



Quarterly Financial Report Individual and Consolidated

September 30, 2019

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Company information/Capital composition

Quantity of shares (Units)	Current quarter 09/30/2019
Paid-in capital	
Common	43.403.849
Preferred	0
Total	43.403.849
Treasury shares	
Common	1,441
Preferred	0
Total	1,441

Individual financial statements / Balance sheet – Assets
(In thousands of Reais)

Code of account	Account description	Current quarter 09/30/2019	Prior year 12/31/2018
1	Total assets	4,619,587	4,673,671
1.01	Total current assets	2,237,002	2,830,216
1.01.01	Cash and cash equivalents	244,993	201,571
1.01.02	Financial investments	6,554	28,023
1.01.03	Accounts receivable	303,085	771,700
1.01.04	Inventory	1,457,749	1,588,298
1.01.06	Taxes recoverable	94,469	90,228
1.01.07	Prepaid expenses	14,002	10,274
1.01.08	Other current assets	116,150	140,122
1.01.08.03	Others	116,150	140,122
1.01.08.03.01	Derivative financial instruments	82,471	129,313
1.01.08.03.02	Other current assets	33,679	10,809
1.02	Total non-current assets	2,382,585	1,843,455
1.02.01	Long term assets	1,078,261	542,636
1.02.01.01	Financial investments	13,228	16,765
1.02.01.04	Accounts receivable	0	10
1.02.01.07	Taxes	824,721	287,185
1.02.01.07.01	Deferred income tax and social contribution	167,763	164,785
1.02.01.07.02	Taxes recoverable	656,958	122,400
1.02.01.08	Prepaid expenses	5,685	9,669
1.02.01.10	Other non-current assets	234,627	229,007
1.02.01.10.03	Assets held for sale	112,374	112,745
1.02.01.10.04	Legal deposits	26,940	32,309
1.02.01.10.05	Other non-current assets	95,313	83,953
1.02.02	Investments	27,463	24,099
1.02.02.01	Equity interest	25,045	21,772
1.02.02.01.02	Investments	25,045	21,772
1.02.02.02	Investment Property	2,418	2,327
1.02.02.02.01	Other investments	2,418	2,327
1.02.03	Property, plant and equipment	1,268,048	1,266,555
1.02.03.01	Fixed assets in operation	1,137,148	1,235,971
1.02.03.02	Prepaid expenses	26,552	0
1.02.03.03	Property, plant and equipment in progress	104,348	30,584
1.02.04	Intangible assets	8,813	10,165

Individual financial statements / Balance sheet – Liabilities
(In thousands of Reais)

Code of account	Account description	Current quarter 09/30/2019	Prior year 12/31/2018
2	Total liabilities	4,619,587	4,673,671
2.01	Total current liabilities	1,845,770	1,877,184
2.01.01	Payroll and related charges	60,584	59,902
2.01.02	Suppliers	1,006,572	1,308,257
2.01.02.01	Domestic suppliers	154,833	132,752
2.01.02.02	Foreign suppliers	851,739	1,175,505
2.01.03	Taxes payable	27,776	9,691
2.01.03.01	Federal tax liabilities	20,276	4,872
2.01.03.01.02	Excise tax	2,336	1,861
2.01.03.01.03	Withholding income tax-IRRF	1,594	2,505
2.01.03.01.04	PIS and COFINS	15,821	0
2.01.03.01.05	Withholding social contribution tax	523	470
2.01.03.01.07	Others	2	36
2.01.03.02	State tax liabilities	6,849	4,198
2.01.03.02.01	Value-Added Tax on Sales and Services	6,849	4,198
2.01.03.03	Municipal tax liabilities	651	621
2.01.03.03.01	Service tax	651	621
2.01.04	Loans and financing	504,257	131,829
2.01.05	Other liabilities	246,581	367,505
2.01.05.02	Others	246,581	367,505
2.01.05.02.02	Dividends payable	27,351	26,274
2.01.05.02.04	Derivative financial instruments	25,207	26,449
2.01.05.02.05	Advances from clients	8,586	192,515
2.01.05.02.06	Other current liabilities	40,964	55,353
2.01.05.02.07	Forfeiting and letter of credit operations	131,701	66,914
2.01.05.02.08	Leasing	12,772	0
2.02	Total non-current liabilities	1,941,420	2,193,990
2.02.01	Loans and financing	1,737,374	2,017,084
2.02.02	Other liabilities	821	0
2.02.02.02	Other non - current liabilities	821	0
2.02.02.02.06	Suppliers	821	0
2.02.04	Provisions	203,225	176,906
2.02.04.01	Legal deposits	188,227	174,160
2.02.04.01.01	Tax Provision	2,318	2,204
2.02.04.01.02	Social security and labor provisions	178,499	165,212
2.02.04.01.04	Civil provisions	7,410	6,744
2.02.04.02	Others provisions	14,998	2,746
2.02.04.02.04	Provision for negative net equity	201	2,746
2.02.04.02.05	Leasing	14,797	0
2.03	Shareholders' equity	832,397	602,497
2.03.01	Paid-in capital	2,089,978	2,089,978
2.03.01.01	Paid-in capital	2,069,566	1,990,708
2.03.01.02	Debentures convertible into shares	25,787	104,645
2.03.01.03	Capitalization costs	-5,375	-5,375
2.03.02	Capital Reserve	-741	-741
2.03.02.05	Treasury shares	-741	-741
2.03.05	Retained earnings	-515,876	-725,250
2.03.06	Equity valuation adjustments	-740,964	-761,490

Individual financial statements / Statement of income
(In thousands of Reais)

Code of account	Account description	3Q19	9M19	3Q18	9M18
3.01	Net sales	1,389,943	4,323,963	1,595,614	3,646,134
3.02	Cost of goods sold	-1,420,966	-4,233,603	-1,466,999	-3,495,482
3.03	Gross income	-31,023	90,360	128,615	150,652
3.04	Operating expenses	163,526	87,281	-71,505	-252,137
3.04.01	Sales expenses	-7,369	-19,713	-7,137	-20,428
3.04.02	General and administrative expenses	-31,090	-77,911	-31,435	-86,305
3.04.02.01	General and administrative	-21,858	-61,813	-21,057	-56,749
3.04.02.02	Management fees	-2,137	-6,225	-1,982	-5,575
3.04.02.03	General and administrative	-7,095	-9,873	-8,396	-23,981
3.04.04	Other income	260,038	360,446	27,657	44,219
3.04.05	Other expenses	-58,733	-178,420	-59,958	-196,665
3.04.06	Equity income (loss)	680	2,879	-632	7,042
3.05	Operating profit before financial results	132,503	177,641	57,110	-101,485
3.06	Financial income (loss)	394	23,399	-89,234	-385,278
3.06.01	Financial income	334,790	674,113	221,890	700,434
3.06.02	Financial expenses	-334,396	-650,714	-311,124	-1,085,712
3.07	Income before income and social contribution taxes	132,897	201,040	-32,124	-486,763
3.08	Income and social contribution tax	7,235	2,977	13,281	130,719
3.08.02	Deferred income and social contribution taxes	7,235	2,977	13,281	130,719
3.09	Net income (loss) from continuing operations	140,132	204,017	-18,843	-356,044
3.11	Income (Loss) for the period	140,132	204,017	-18,843	-356,044
3.99	Earning per share - (Reais / Share)	-	-	-	-
3.99.01	Basic earnings per share	-	-	-	-
3.99.01.01	ON	3.44271	5.01222	-0.46482	-8.78299
3.99.02	Diluted earnings per share	-	-	-	-
3.99.02.01	ON	3.37025	4.90672	-0.42738	-8.07553

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Individual financial statements / Statements of comprehensive income (loss)
(In thousands of Reais)

Code of account	Account description	3Q19	9M19	3Q18	9M18
4.01	Income (Loss) for the period	140,132	204,017	-18,843	-356,044
4.02	Other comprehensive Income	2,232	25,883	7,957	25,476
4.02.01	Hedge cash flow – Export income ACC/PPE	-5,275	-5,358	-742	1,743
4.02.02	Hedge cash flow – NDF sales income	8,127	33,966	7,617	22,804
4.02.05	Hedge cash flow – Cost metal – Future stock exchange	-628	-2,917	1,343	690
4.02.07	Earnings from Foreign exchange variations	8	192	-261	239
4.03	Comprehensive income for the year	142,364	229,900	-10,886	-330,568

Individual financial statements / Statements of cash flows - Indirect method
(In thousands of Reais)

Code of account	Account description	9M19	9M18
6.01	Net cash provided by operating activities	268,796	341,397
6.01.01	Cash generated from operations	644,276	171,707
6.01.01.01	Income before income and social contribution taxes	201,040	-486,763
6.01.01.02	Residual value of written-off fixed assets	-110	5
6.01.01.03	Depreciation and amortization	113,857	108,763
6.01.01.04	Equity in net income	-2,879	-7,041
6.01.01.05	Amortization of right-to-use assets	10,186	0
6.01.01.06	Provision for losses on lawsuits	38,447	48,939
6.01.01.07	Provision of other estimated losses	-7,482	10,545
6.01.01.08	Financial charges	292,550	489,480
6.01.01.09	Present value adjustment - receivables and suppliers	2,650	1,145
6.01.01.10	Shareholders' equity provision	201	5,738
6.01.01.12	Provision (reversal) for recoverable value of estimated losses	-4,184	896
6.01.02	Changes in assets and liabilities	-375,480	169,690
6.01.02.02	Accounts receivable	474,311	-192,148
6.01.02.04	Inventory	130,913	226,850
6.01.02.05	Taxes recoverable	-536,713	-19,599
6.01.02.06	Prepaid expenses	256	-3,607
6.01.02.07	Legal deposits	-15,116	-2,368
6.01.02.08	Derivative financial instruments	77,680	-48,601
6.01.02.09	Assets held for sale	-147	249
6.01.02.10	Other current and non-current liabilities	-30,361	-9,166
6.01.02.11	Suppliers	-353,091	252,956
6.01.02.12	Forfeiting and letter of credit operations	62,406	-10,071
6.01.02.14	Taxes payable	18,085	2,199
6.01.02.15	Legal deposits	-17,171	-27,721
6.01.02.16	Payroll and related charges	682	13,066
6.01.02.18	Advances from clients	-179,847	120,513
6.01.02.19	Derivative financial instruments	3,002	-142,932
6.01.02.20	Other current and non-current liabilities	-10,369	10,070
6.02	Net cash used in investment activities	-63,066	-196,611
6.02.04	Other investments	-91	0
6.02.06	Variations in the capital of controlled companies	-2,947	0
6.02.07	Fixed assets and intangible additions	-85,034	-182,150
6.02.08	Financial investments	-2,706,464	-588,717
6.02.09	Redemption of financial investments	2,731,470	574,256
6.03	Net cash generated by (used in) financing activities	-162,308	-151,805
6.03.01	Loans and financing	53,264	23,557
6.03.02	Amortization of loans and financing	-90,282	-74,239
6.03.04	Interest payments on loans	-113,978	-101,123
6.03.05	Leasing	-11,312	0
6.05	Increase (decrease) in cash and cash equivalents	43,422	-7,019
6.05.01	Cash and cash equivalents at the beginning of the year	201,571	343,678
6.05.02	Cash and cash equivalents at the end of the year	244,993	336,659

