed CGUs recoverable amount to be equal to their carrying amount:

CGU	Excess over recoverable amount	Decrease in Long term Zinc (USD/t)		Increase in WACC	
		Change	Price	Change	Rate
Cerro Lindo	179,440	(28.1%)	2,003	175.5%	19.1%
Cajamarquilla	407,027	(15.2%)	2,246	41.9%	9.8%

32 Long-term commitments

Projects evaluation

As part of NEXA's activities for the execution of certain greenfield projects, the Company has agreed, with the Peruvian Government, to minimum investments levels in the Magistral Project, that if the Company does not meet by September 2024, would require additional disbursements of USD 102,900 as a penalty for the non-execution of certain levels.

33 Events after the reporting period

On February 15, 2023, the Company's Board of Directors approved, subject to ratification by the Company's shareholders at the 2024 annual shareholders' meeting in accordance with Luxembourg laws, a cash distribution to the Company's shareholders of approximately USD 25,000 to be paid on March 24, 2023 as share premium (special cash dividend).

..*

Management's report on internal control over financial reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting and for assessing its effectiveness.

Our internal control over financial reporting is a process designed by, or under the supervision of, our chief executive officer and our chief financial officer, and effected by our board of directors, management and other employees, and is designed to provide reasonable assurance regarding the reliability of financial reporting and of preparation of our consolidated financial statements, in accordance with IFRS as issued by the IASB.

Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. In addition, projections of any evaluation of effectiveness of internal control over financial reporting to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with our policies or procedures may deteriorate.

Our management has assessed the effectiveness of internal control over financial reporting as of December 31, 2022, based upon the criteria established in Internal Controls – Integrated Framework (2013), issued by the Committee of Sponsoring Organizations of Treadway Commission (COSO). Based on this assessment and criteria, our management has concluded that our internal control over financial reporting was effective as of December 31, 2022.

Audit of the effectiveness of internal control over financial reporting

Our independent registered public accounting firm, PricewaterhouseCoopers Auditores Independientes Ltda has audited the effectiveness of internal control over financial reporting, as stated in their report as of December 31, 2022.

Changes in internal control over financial reporting

There were no changes in our internal control over financial reporting during 2022, which have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Sincerely,

Nexa Resources S.A.

/s/ Juan Ignacio Rosado Gomez de La Torre

Juan Ignacio Rosado Gomez de La Torre
President and Chief Executive Officer

/s/ José Carlos del Valle

José Carlos del Valle
Senior VP Finance and Group CFO

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of
Nexa Resources SA

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Nexa Resources S.A. and its subsidiaries (the “Company”) as of December 31, 2022 and 2021, and the related consolidated income statement, consolidated statement of comprehensive income, consolidated statement of changes in shareholders’ equity and consolidated statement of cash flows for each of the three years in the period ended December 31, 2022, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Impairment Assessment – Long-lived assets

As described in Note 31 to the consolidated financial statements, management assesses at the end of each reporting period whether there is any indication that long-lived assets may be impaired or there is an indicator that an impairment loss recognized in prior period (for a long-lived asset other than goodwill) may no longer exist or may have decreased. Additionally, management conducts an annual impairment test of goodwill during the third quarter of each year. Management tests long-lived assets for impairment at the individual asset level, or when it is not possible to estimate the recoverable amount of the individual asset, at the level of the cash generating unit (CGU) and tests goodwill for impairment at the level of the CGU or group of CGU to which the goodwill is allocated. An impairment loss is identified when carrying amounts, including goodwill where applicable, exceed the recoverable value of the CGUs or an individual assets carrying amount exceeds its recoverable amount. Impairment reversal is applicable to CGUs where impairment losses on long-lived assets have been recorded in previous periods, except for goodwill for which impairment is never reverted, and it is identified when the recoverable value of these CGUs exceed their carrying amounts. The recoverable value is the higher of fair value less costs of disposal and value in use. Management estimated the fair value less cost of disposal using discounted cash flow techniques. Management's cash flow projections for each CGU tested for impairment included significant judgments and assumptions relating to long-term metal prices and discount rate. In addition to the annual impairment test performed in the third quarter, during the fourth quarter of 2022 the Company identified both impairment loss indicators mainly related to increase in forecasted capital expenditures and impairment reversal indicators mainly related to the good performance of metal prices resulting in an update impairment test for the Cerro Pasco CGU and for Mining Peru Group of CGUs prepared by management through the 2022 year end. Management also recognizes impairment loss for other individual assets within Assets and Projects under Construction account and for greenfield projects when facts and

circumstances indicate that their carrying amounts are no longer recoverable. Impairment tests conducted for the year ended December 31, 2022 resulted in the recognition of a net impairment loss of US\$ 32,512 thousand (US\$ 30,971 thousand, net of taxes), which is presented net of recognized impairment reversal, comprised of an impairment loss of US\$ 61,856 thousand in the Mining Peru Group of CGUs where goodwill is allocated, an impairment reversal of US\$ 79,529 thousand in the Cerro Pasco CGU and impairment losses of certain individual assets and discontinued greenfield projects totaling US\$ 50,185 thousand. The performing procedures relating to impairment assessment at the level of CGUs is determined to be a critical audit matter.

The principal consideration for our determination that performing procedures relating to impairment assessment at the level of CGUs is a critical audit matter is there was significant judgment by management when developing the recoverable values of the CGUs. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures to evaluate management's cash flow projections and significant assumptions, including long-term metal prices and discount rate. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing design and the effectiveness of controls relating to management's impairment assessment, including controls over the valuation of the Company's CGUs. These procedures also included, among others, testing management's process for developing the recoverable value; evaluating the appropriateness of the discounted cash flow model; testing the completeness and accuracy of underlying data used in the model; and evaluating the significant assumptions used by management, related to the long-term metal prices and discount rate. Evaluating management's assumptions related to long-term metal prices and discount rate involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the CGUs, (ii) the consistency with external market and industry data, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's discounted cash flow model and certain significant assumptions, including the discount rate.

/s/PricewaterhouseCoopers Auditores Independentes Ltda.
Curitiba, Brazil, February 15, 2023

We have served as the Company's auditor since 2001.