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Individual financial statements / Statement of changes in equity – 01/01/2019 - 09/30/2019
(In thousands of Reais)

Code of account	Account description	Paid-up capital	Capital reserves, Options granted and Treasury shares	Profit reserves	Retained earnings (loss)	Other comprehensive income	Equity
5.01	Opening balances	1,990,708	98,529	0	-725,250	-761,490	602,497
5.03	Adjusted opening balances	1,990,708	98,529	0	-725,250	-761,490	602,497
5.04	Capital transactions with partners	78,858	-78,858	0	0	0	0
5.04.01	Capital increase	78,858	-78,858	0	0	0	0
5.05	Total comprehensive income	0	0	0	204,017	25,883	229,900
5.05.01	Net income for the period	0	0	0	204,017	0	204,017
5.05.02	Other comprehensive income	0	0	0	0	25,883	25,883
5.05.02.01	Financial instruments - adjustments	0	0	0	0	25,691	25,691
5.05.02.06	Earnings and losses from foreign exchange variations-foreign investment	0	0	0	0	192	192
5.06	Internal changes in equity	0	0	0	5,357	-5,357	0
5.06.02	Realization of revaluation reserve	0	0	0	7,143	-7,143	0
5.06.03	Taxes on the realization of the revaluation reserve	0	0	0	-1,786	1,786	0
5.07	Closing balances	2,069,566	19,671	0	-515,876	-740,964	832,397

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Individual financial statements / Statement of changes in equity – 01/01/2018 - 09/30/2018
(In thousands of Reais)

Code of account	Account description	Paid-up capital	Capital reserves, Options granted and Treasury shares	Profit reserves	Retained earnings (loss)	Other comprehensive income	Equity
5.01	Opening balances	1,984,751	104,486	0	-414,356	-786,359	888,522
5.03	Adjusted opening balances	1,984,751	104,486	0	-414,356	-786,359	888,522
5.04	Capital transactions with partners	5,957	-5,957	0	0	0	0
5.04.01	Capital increase	5,957	-5,957	0	0	0	0
5.05	Total comprehensive income	0	0	0	-356,044	25,476	-330,568
5.05.01	Net income for the period	0	0	0	-356,044	0	-356,044
5.05.02	Other comprehensive income	0	0	0	0	25,476	25,476
5.05.02.01	Financial instruments - adjustments	0	0	0	0	25,237	25,237
5.05.02.06	Earnings and losses from foreign exchange variations-foreign investment	0	0	0	0	239	239
5.06	Internal changes in equity	0	0	0	10,461	-10,461	0
5.06.02	Realization of revaluation reserve	0	0	0	13,516	-13,516	0
5.06.03	Taxes on the realization of the revaluation reserve	0	0	0	-3,055	3,055	0
5.07	Closing balances	1,990,708	98,529	0	-759,939	-771,344	557,954

Individual financial statements or Statement of value added
(In thousands of Reais)

Code of account	Account description	9M19	9M18
7.01	Income	5,159,064	4,067,619
7.01.01	Sales of goods and services	4,796,503	4,023,617
7.01.02	Other income	358,377	44,002
7.01.04	Provision of credits for doubtful accounts	4,184	0
7.02	Inputs acquired from third parties	-4,482,034	-3,750,457
7.02.01	Cost of goods and services sold	-3,995,968	-3,313,505
7.02.02	Materials, energy, third party services and other	-486,066	-436,952
7.03	Gross added value	677,030	317,162
7.04	Retentions	-124,043	-108,763
7.04.01	Depreciation and amortization	-113,857	-108,763
7.04.02	Others	-10,186	0
7.05	Net added value	552,987	208,399
7.06	Added value received through transfers	676,992	707,475
7.06.01	Equity equivalence result	2,879	7,041
7.06.02	Financial income	674,113	700,434
7.07	Total net added value payable	1,229,979	915,874
7.08	Net added value payable	1,229,979	915,874
7.08.01	Personnel and charges	181,074	185,043
7.08.02	Taxes, duties and contributions	185,381	-3,020
7.08.03	Third-party capital remuneration	659,507	1,089,895
7.08.04	Remuneration of own capital	204,017	-356,044
7.08.04.03	Income (Loss) for the period	204,017	-356,044

Consolidated financial statements / Balance sheet – Assets
(In thousands of Reais)

Code of account	Account description	Current quarter 09/30/2019	Prior year 12/31/2018
1	Total assets	4,604,868	4,623,494
1.01	Total current assets	2,232,180	2,787,160
1.01.01	Cash and cash equivalents	254,480	216,668
1.01.02	Financial investments	11,597	28,791
1.01.03	Accounts receivable	254,028	665,589
1.01.04	Inventory	1,481,343	1,626,575
1.01.06	Taxes recoverable	99,996	101,742
1.01.07	Prepaid expenses	14,422	10,789
1.01.08	Other current assets	116,314	137,006
1.01.08.03	Others	116,314	137,006
1.01.08.03.01	Derivative financial instruments	82,471	129,313
1.01.08.03.02	Other current assets	33,843	7,693
1.02	Total non-current assets	2,372,688	1,836,334
1.02.01	Long term assets	1,092,237	556,332
1.02.01.01	Financial investments	14,015	16,765
1.02.01.04	Accounts receivable	1,822	1,096
1.02.01.07	Taxes	836,088	299,795
1.02.01.07.01	Deferred income tax and social contribution	179,130	177,395
1.02.01.07.02	Taxes recoverable	656,958	122,400
1.02.01.08	Prepaid expenses	5,685	9,669
1.02.01.10	Other non-current assets	234,627	229,007
1.02.01.10.03	Assets held for sale	112,374	112,745
1.02.01.10.04	Legal deposits	26,940	32,309
1.02.01.10.05	Other non-current assets	95,313	83,953
1.02.02	Investments	2,418	2,327
1.02.02.02	Investment Property	2,418	2,327
1.02.02.02.01	Other investments	2,418	2,327
1.02.03	Property, plant and equipment	1,269,220	1,267,510
1.02.03.01	Fixed assets in operation	1,138,011	1,236,926
1.02.03.02	Prepaid expenses	26,861	0
1.02.03.03	Property, plant and equipment in progress	104,348	30,584
1.02.04	Intangible assets	8,813	10,165

Consolidated financial statements / Balance sheet – Liabilities
(In thousands of Reais)

Code of account	Account description	Current quarter 09/30/2019	Prior year 12/31/2018
2	Total liabilities	4,604,868	4,623,494
2.01	Total current liabilities	1,831,105	1,829,754
2.01.01	Payroll and related charges	60,695	60,061
2.01.02	Suppliers	986,193	1,257,987
2.01.02.01	Domestic suppliers	134,247	82,482
2.01.02.02	Foreign suppliers	851,946	1,175,505
2.01.03	Taxes payable	28,720	11,139
2.01.03.01	Federal tax liabilities	21,179	6,300
2.01.03.01.01	Income tax and social contribution	219	1,424
2.01.03.01.02	Excise tax	2,336	1,861
2.01.03.01.03	Withholding income tax–IRRF	1,596	2,509
2.01.03.01.04	PIS and COFINS	16,503	0
2.01.03.01.05	Withholding social contribution tax	523	470
2.01.03.01.07	Others	2	36
2.01.03.02	State tax liabilities	6,890	4,218
2.01.03.02.01	Value-Added Tax on Sales and Services	6,890	4,218
2.01.03.03	Municipal tax liabilities	651	621
2.01.03.03.01	Service tax	651	621
2.01.04	Loans and financing	504,257	131,829
2.01.05	Other liabilities	251,240	368,738
2.01.05.02	Others	251,240	368,738
2.01.05.02.02	Dividends payable	27,351	26,274
2.01.05.02.04	Derivative financial instruments	25,207	26,449
2.01.05.02.05	Advances from clients	13,606	193,122
2.01.05.02.06	Other current liabilities	40,428	55,979
2.01.05.02.07	Forfeiting and letter of credit operations	131,701	66,914
2.01.05.02.08	Leasing	12,947	0
2.02	Total non-current liabilities	1,941,366	2,191,243
2.02.01	Loans and financing	1,737,374	2,017,084
2.02.02	Other liabilities	821	0
2.02.02.02	Other non-current liabilities	821	0
2.02.02.02.06	Suppliers	821	0
2.02.04	Provisions	203,171	174,159
2.02.04.01	Legal deposits	188,227	174,159
2.02.04.01.01	Tax Provision	2,318	2,204
2.02.04.01.02	Social security and labor provisions	178,499	165,211
2.02.04.01.04	Civil provisions	7,410	6,744
2.02.04.02	Others provisions	14,944	0
2.02.04.02.05	Leasing	14,944	0
2.03	Shareholders' equity	832,397	602,497
2.03.01	Paid-in capital	2,089,978	2,089,978
2.03.01.01	Paid-in capital	2,069,566	1,990,708
2.03.01.02	Debentures convertible into shares	25,787	104,645
2.03.01.03	Capitalization costs	-5,375	-5,375
2.03.02	Capital Reserve	-741	-741
2.03.02.05	Treasury shares	-741	-741
2.03.05	Retained earnings	-515,876	-725,250
2.03.06	Equity valuation adjustments	-740,964	-761,490

Consolidated financial statements / Statement of income
(In thousands of Reais)

Code of account	Account description	3Q19	9M19	3Q18	9M18
3.01	Net sales	1,329,187	4,066,598	1,478,936	3,450,656
3.02	Cost of goods sold	-1,355,940	-3,962,790	-1,346,454	-3,288,717
3.03	Gross income	-26,753	103,808	132,482	161,939
3.04	Operating expenses	162,006	81,779	-66,112	-256,251
3.04.01	Sales expenses	-7,849	-21,212	-7,668	-22,080
3.04.02	General and administrative expenses	-31,445	-79,232	-31,791	-87,430
3.04.02.01	General and administrative	-22,194	-63,087	-21,384	-57,782
3.04.02.02	Management fees	-2,138	-6,226	-1,982	-5,575
3.04.02.03	General and administrative	-7,113	-9,919	-8,425	-24,073
3.04.04	Other income	260,063	360,494	27,567	44,303
3.04.05	Other expenses	-58,763	-178,271	-54,220	-191,044
3.05	Operating profit before financial results	135,253	185,587	66,370	-94,312
3.06	Financial income (loss)	-2,018	16,915	-97,661	-388,616
3.06.01	Financial income	340,329	693,492	227,674	723,888
3.06.02	Financial expenses	-342,347	-676,577	-325,335	-1,112,504
3.07	Income before income and social contribution taxes	133,235	202,502	-31,291	-482,928
3.08	Income and social contribution tax	6,897	1,515	12,448	126,884
3.08.01	Income and social contribution tax for the current year	70	-221	-494	-2,250
3.08.02	Deferred income and social contribution taxes	6,827	1,736	12,942	129,134
3.09	Net income (loss) from continuing operations	140,132	204,017	-18,843	-356,044
3.11	Income (Loss) for the period	140,132	204,017	-18,843	-356,044
3.11.01	Atributed to Parent Company Share Holders	140,132	204,017	-18,843	-356,044
3.99	Earning per share - (Reais / Share)				
3.99.01	Basic earnings per share				
3.99.01.01	ON	3.44271	5.01222	-0.46482	-8.78299
3.99.02	Diluted earnings per share				
3.99.02.01	ON	3.37025	4.90672	-0.42738	-8.07553

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Consolidated financial statements / Statement of comprehensive income (loss)
(In thousands of Reais)

Code of account	Account description	3Q19	9M19	3Q18	9M18
4.01	Income (Loss) for the period	140,132	204,017	-18,843	-356,044
4.02	Other comprehensive Income	2,232	25,883	7,957	25,476
4.02.01	Hedge cash flow – Export income ACC/PPE	-5,275	-5,358	-742	1,743
4.02.02	Hedge cash flow – NDF sales income	8,127	33,966	7,617	22,804
4.02.05	Hedge cash flow – Cost metal – Future stock exchange	-628	-2,917	1,343	690
4.02.07	Earnings from Foreign exchange variations	8	192	-261	239
4.03	Comprehensive income for the year	142,364	229,900	-10,886	-330,568
4.03.01	Atributed to Parent Company Share Holders	142,364	229,900	-10,886	-330,568

Consolidated financial statements / Statements of cash flows - Indirect method
(In thousands of Reais)

Code of account	Account description	9M19	9M18
6.01	Net cash provided by operating activities	264,481	346,368
6.01.01	Cash generated from operations	645,320	175,116
6.01.01.01	Income before income and social contribution taxes	202,502	-482,928
6.01.01.02	Residual value of written-off fixed assets	-110	5
6.01.01.03	Depreciation and amortization	113,949	108,850
6.01.01.05	Amortization of right-to-use assets	10,312	0
6.01.01.06	Provision for losses on lawsuits	38,447	48,939
6.01.01.07	Provision of other estimated losses	-7,482	10,545
6.01.01.08	Financial charges	292,742	489,715
6.01.01.09	Present value adjustment - receivables and suppliers	-602	-679
6.01.01.12	Provision (reversal) for recoverable value of estimated losses	-4,438	669
6.01.02	Changes in assets and liabilities	-380,408	173,503
6.01.02.02	Accounts receivable	419,124	-135,924
6.01.02.04	Inventory	145,596	238,991
6.01.02.05	Taxes recoverable	-531,719	-18,843
6.01.02.06	Prepaid expenses	351	-3,369
6.01.02.07	Legal deposits	-15,116	-2,355
6.01.02.08	Derivative financial instruments	77,680	-48,564
6.01.02.09	Assets held for sale	-147	249
6.01.02.10	Other current and non-current liabilities	-33,640	-3,235
6.01.02.11	Suppliers	-323,230	182,376
6.01.02.12	Forfeiting and letter of credit operations	62,406	-10,071
6.01.02.14	Taxes payable	18,786	2,197
6.01.02.15	Legal deposits	-17,170	-27,734
6.01.02.16	Payroll and related charges	634	13,062
6.01.02.18	Advances from clients	-175,434	117,668
6.01.02.19	Derivative financial instruments	3,002	-142,897
6.01.02.20	Other current and non-current liabilities	-11,531	11,952
6.01.03	Other	-431	-2,251
6.01.03.01	Income and social contribution taxes paid	-431	-2,251
6.02	Net cash used in investment activities	-65,181	-195,916
6.02.04	Other investments	-91	0
6.02.07	Fixed assets and intangible additions	-85,034	-182,181
6.02.08	Financial investments	-2,711,526	-587,991
6.02.09	Redemption of financial investments	2,731,470	574,256
6.03	Net cash generated by (used in) financing activities	-161,488	-151,802
6.03.01	Loans and financing	53,264	23,557
6.03.02	Amortization of loans and financing	-90,282	-74,236
6.03.04	Interest payments on loans	-113,978	-101,123
6.03.05	Leasing	-10,492	0
6.05	Increase (decrease) in cash and cash equivalents	37,812	-1,350
6.05.01	Cash and cash equivalents at the beginning of the year	216,668	345,551
6.05.02	Cash and cash equivalents at the end of the year	254,480	344,201

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Consolidated financial statements / Statement of changes in equity – 01/01/2019 - 09/30/2019
(In thousands of Reais)

Code of account	Account description	Paid-up capital	Capital reserves, Options granted and Treasury shares	Profit reserves	Retained earnings (loss)	Other comprehensive income	Equity	Consolidated Equity
5.01	Opening balances	1,990,708	98,529	0	-725,250	-761,490	602,497	602,497
5.03	Adjusted opening balances	1,990,708	98,529	0	-725,250	-761,490	602,497	602,497
5.04	Capital transactions with partners	78,858	-78,858	0	0	0	0	0
5.04.01	Capital increase	78,858	-78,858	0	0	0	0	0
5.05	Total comprehensive income	0	0	0	204,017	25,883	229,900	229,900
5.05.01	Net income for the period	0	0	0	204,017	0	204,017	204,017
5.05.02	Other comprehensive income	0	0	0	0	25,883	25,883	25,883
5.05.02.01	Financial instruments - adjustments	0	0	0	0	25,691	25,691	25,691
5.05.02.06	Earnings and losses from foreign exchange variations-foreign investment	0	0	0	0	192	192	192
5.06	Internal changes in equity	0	0	0	5,357	-5,357	0	0
5.06.02	Realization of revaluation reserve	0	0	0	7,143	-7,143	0	0
5.06.03	Taxes on the realization of the revaluation reserve	0	0	0	-1,786	1,786	0	0
5.07	Closing balances	2,069,566	19,671	0	-515,876	-740,964	832,397	832,397

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Consolidated financial statements / Statement of changes in equity – 01/01/2018 - 09/30/2018
(In thousands of Reais)

Code of account	Account description	Paid-up capital	Capital reserves, Options granted and Treasury shares	Profit reserves	Retained earnings (loss)	Other comprehensive income	Equity	Consolidated Equity
5.01	Opening balances	1,984,751	104,486	0	-414,356	-786,359	888,522	888,522
5.03	Adjusted opening balances	1,984,751	104,486	0	-414,356	-786,359	888,522	888,522
5.04	Capital transactions with partners	5,957	-5,957	0	0	0	0	0
5.04.01	Capital increase	5,957	-5,957	0	0	0	0	0
5.05	Total comprehensive income	0	0	0	-356,044	25,476	-330,568	-330,568
5.05.01	Net income for the period	0	0	0	-356,044	0	-356,044	-356,044
5.05.02	Other comprehensive income	0	0	0	0	25,476	25,476	25,476
5.05.02.01	Financial instruments - adjustments	0	0	0	0	25,237	25,237	25,237
5.05.02.06	Earnings and losses from foreign exchange variations-foreign investment	0	0	0	0	239	239	239
5.06	Internal changes in equity	0	0	0	10,461	-10,461	0	0
5.06.02	Realization of revaluation reserve	0	0	0	13,516	-13,516	0	0
5.06.03	Taxes on the realization of the revaluation reserve	0	0	0	-3,055	3,055	0	0
5.07	Closing balances	1,990,708	98,529	0	-759,939	-771,344	557,954	557,954

**Consolidated financial statements or Statement of value added
(In thousands of Reais)**

Code of account	Account description	9M19	9M18
7.01	Income	4,839,737	3,803,200
7.01.01	Sales of goods and services	4,476,871	3,759,119
7.01.02	Other income	358,427	44,081
7.01.04	Provision of credits for doubtful accounts	4,439	0
7.02	Inputs acquired from third parties	-4,301,716	-3,556,553
7.02.01	Cost of goods and services sold	-3,806,376	-3,104,127
7.02.02	Materials, energy, third party services and other	-495,340	-452,426
7.03	Gross added value	538,021	246,647
7.04	Retentions	-124,261	-108,850
7.04.01	Depreciation and amortization	-113,949	-108,850
7.04.02	Others	-10,312	0
7.05	Net added value	413,760	137,797
7.06	Added value received through transfers	693,492	723,888
7.06.02	Financial income	693,492	723,888
7.07	Total net added value payable	1,107,252	861,685
7.08	Net added value payable	1,107,252	861,685
7.08.01	Personnel and charges	182,396	186,392
7.08.02	Taxes, duties and contributions	34,894	-86,034
7.08.03	Third-party capital remuneration	685,945	1,117,371
7.08.04	Remuneration of own capital	204,017	-356,044
7.08.04.03	Income (Loss) for the period	204,017	-356,044

MESSAGE FROM THE MANAGEMENT

In the 3Q19, we continued promoting our strategies to deepen the focus on operating cash generation and shortening operating cycles.

The process involving the introduction of the lean manufacturing system has been expanded. In addition to operations at the Utinga (Eluma) plant, the system also started being deployed at the Dias d'Ávila (Caraíba) plant, completing the full operation flow, from the smelting to the refining. The impacts of these actions can be seen in the cash generation in the 3Q19, which reached R\$ 231 million for the period, the best result of the year.

Net income totaled R\$ 140 million in the quarter, positively impacted by the recognition of amounts related to favorable judicial decisions that challenged the inclusion of ICMS in PIS and COFINS calculation basis.

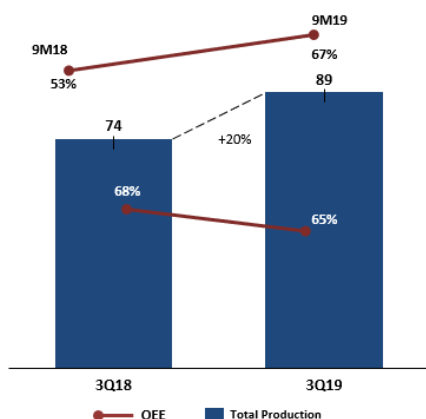
As previously announced, Paranapanema will perform an annual scheduled maintenance beginning as of November 25, with a duration of approximately 20 days. This work will involve approximately 1,000 direct and 2,000 indirect employees and will bring improvements in the Company's operating performance.

There was also a corporate change in the third quarter with the sale of the shares held by Banco do Brasil's Employee Pension Fund (PREVI) to the Buritipar Group, which together with its owner, became the largest shareholders of the company, holding 37.4% of its capital.

OPERATING PERFORMANCE

Total Production Volume

Total Production (thousand tons) x Plant Efficiency Level (%)

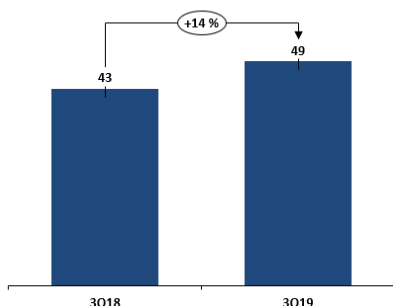


In the 3Q19, the productivity of the plant continued to evolve. Therefore, we were able to reach a total production of 89 thousand tons, an increase of 20% compared to the 3Q18.

The average OEE of the Dias d'Ávila unit was approximately 65%, representing a 5% decrease when compared to the 3Q18, owing to some intermittences in the sulfuric acid tower and in the smelter. However, Paranapanema recorded a 26% increase in performance in the 9M19 when compared to the 9M18.

Production of Primary Copper (Cathode)

Production of Primary Copper (thousand tons)

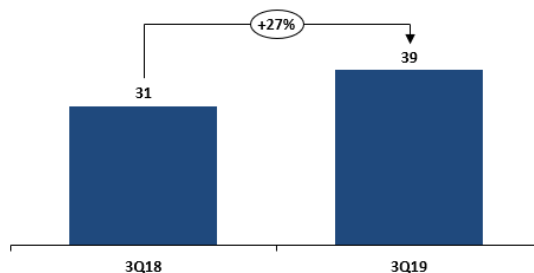


The 14% growth in the 3Q19 in primary copper production in relation to the 3Q18 results mainly from the optimization in the use of concentrate blend.

Copper Products*

The 27% growth in the 3Q19 in copper product production in relation to the 3Q18 was driven by the Company's business strategy of prioritizing the sales of products with a higher added value.

Production of Copper Products (thousand tons)



Byproducts

In the 3Q19, production volume reached 152 thousand tons, a decrease of 16% compared to the 3Q18, due to the intermittence in the sulfuric acid tower and the reduced demand for Gross Slag in the construction market.

*Copper Products: Rods, Wires, Bars, Profiles, Wires, Laminates, Pipes and Connections.

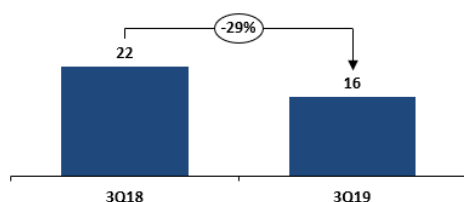
COMMERCIAL PERFORMANCE

Sales Volume

The total volume of products sold in the 3Q19 was 53.7 thousand tons, a 4% increase compared to the 3Q18. It is worth highlighting that Copper Products recorded a 28% increase. This steady increase in sales volume is due to the strengthening of copper products, following the Company's strategy of optimizing assets and increasing operating leverage.

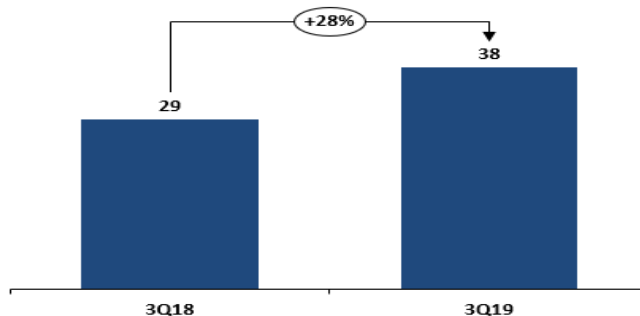
Primary Copper

Primary Copper Volume (thousand tons)



The 29% decrease in the 3Q19 in primary copper sales in relation to the 3Q18 was offset by higher sales of copper products.

Copper Product Sales Volume (thousand tons)



Copper Products

The 28% growth in the 3Q19 in the sales volume of copper in relation to the 3Q18 was driven by the commercial strategy of focusing on selling more profitable products. Thus, we increased our market share in the domestic market.

Byproducts

Byproducts result from process of transformation of concentrate copper into Cathodes. The main are Sulphuric Acid and Anode Slime (material rich in precious metals such as gold and silver). Sulphuric Acid has its price based on the FMB quote (Fertilizer Market Bulletin) plus premiums or discounts as local market and freight, while Anode Slime has its price set as a result of the precious metals it contains. Byproduct prices are indexed to dollar.

In the 3Q19, production volume available for sale reached 168 thousand tons, a decrease of 10% compared to the 3Q18, due to the reduced volume owing to the intermittence in the sulfuric acid tower and in the smelter.

ECONOMIC PERFORMANCE

Net Revenue

<i>In R\$ thd, except otherwise stated</i>	3Q18	3Q19	Δ %
Primary Copper	568.705	368.709	-35%
% of Revenue	38,5%	27,7%	-10,7 p.p.
Copper Products	659.031	822.608	25%
% of Revenue	44,6%	61,9%	17,3 p.p.
Byproducts	251.200	137.870	-45%
% of Revenue	17,0%	10,4%	-6,6 p.p.
Total Net Revenue	1.478.936	1.329.187	-10%
Domestic Market [%]	34,4%	36,8%	2,4 p.p.
Export Market [%]	64,5%	62,0%	-2,5 p.p.
Toll [%]	1,1%	1,2%	0,0 p.p.

The 25% growth in the 3Q19 in the Revenue of Copper Products when compared to the 3Q18 was driven by the strategy of focusing on selling more profitable products.

Total Net Revenue in the 3Q19 decreased by 10% in relation to the 3Q18, mainly explained by the 5% decrease in LME prices.

Lastly, it is worth remembering that the Company's Net Revenue is negatively impacted by Other Comprehensive Income (OCI), which corresponds to the non-monetary effect of deferred 2015 exchange-rate change due to adjustments in hedge accounting and negatively impacted the Company's Revenue on R\$ 2 million.

Gross Income

<i>In R\$ thd, except otherwise stated</i>	3Q18	3Q19	Δ %
Net Revenue	1.478.936	1.329.187	-10%
Total COGS	(1.346.454)	(1.355.940)	1%
(-) Metal Cost	(1.192.686)	(1.196.268)	0%
(-) Transformation Cost	(153.768)	(159.672)	4%
COGS Total/tonnes sold	26,0	25,2	-3%
Metal Cost/tonnes sold	23,0	22,2	-3%
Transformation Cost/tonnes sold	3,0	3,0	0%
Gross Profit	132.482	(26.753)	-120%
% of Revenue	9,0%	-2,0%	-11,0 p.p.
TC/RC (reduces metal cost)	67.457	73.727	9%
Premiums	286.250	132.919	-54%
Premium/Net Revenue [%]	19,4%	10,0%	-9,4 p.p.
Premium/tonnes sold	5,53	2,47	-55%

¹ Unit Cost: The indices do not include the costs/resale volumes of other raw materials

The Company recorded Gross Loss of R\$ 26 million in the 3Q19, due to events not related to the performance for this quarter (Revert content adjustment) or non-recurring events (increased consumption of Caustic Soda), which, together, negatively impacted gross income by approximately R\$ 41 million.

Operating Expenses

<i>In R\$ thd, except otherwise stated</i>	3Q18	3Q19	Δ %
Total Operating Expenses	(66.112)	162.006	-345%
Sales Expenses	(7.668)	(7.849)	2%
G&A Expenses and Management Compensation	(23.366)	(24.332)	4%
Other Operating, net	(35.078)	194.187	-654%
Total Expenses/Net Revenue [%]	4,5%	-12,2%	-16,7 p.p.
Recurring Expenses/Gross Profit [%]	8,6%	-56,9%	-65,4 p.p.
Recurring Expenses/tonnes sold	0,22	0,28	29%
Main items - Other Operating, Net:			
Provisions for labor and tax contingencies	(18.474)	(5.396)	71%
Other provisions	(62)	(5.809)	-9269%
Idle capacity	(36.214)	(38.386)	-6%
Exclusion of PIS and COFINS of ICMS base	0	226.808	n.a

Operating Expenses in the 3Q19 were positively impacted by a non-recurring event related to the recognition of a tax credit payable by court decisions recognizing that PIS/COFINS taxes on ICMS for the period from 2007 to 05/2014 were undue. Disregarding the non-recurring event, operating expenses decreased by 2% between the 3Q18 and the 3Q19, and by 9% between the 2Q19 and the 3Q19

EBITDA

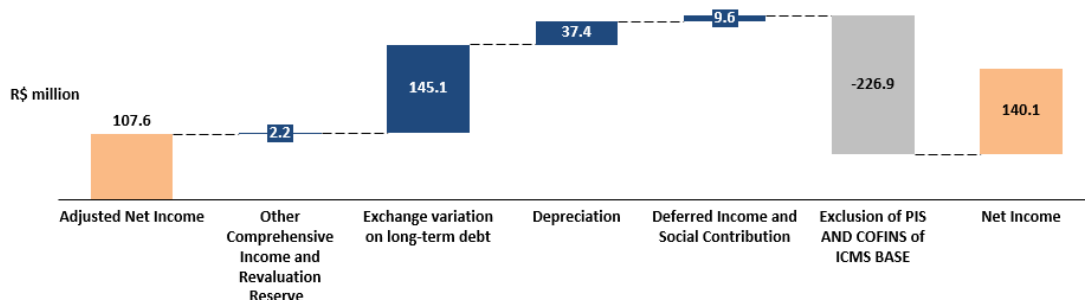
	3Q18	3Q19	Δ %
Net Income	(18.843)	140.132	844%
(+) Taxes	(12.448)	(6.897)	45%
(+) Net Financial Result	97.661	2.018	-98%
EBIT	66.370	135.253	104%
(+) Depreciation and Amortization	38.086	37.447	-2%
EBITDA	104.456	172.700	65%
% of Revenue	7,1%	13,0%	5,9 p.p.

The EBITDA reached R\$ 173 million in the 3Q19, a 65% increase in relation to the 3Q18, explained by the Company's strategy to increase sales volume in the Copper Products segment and by the positive impact of credit receivables related to PIS/COFINS contributions on ICMS tax.

Net Income

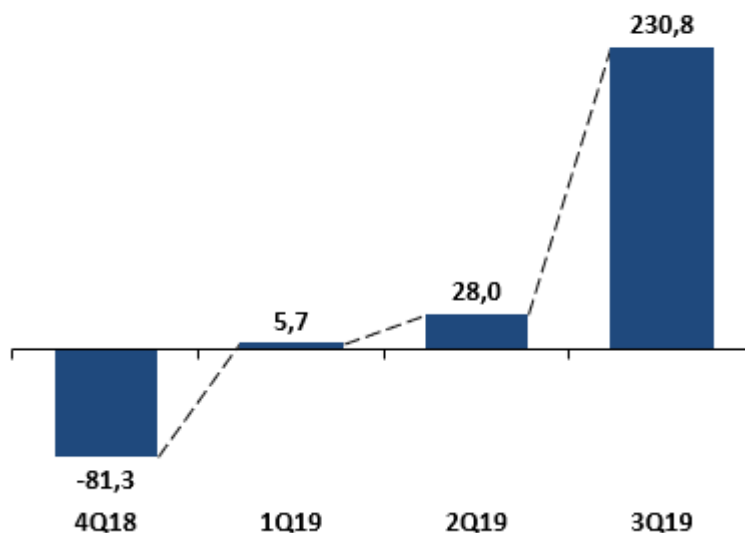
The Company recorded a Net Income of R\$ 140 million in the 3Q19. We had non-monetary impacts of the exchange-rate change on long-term debts, totaling a financial expense of R\$ 145 million¹. In addition to this non-monetary impact, depreciation totaled R\$ 37 million, while expense under Other Comprehensive Income (Equity Valuation Adjustment), Revaluation Reserve was R\$ 2 million.

Operating Cash Generation



The Operating Cash Generation was R\$ 231 million in the 3Q19, due to the improvement in the cash conversion cycle that reached 40 days in the period.

Operating Cash Generation (R\$ million)

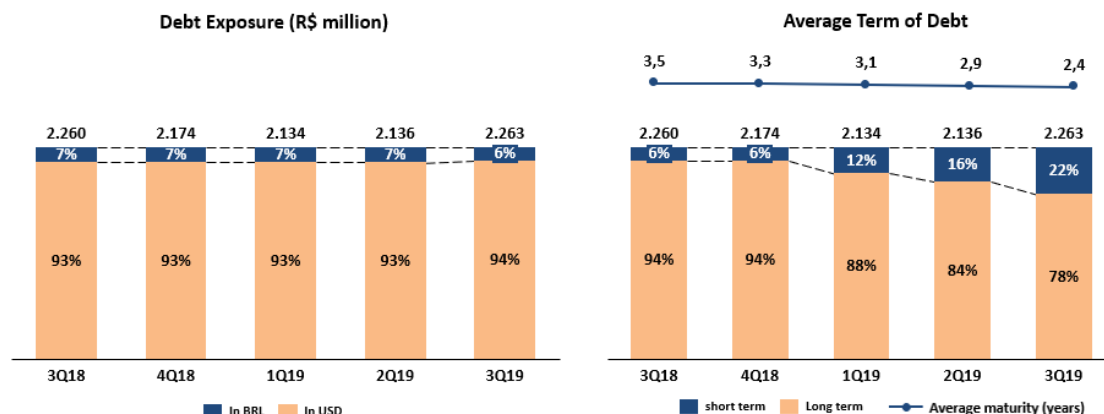


¹ About 94% of our total debt is denominated in US dollars, while 78% of this debt have a long-term maturity. It is important to point out that the effects of the exchange-rate change on long-term debts should not be taken as an actual exposure of the Company, since the cash related to these payments will be generated in future periods, when revenues will also capture such appreciation. Thus, from the perspective of the Company's cash flow, there is a natural hedge between future revenues and future debt payments.

Indebtedness

<i>In R\$ thd, except otherwise stated</i>	3Q18	4Q18	1Q19	2Q19	3Q19
Loans and Financing Short Term	138.001	136.188	267.279	338.088	508.617
Loans and Financing Long Term	2.122.484	2.037.787	1.866.900	1.797.800	1.754.808
Total Bank Loans	2.260.485	2.173.975	2.134.179	2.135.888	2.263.425
Transaction Costs - reprofiling	(26.152)	(25.062)	(23.972)	(22.883)	(21.794)
Total Loans	2.234.333	2.148.913	2.110.207	2.113.005	2.241.631
Forfeiting and letter of credit operations	38.403	66.914	79.775	112.904	131.701
Derivatives financial instruments	37.189	26.449	75.678	30.900	25.207
Derivatives	(160.051)	(129.313)	(50.661)	(64.052)	(82.471)
Gross Debt	2.149.874	2.112.963	2.214.999	2.192.757	2.316.068
Cash and Cash Equivalents	344.201	216.668	143.548	147.993	254.480
Financial Investments	66.820	45.556	22.860	20.310	25.612
Net Debt	1.738.853	1.850.739	2.048.591	2.024.454	2.035.976
Divida Curto Prazo (%)	6%	6%	12%	16%	22%
Divida Longo Prazo (%)	94%	94%	88%	84%	78%
LTM EBITDA*	34.638	98.621	159.520	325.687	393.931
Net Debt /LTM EBITDA	50,20x	18,77x	12,84x	6,22x	5,17x
* Last Twelve Months					

The indicator measured through the Net Debt/EBITDA ratio showed a decrease, driven by the better operating performance and the impact of the recognition of PIS/COFINS credits. The Company continues focusing on improving its operating results, while gaining efficiency in its processes, thereby reducing its financial leverage.



There were no new long-term funding for the period. The increase in short term reflects the transition from part of long-term to short-term debt, arising from the first amortization installment of the principal, which will occur in March 2020. Considering the current debt profile, the average debt maturity decreased in relation to the 2Q19 and is currently at 2.4 years.

Balance sheet

September 30, 2019 and December 31, 2018

(in thousands of Reais)

ASSETS	Notes	Parent company		Consolidated	
		09/30/2019	12/31/2018	09/30/2019	12/31/2018
Cash and cash equivalents	05	244,993	201,571	254,480	216,668
Financial investments	05	6,554	28,023	11,597	28,791
Accounts receivable	06	303,085	771,700	254,028	665,589
Inventory	07	1,457,749	1,588,298	1,481,343	1,626,575
Taxes recoverable	08	94,469	90,228	99,996	101,742
Other current assets	09	33,679	10,809	33,843	7,693
Derivative financial instruments	28	82,471	129,313	82,471	129,313
Prepaid expenses		14,002	10,274	14,422	10,789
Total current assets		2,237,002	2,830,216	2,232,180	2,787,160
Financial investments	05	13,228	16,765	14,015	16,765
Accounts receivable	06	-	10	1,822	1,096
Taxes recoverable	08	656,958	122,400	656,958	122,400
Assets held for sale	10	112,374	112,745	112,374	112,745
Deferred income tax and social contribution	26	167,763	164,785	179,130	177,395
Legal deposits	09.2	26,940	32,309	26,940	32,309
Other non-current assets	09.1	95,313	83,953	95,313	83,953
Prepaid expenses		5,685	9,669	5,685	9,669
		1,078,261	542,636	1,092,237	556,332
Prepaid expenses	15	26,552	-	26,861	-
Investments	11	25,045	21,772	-	-
Other investments		2,418	2,327	2,418	2,327
Property, plant and equipment	12	1,241,496	1,266,555	1,242,359	1,267,510
Intangible assets	12	8,813	10,165	8,813	10,165
		1,304,324	1,300,819	1,280,451	1,280,002
Total non-current assets		2,382,585	1,843,455	2,372,688	1,836,334
Total assets		4,619,587	4,673,671	4,604,868	4,623,494

See the accompanying notes to the quarterly information.

Balance sheet

September 30, 2019 and December 31, 2018

(in thousands of Reais)

LIABILITIES	Notes	Parent company		Consolidated	
		09/30/2019	12/31/2018	09/30/2019	12/31/2018
Suppliers	13	1,006,572	1,308,257	986,193	1,257,987
Forfaiting and letter of credit operations	14	131,701	66,914	131,701	66,914
Leasing	15	12,772	-	12,947	-
Loans and financing	16	504,257	131,829	504,257	131,829
Derivative financial instruments	28	25,207	26,449	25,207	26,449
Payroll and related charges	17	60,584	59,902	60,695	60,061
Taxes payable	18	27,776	9,691	28,720	11,139
Dividends payable	20	27,351	26,274	27,351	26,274
Advances from clients	20	8,586	192,515	13,606	193,122
Other current liabilities	20	40,964	55,353	40,428	55,979
Total current liabilities		1,845,770	1,877,184	1,831,105	1,829,754
Suppliers	13	821	-	821	-
Leasing	15	14,797	-	14,944	-
Loans and financing	16	1,737,374	2,017,084	1,737,374	2,017,084
Legal deposits	19	188,227	174,160	188,227	174,159
Provision for negative net equity	11	201	2,746	-	-
Total non-current liabilities		1,941,420	2,193,990	1,941,366	2,191,243
Total liabilities		3,787,190	4,071,174	3,772,471	4,020,997
Paid-in capital	21.a	2,069,566	1,990,708	2,069,566	1,990,708
Debentures convertible into shares	21.b	25,787	104,645	25,787	104,645
Capitalization costs		(5,375)	(5,375)	(5,375)	(5,375)
Equity valuation adjustments	21.h	(740,964)	(761,490)	(740,964)	(761,490)
Treasury shares		(741)	(741)	(741)	(741)
Retained earnings		(515,876)	(725,250)	(515,876)	(725,250)
Shareholders' equity	21	832,397	602,497	832,397	602,497
Total shareholders' equity		832,397	602,497	832,397	602,497
Total liabilities and equity		4,619,587	4,673,671	4,604,868	4,623,494
Net equity per share – in Brazilian Reais (R\$)		19.18	14.79		

See the accompanying notes to the quarterly information.

Statements of income

Three and nine-month periods ended September 30,
(In thousands of Reais, except earnings per share)

	Notes	3Q19	9M19	Parent company	
				3Q18 Reclassified	9M18 Reclassified
Net sales	22	1,389,943	4,323,963	1,595,614	3,646,134
Cost of goods sold	23	(1,420,966)	(4,233,603)	(1,466,999)	(3,495,482)
Gross Profit (Loss)		(31,023)	90,360	128,615	150,652
Commercial	23	(7,369)	(19,713)	(7,137)	(20,428)
General and administrative	23	(21,858)	(61,813)	(21,057)	(56,749)
Management fees	11.4	(2,137)	(6,225)	(1,982)	(5,575)
Equity	11.1	680	2,879	(632)	7,042
General and administrative		(7,095)	(9,873)	(8,396)	(23,981)
Other expenses	24	(58,733)	(178,420)	(59,958)	(196,665)
Other income	24	260,038	360,446	27,657	44,219
Operating expenses		163,526	87,281	(71,505)	(252,137)
Operating profit before financial results		132,503	177,641	57,110	(101,485)
Financial expenses	25	(334,396)	(650,714)	(311,124)	(1,085,712)
Financial income	25	334,790	674,113	221,890	700,434
Income (Loss) before income and social contribution taxes		132,897	201,040	(32,124)	(486,763)
Deferred income and social contribution taxes	26.2	7,235	2,977	13,281	130,719
Income and social contribution tax		7,235	2,977	13,281	130,719
Income (Loss) for the period		140,132	204,017	(18,843)	(356,044)
Earning (Loss) per common share		3.44271	5.01222	(0.46482)	(8.78299)
Earning (Loss) per diluted common share		3.37025	4.90672	(0.42738)	(8.07553)

	Notes	3Q19	9M19	Consolidated	
				3Q18 Reclassified	9M18 Reclassified
Net sales	22	1,329,187	4,066,598	1,478,936	3,450,656
Cost of goods sold	23	(1,355,940)	(3,962,790)	(1,346,454)	(3,288,717)
Gross Profit (Loss)		(26,753)	103,808	132,482	161,939
Commercial	23	(7,849)	(21,212)	(7,668)	(22,080)
General and administrative	23	(22,194)	(63,087)	(21,384)	(57,782)
Management fees	11.4	(2,138)	(6,226)	(1,982)	(5,575)
General and administrative		(7,113)	(9,919)	(8,425)	(24,073)
Other expenses	24	(58,763)	(178,271)	(54,220)	(191,044)
Other income	24	260,063	360,494	27,567	44,303
Operating expenses		162,006	81,779	(66,112)	(256,251)
Operating profit before financial results		135,253	185,587	66,370	(94,312)
Financial expenses	25	(342,347)	(676,577)	(325,335)	(1,112,504)
Financial income	25	340,329	693,492	227,674	723,888
Income (Loss) before income and social contribution taxes		133,235	202,502	(31,291)	(482,928)
Income and social contribution tax for the current year	26.2	70	(221)	(494)	(2,250)
Deferred income and social contribution taxes	26.2	6,827	1,736	12,942	129,134
Income and social contribution tax		6,897	1,515	12,448	126,884
Income (Loss) for the period		140,132	204,017	(18,843)	(356,044)
Earning (Loss) per common share		3.44271	5.01222	(0.46482)	(8.78299)
Earning (Loss) per diluted common share		3.37025	4.90672	(0.42738)	(8.07553)

See the accompanying notes to the quarterly information.

Statements of comprehensive income (loss)

Three and nine-month period ended September 30,
(in thousands of Reais)

	Parent company/Consolidated			
	3Q19	9M19	3Q18	9M18
Income (Loss) for the period	140,132	204,017	(18,843)	(356,044)
Other income components, net of tax effects				
Items to be subsequently reclassified to the result	2,232	25,883	7,957	25,476
Hedge cash flow – Export income ACC/PPE	(5,275)	(5,358)	(742)	1,743
Hedge cash flow – NDF sales income	8,127	33,966	7,617	22,804
Hedge cash flow – Cost metal – Future stock exchange	(628)	(2,917)	1,343	690
Earnings from Foreign exchange variations	8	192	(261)	239
Comprehensive income for the year	142,364	229,900	(10,886)	(330,568)
Allocated to:				
Controlling shareholders	142,364	229,900	(10,886)	(330,568)
Non-controlling shareholders				

See the accompanying notes to the quarterly information.

Statements of changes in equity

Nine-month period ended September 30

(in thousands of Reais)

	Notes	Paid-in capital	Debentures	Capitalization costs	Treasury shares	Accumulated loss	Equity valuation adjustment	Consolidated shareholders' equity
Balance as at December 31, 2017		1,984,751	110,602	(5,375)	(741)	(414,356)	(786,359)	888,522
Capital increase		5,957	(5,957)	-	-	-	-	-
Capital transactions with partners		5,957	(5,957)	-	-	-	-	-
Financial instruments, net of taxes	21.h	-	-	-	-	-	25,237	25,237
Earnings and losses from foreign exchange variations-foreign investment	21.h	-	-	-	-	-	239	239
Equity evaluation adjustment	21.h	-	-	-	-	13,516	(13,516)	-
Tax on realization of equity evaluation adjustment	21.h	-	-	-	-	(3,055)	3,055	-
Other comprehensive income		-	-	-	-	10,461	15,015	25,476
Loss for the period		-	-	-	-	(356,044)	-	(356,044)
Balance as at September 30, 2018		1,990,708	104,645	(5,375)	(741)	(759,939)	(771,344)	557,954
Balance as at December 31, 2018		1,990,708	104,645	(5,375)	(741)	(725,250)	(761,490)	602,497
Capital increase	01	78,858	(78,858)	-	-	-	-	-
Capital transactions with partners		78,858	(78,858)	-	-	-	-	-
Financial instruments, net of taxes	21.h	-	-	-	-	-	25,691	25,691
Earnings and losses from foreign exchange variations-foreign investment	21.h	-	-	-	-	-	192	192
Equity evaluation adjustment	21.h	-	-	-	-	7,143	(7,143)	-
Tax on realization of equity evaluation adjustment	21.h	-	-	-	-	(1,786)	1,786	-
Other comprehensive income		-	-	-	-	5,357	20,526	25,883
Income for the period		-	-	-	-	204,017	-	204,017
Balance as at September 30, 2019		2,069,566	25,787	(5,375)	(741)	(515,876)	(740,964)	832,397

See the accompanying notes to the Quarterly Information.

Statements of cash flows - Indirect method

Nine-month period ended September 30

(In thousands of Reais)

	Parent company		Consolidated	
	9M19	9M18	9M19	9M18
Income before income and social contribution taxes	201,040	(486,763)	202,502	(482,928)
Adjustments to reconcile net Income (loss) with resources provided by operating activities				
Residual value of written-off fixed assets	(110)	5	(110)	5
Depreciation and amortization	113,857	108,763	113,949	108,850
Amortization of right-to-use assets	10,186	-	10,312	-
Equity in net income	(2,879)	(7,041)	-	-
Shareholders' equity provision	201	5,738	-	-
Provision (reversal) for recoverable value of estimated losses	(4,184)	896	(4,438)	669
Provision of other estimated losses	(7,482)	10,545	(7,482)	10,545
Provision for losses on lawsuits	38,447	48,939	38,447	48,939
Present value adjustment - receivables and suppliers	2,650	1,145	(602)	(679)
Financial charges	292,550	489,480	292,742	489,715
	644,276	171,707	645,320	175,116
(Increase) decrease in assets				
Accounts receivable	474,311	(192,148)	419,124	(135,924)
Inventory	130,913	226,850	145,596	238,991
Taxes recoverable	(536,713)	(19,599)	(531,719)	(18,843)
Prepaid expenses	256	(3,607)	351	(3,369)
Legal deposits	(15,116)	(2,368)	(15,116)	(2,355)
Derivative financial instruments	77,680	(48,601)	77,680	(48,564)
Assets held for sale	(147)	249	(147)	249
Other current and non-current liabilities	(30,361)	(9,166)	(33,640)	(3,235)
Increase (decrease) in liabilities				
Suppliers	(353,091)	252,956	(323,230)	182,376
Forfeiting and letter of credit operations	62,406	(10,071)	62,406	(10,071)
Taxes payable	18,085	2,199	18,786	2,197
Legal deposits	(17,171)	(27,721)	(17,170)	(27,734)
Payroll and related charges	682	13,066	634	13,062
Derivative financial instruments	3,002	(142,932)	3,002	(142,897)
Advances from clients	(179,847)	120,513	(175,434)	117,668
Other current and non-current liabilities	(10,369)	10,070	(11,531)	11,952
Cash flow generated from operations	268,796	341,397	264,912	348,619
Income and social contribution taxes paid	-	-	(431)	(2,251)
Net cash provided by operating activities	268,796	341,397	264,481	346,368
Investing activities				
Financial investments made	(2,706,464)	(588,717)	(2,711,526)	(587,991)
Redemption of financial investments	2,731,470	574,256	2,731,470	574,256
Other investments	(91)	-	(91)	-
Variations in the capital of controlled companies	(2,947)	-	-	-
Fixed assets and intangible additions	(85,034)	(182,150)	(85,034)	(182,181)
Net cash used in investing activities	(63,066)	(196,611)	(65,181)	(195,916)
Financing activities				
Loans and financing	53,264	23,557	53,264	23,557
Amortization of loans and financing	(90,282)	(74,239)	(90,282)	(74,236)
Interest payments on loans	(113,978)	(101,123)	(113,978)	(101,123)
Leasing	(11,312)	-	(10,492)	-
Net cash used in financing activities	(162,308)	(151,805)	(161,488)	(151,802)
Increase (decrease) in cash and cash equivalents	43,422	(7,019)	37,812	(1,350)
Cash and cash equivalents at the beginning of the year	201,571	343,678	216,668	345,551
Cash and cash equivalents at the end of the year	244,993	336,659	254,480	344,201
Increase (decrease) in cash and cash equivalents	43,422	(7,019)	37,812	(1,350)

See the accompanying notes to the quarterly information.

Statements of value added

Nine-month period ended September 30

(in thousands of Reais)

	Parent company		Consolidated	
	9M19	9M18	9M19	9M18
Income				
Sales of goods and services	4,796,503	4,023,617	4,476,871	3,759,119
Provision for doubtful accounts	4,184	-	4,439	-
Other income	358,377	44,002	358,427	44,081
Inputs acquired from third parties (Including taxes)				
Cost of goods and services sold	(3,995,968)	(3,313,505)	(3,806,376)	(3,104,127)
Materials, energy, third party services and other	(486,066)	(436,952)	(495,340)	(452,426)
Gross added value	677,030	317,162	538,021	246,647
Retentions				
Depreciation and amortization	(113,857)	(108,763)	(113,949)	(108,850)
Amortization of right-to-use assets	(10,186)	-	(10,312)	-
Net added value	552,987	208,399	413,760	137,797
Received from third parties				
Equity equivalence result	2,879	7,041	-	-
Financial income	674,113	700,434	693,492	723,888
Total net added value payable	1,229,979	915,874	1,107,252	861,685
Net added value payable	1,229,979	915,874	1,107,252	861,685
Personnel and charges	181,074	185,043	182,396	186,392
Taxes and contributions	185,381	(3,020)	34,894	(86,034)
Interest and rent	659,507	1,089,895	685,945	1,117,371
Income (Loss) for the period	204,017	(356,044)	204,017	(356,044)

See the accompanying notes to the quarterly information.

01. Operations

Paranapanema S.A. (Paranapanema, the "Parent Company" or the "Company") is a publicly-held corporation headquartered in the city of Dias D'Ávila, in the State of Bahia, at Via do Cobre, nº 3,700, West Industrial Area, Complexo Petroquímico de Camaçari.

Paranapanema's shares have been listed and traded on B3 S.A. (Brasil, Bolsa, Balcão), the highest level of corporate governance on the stock market since 1971, and in the "New Market" segment since 2012, both under the ticker code PMAM3.

The Company and its subsidiaries are engaged in industrial activities related to the transformation and processing of ores and their byproducts, and in metallurgical activities related to ferrous and non-ferrous products such as laminates, bars and profiles, tubes, rods, casts, manufactured and semi-manufactured industrial parts and components intended for the domestic and export markets.

The Company's Individual and Consolidated quarterly information for the period ended September 30, 2019 was prepared based on the assumption of operational continuity.

In 2017, the Company completed the strengthening of the capital structure and the re-profiling of its debt. The actions taken included a public offering of shares with restricted primary distribution efforts, fully capitalized and paid-up, and a public offering of debentures with restricted placement efforts.

Of the total of 360,003,818 debentures, 334,216,991 have already been converted into shares (249,402,021 in October 2017, equivalent to 143,885,809 shares, 5,956,455 in March 2018, equivalent to 3,436,417 shares, and 18,361,996 in June 2019, equivalent to 623,144 shares and 60,496,519 in September 2019, equivalent to 2,053,047 shares), with the remaining balance of 25,786,827 not yet converted, equivalent to 875,120 shares.

	Total Debentures	Converted in October,17	Converted in March,18	Converted in June,19	Converted in September,19	Debentures Pending Conversion
Merrill Lynch International	39,450,975	39,450,975	-	-	-	-
Sumitomo Mitsui Banking Corp, NY Branch	38,884,228	20,522,232	-	18,361,996	-	-
Banco Latinoamericano De Com Ext S.A.	30,305,442	15,994,539	-	-	14,310,903	-
Cargill Financial Services Internat, Inc	152,404,143	80,435,520	-	-	46,181,796	25,786,827
China Construc Bank Bra Bco Multiplo S.A.	12,613,670	6,657,215	5,956,455	-	-	-
Fundo De Recuperacao De Ativos - Fidc Np	82,401,612	82,401,612	-	-	-	-
The Bank Of Nova Scotia	3,939,928	3,939,928	-	-	-	-
Other Investors	3,820	-	-	-	3,820	-
	360,003,818	249,402,021	5,956,455	18,361,996	60,496,519	25,786,827

	Equivalent in shares	Converted in October,17	Converted in March,18	Pending Conversion	Shares grouping in 05/02/2019	Converted in June,19	Converted in September,19	Pending Conversion
Merrill Lynch International	22,760,182	22,760,182	-	-	-	-	-	-
Sumitomo Mitsui Banking Corp, NY Branch	22,433,212	11,839,751	-	10,593,461	623,144	623,144	-	-
Banco Latinoamericano De Com Ext S.A.	17,483,912	9,227,620	-	8,256,292	485,664	-	485,664	-
Cargill Financial Services Internat, Inc	87,925,483	46,405,116	-	41,520,367	2,442,375	-	1,567,255	875,120
China Construc Bank Bra Bco Multiplo S.A.	7,277,118	3,840,701	3,436,417	-	-	-	-	-
Fundo De Recuperacao De Ativos - Fidc Np	47,539,400	47,539,400	-	-	-	-	-	-
The Bank Of Nova Scotia	2,273,035	2,273,035	-	-	-	-	-	-
Other Investors	2,204	-	-	2,204	128	-	128	-
Treasury	4	4	-	-	-	-	-	-
	207,694,550	143,885,809	3,436,417	60,372,324	3,551,311	623,144	2,053,047	875,120

According to the relevant event on March 29, 2019, the Company, at its Annual and Extraordinary Shareholders' Meetings held on that same date, approved the proposal of the grouping the total shares representing the capital of the Company, with no change in the value of capital under Article 12 of Law 6404/76.

The grouping of all the shares representing the Company's capital stock, in the proportion of seventeen (17) common shares to one (1) share of the same type, began to be traded as a group from May 2, 2019.

Group entities – “Subsidiaries”

The Company held the following equity in its direct subsidiaries as at the respective dates:

Subsidiaries	09/30/2019	12/31/2018
CDPC-Centro de Distrib. de Produtos de Cobre Ltda Company with its headquarters in the city of Santo Andre, in the State of São Paulo, Brazil. Its key business purpose is the marketing and distribution of copper, goods and other ores, alloys and their resulting products and byproducts.	99.99%	99.99%
Caraíba Incorporated Ltd. (*) Company with its headquarters in the Cayman Islands, established on July 8, 2005.	100.00%	100.00%
Paraibuna Agropecuária Ltda. (*) Company with its headquarters in the city of Santo Andre, in the State of São Paulo, Brazil. The business purpose is to carry out agricultural and pastoral activities.	99.98%	99.98%
Paranapanema Netherlands B.V. (*) Company with its headquarters in the city of Amsterdam, the Netherlands, established on April 9, 2014.	100.00%	100.00%
Rio Negro Mineração e Com Ltda (*)	-	99.99%

(*) The Company is currently inactive.

02. Preparation basis

A) Declaration of compliance

The individual and consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB), IAS 34 – “Interim Financial Reporting” and CPC 21 (R1) – “Interim Statements” and include all information relevant to the quarterly information, and only such information, which is consistent with that used by management in the course of its duties.

The presentation of the individual and consolidated Statement of Value Added (DVA) is required by the Brazilian Corporate Law, and by the accounting practices adopted in Brazil applicable to publicly-held companies. IFRS does not require the presentation of this statement. Thus, for IFRS purposes, this statement is presented as supplementary information, and not as part of the required set of quarterly information.

The issuance of the individual and consolidated quarterly information was authorized by the Company's Board of Directors at a meeting held on November 05, 2019.

Measurement basis

The individual and consolidated quarterly information was prepared on a historical costs basis, except for the following material items recognized in the balance sheets:

- Derivative financial instruments measured at fair value;
- Non-derivative financial instruments designated and measured at fair value through profit or loss;
- Hedged metals inventory measured at fair value in Brazilian Reais (R\$) through profit or loss; and

- Land, buildings and machines were adjusted to their deemed costs as at the date of transition to IFRS/CPC.

B) Functional and presentation currency

This individual and consolidated quarterly information is being presented in Brazilian Reais (R\$), the functional currency of the Company. All financial information presented in Brazilian Reais has been rounded to the nearest thousand, except where otherwise indicated.

C) Use of estimates and judgments

The preparation of individual and consolidated quarterly information, according to the IFRS and CPC standards, requires management to make judgments, estimates and assumptions that affect the application of the accounting policies and the reported values of assets, liabilities, revenue and expenses. The actual results may differ from these estimates.

Estimates and assumptions are reviewed continuously. Reviews of estimates are recognized on a prospective basis.

D) Uncertainty regarding accounting and critical assumptions and estimates

Information regarding the uncertainty arising from the use of assumptions and accounting estimates that carry a significant risk of material adjustments to critical accounts for the year ended September 30, 2019 are included in the following notes:

- Note 08 – Recoverable taxes: actions taken by the Company to realize ICMS credits;
- Note 12 - Property, plant and equipment: key assumptions regarding the recoverable values of assets and a substantive analysis of their useful lives;
- Note 19 - Provision for judicial claims: Main assumptions regarding the probability and amounts of cash disbursements;
- Note 26 - Deferred income tax and social contribution: Availability of future taxable income to compensate accumulated losses;
- Note 28 – Derivative financial instruments: fair values of derivatives.

03. Measuring the fair value

A number of the Company's accounting policies and disclosures require the determination of the fair value, for both financial and non-financial assets and liabilities. The fair values have been determined for measurement and/or disclosure purposes based on the methods outlined below.

Where applicable, additional information regarding the assumptions made to determine the fair value is disclosed in the notes specific to that asset or liability.

Financial assets and liabilities recorded at fair value are classified and disclosed according to the fair value hierarchy (Note 28.4).

A) Forward exchange rate agreements and interest rate swaps

The fair values of forward exchange rate agreements and interest rate swap contracts are based

on brokerage prices. These quotations are tested for reasonableness by estimating the discounted future cash flow based on the contract conditions and maturities, using the market interest rates of similar instruments as at the measurement date. The fair values reflect the instrument credit risk and include adjustments to reflect the credit risk of Paranapanema, and of its subsidiaries and counterparties when appropriate.

B) Metal inventory

The fair value of the metal inventory is marked-to-market using the US\$ future price curve of the London Metal Exchange (LME) and the London Bullion Market Association (LBMA) converted into R\$ using the month-end exchange rate. Changes in future prices are reflected at each stage of production, considering the estimated time required to sell this inventory.

C) Other non-derivative financial liabilities

Other non-derivative financial liabilities are measured at fair value upon initial recognition, and at each annual reporting date for disclosure purposes. The fair value is calculated based on the present value of the principal and future cash flow, discounted using the market interest rate as at the measurement date. For convertible debt securities, the market interest rate is determined with reference to similar liabilities that do not have a conversion option. For financial leases, the interest rate is calculated with reference to similar lease agreements.

04. Significant accounting policies

The interim financial information was prepared following the same accounting principles, methods and policies, except where indicated, as those presented in the last fiscal year prior to December 31, 2018.

A) Changes in accounting practices and disclosures

- a) IFRS 16 (CPC 06R2) – “Lease transactions” - IFRS 16 establishes that, in all leases, with limited exceptions, the lessee must recognize a lease liability in the balance sheet at the present value of the payments, plus directly allocable costs, and at the same time recognize the rights of use corresponding to the underlying asset. Over the term of the lease, the lease liability is adjusted to reflect the financial costs and payments made, and the usage rights are amortized, similarly to the financial lease rules, in accordance with IAS 17.

The Company adopted the standard from January 1, 2019, under the simplified transition model, and did not restate the comparative values for the year prior to the first adoption. The Company opted to use the exemptions offered by the standard for leases whose terms end within 12 months of initial adoption, and for lease agreements up to USD 5,000.00, measuring the right to use an asset with a value equal to the lease liability adjusted to present value, and using the weighted average cost of domestic capital, disclosed separately in the Balance Sheet. In the Statement of Cash Flow, leases, which were previously classified as operating activities, will start to be considered as financing activities.

Based on a review of agreements, the table below presents the amounts considered in the initial adoption:

Contract Balances as at January 1, 2019	Rights to use Assets	Lease liability	Adjustment to Present Value of Liability	Duration Until
Scaffolding + Assembly and Dismantling	1,763	1,887	124	feb-20
Munck - Rental Truck	502	535	33	jan-20
Commercial Room Rental	1,177	1,480	303	mar-23
Forklift Rental-BA	2,965	3,421	456	jul-21
Forklift Rental-ES	118	151	33	aug-23
Forklift Rental-RJ	435	502	67	jul-21
Rental of Forklifts-SP	131	146	16	dec-20
Rental of Forklifts-SP	4,211	5,384	1,172	jul-23
Rental of Cranes-BA	910	978	68	mar-20
Rental of communication radios-BA	251	262	10	aug-23
Car rental	585	680	96	sep-21
Rental of Lifting Platforms-BA	715	772	57	apr-20
Equipment Rental for Internal Handling	20,947	24,591	3,644	nov-21
	<u>34,710</u>	<u>40,789</u>	<u>6,079</u>	

- b) IFRIC 23 – “Uncertainty Related to Income Tax Treatment”:** This clarifies the accounting treatment of tax positions that have not yet been accepted by the tax authorities. Both IAS 12/CPC 32 – “Income Taxes” and the new IFRIC 23 interpretation are only applicable to Income Tax and Social Contribution. IFRIC 23 does not introduce new disclosure requirements, but stresses the need to comply with the existing disclosure requirements regarding: (i) judgments made; (ii) assumptions or other estimates used; and (iii) the potential impact of uncertainties that are not reflected in the financial statements.

B) New standards and interpretations not yet adopted

There are no other IFRS or IFRIC interpretations affecting the Quarterly Information of the Company on a relevant basis as at September 30, 2019.

Management adopts the accounting policy for presenting interest paid within financing activities in the cash flow statements.

C) Changes in accounting estimates

a) Inflation adjustment for judicial claims

Management decided, according to CPC 23 (IAS 8 – “Accounting Policies, Changes in Accounting Estimates and Errors”), to change its accounting practice regarding the classification of the inflation adjustment of judicial claims. The Company sets up provisions within liabilities for risks with losses considered probable, based on the individual analysis of administrative and judicial proceedings related to tax, labor and civil matters based on the assessment of our legal advisors, at an amount considered sufficient.

The Company understands that the segregation of the provisioned amount between the principal and monetary restatement is required to reflect the essence of the transaction.

The effect of the reclassification of the inflation adjustment of the provision for judicial claims from other operating expenses on the financial result for the nine-month period of 2018 was R\$ 11,884 and R\$ 4,293 in 3Q18 and for comparative purposes, in the period 2019, the financial result was R\$ 11,122, and R\$ 3,570 in 3Q19.

The effects of the change in accounting practices in 2018 are as follow:

	3Q18	9M18	Consolidated			
			3Q18 Reclassified	9M18 Reclassified	3Q18 Reclassified	9M18 Reclassified
Net sales	1,478,936	3,450,656	-	-	1,478,936	3,450,656
Cost of goods sold	(1,346,454)	(3,288,717)	-	-	(1,346,454)	(3,288,717)
Gross income	132,482	161,939	-	-	132,482	161,939
Commercial	(7,668)	(22,080)	-	-	(7,668)	(22,080)
General and administrative	(21,384)	(57,782)	-	-	(21,384)	(57,782)
Management fees	(1,982)	(5,575)	-	-	(1,982)	(5,575)
Equity	-	-	-	-	-	-
General and administrative	(8,425)	(24,073)	-	-	(8,425)	(24,073)
Other expenses	(58,513)	(202,928)	4,293	11,884	(54,220)	(191,044)
Other income	27,567	44,303	-	-	27,567	44,303
Operating expenses	(70,405)	(268,135)	4,293	11,884	(66,112)	(256,251)
Financial expenses	62,077	(106,196)	4,293	11,884	66,370	(94,312)
Financial income	(321,042)	(1,100,620)	(4,293)	(11,884)	(325,335)	(1,112,504)
	227,674	723,888	-	-	227,674	723,888
	(31,291)	(482,928)	-	-	(31,291)	(482,928)
Income and social contribution tax for the current year	(494)	(2,250)	-	-	(494)	(2,250)
Subsidiary's tax incentive - income tax	-	-	-	-	-	-
Deferred income and social contribution taxes	12,942	129,134	-	-	12,942	129,134
Income and social contribution tax	12,448	126,884	-	-	12,448	126,884
Loss for the period	(18,843)	(356,044)	-	-	(18,843)	(356,044)
Loss per common share	(0.027)	(0.517)	(0.437)	(8.266)	(0.465)	(8.783)
Loss per diluted common share	(0.025)	(0.475)	(0.402)	(7.601)	(0.427)	(8.076)

05. Cash and cash equivalents and interest-earning bank deposits

		Parent company		Consolidated	
	Notes	09/30/2019	12/31/2018	09/30/2019	12/31/2018
Cash and banks		130,736	136,663	134,763	151,760
Foreign exchange received		-	2,812	-	2,812
Interest-earning bank deposits	(a)	114,257	62,096	119,717	62,096
Cash and cash equivalents		244,993	201,571	254,480	216,668
Interest-earning bank deposits	(b)	19,782	44,788	25,612	45,556
Interest-earning bank deposits		19,782	44,788	25,612	45,556
Current assets		6,554	28,023	11,597	28,791
Non-current assets		13,228	16,765	14,015	16,765

The Company, in line with its investment policies, keeps its investments in government bonds and a cash surplus in low-risk savings accounts held by first-line financial institutions (based on ratings from the main credit agencies).

a) Interest-earning bank deposits classified as cash and cash equivalents

Refer to bank deposit certificates reflecting normal market conditions as at the balance sheet dates. They are highly liquid and have low interest fluctuation risk.

b) Interest-earning bank deposits

Refer to bank deposit certificates and buyback debentures, reflecting normal market conditions as at the financial statement closing dates. The consolidated balance as at September 30, 2019 in the amount of R\$ 25,612 (R\$ 45,556 as at December 31, 2018) represented the collateral for the purchase of energy in the free market, purchases of USD futures and bank guarantees.

As at September 30, 2019, the investments yielded an average of 87.7% of the Interbank Deposit Certificate rate (CDI 83.7% as at December 31, 2018), measured at fair value through P&L.

06. Trade accounts receivable

		Parent company		Consolidated	
	Notes	09/30/2019	12/31/2018	09/30/2019	12/31/2018
Domestic clients:					
Third parties		145,279	143,898	175,558	204,060
Adjustment to present value - Third parties		(363)	(301)	(1,859)	(4,231)
Related parties	11.2	75,849	160,918	-	-
Adjustment to present value - Related parties	11.2	(980)	(1,063)	-	-
Estimated loss on recoverable value		(52,011)	(55,327)	(53,159)	(56,729)
		167,774	248,125	120,540	143,100
Foreign clients:					
Third parties		118,612	513,112	118,611	513,112
Price adjustment		19,937	14,390	19,937	14,390
Adjustment to present value		(910)	(720)	(910)	(720)
Estimated loss on recoverable value		(2,328)	(3,197)	(2,328)	(3,197)
		135,311	523,585	135,310	523,585
		303,085	771,710	255,850	666,685
Current assets		303,085	771,700	254,028	665,589
Non-current assets		-	10	1,822	1,096

The aging of accounts receivable, net of any impairment losses, is as follows:

	Parent company		Consolidated	
	09/30/2019	12/31/2018	09/30/2019	12/31/2018
Due in more than 120 days	1,578	1,195	9,392	17,278
Due in 91 to 120 days	2,338	2,267	3,088	3,758
Due in 61 to 90 days	40,391	6,680	10,730	6,680
Due in 31 to 60 days	73,564	193,266	38,199	69,280
Due in 30 days	142,640	340,993	154,611	337,539
Total Due	260,511	544,401	216,020	434,535
Overdue up to 30 days	22,542	103,728	20,314	111,165
Overdue from 31 to 60 days	1,337	52,328	1,337	52,328
Overdue from 61 to 90 days	-	50,217	-	50,217
Overdue for more than 90 days	817	8,730	817	9,001
Total due	24,696	215,003	22,468	222,711
	285,207	759,404	238,488	657,246
Adjustment to present value	(2,253)	(2,084)	(2,769)	(4,951)
Price adjustment	20,131	14,390	20,131	14,390
	303,085	771,710	255,850	666,685

The Company is exposed to credit risk due to defaults on sales of products (accounts receivable). The Company mitigates this risk by applying policies and standards for credit monitoring and the collection of trade notes.

In accordance with IFRS 9, the expected losses on financial assets form the basis for determining the losses to be recognized in profit or loss as a result of the *impairment* of financial assets.

The recording of the PECLD balance as at September 30, 2019 considers the sum of the expected loss, and applied a loss percentage according to the customer's score (punctuality x restrictions), plus all notes overdue for more than 90 days.

The amount of R\$ 817 in the consolidated as at September 30, 2019 (R\$ 9,001 as at December 31, 2018), referring to securities overdue for more than 90 days, is not subject to a provision, because there were credits on behalf of the debtor. The formation or reversal of the estimated impairment is recorded in the statements of income, under the line item "Sales deductions".

Changes in the provision for estimated doubtful accounts are shown below:

	Parent company	Consolidated
Balance as at December 31, 2017	(77,333)	(82,803)
Reversals for the year	(896)	(717)
Definitive drop	21,576	21,623
Balance as at September 30, 2018	(56,653)	(61,897)
Balance as at December 31, 2018	(58,524)	(59,926)
Reversals for the year	4,931	4,970
Provision for the year	(746)	(531)
Balance as at September 30, 2019	(54,339)	(55,487)

Accounts receivable pledged as guarantees

The Company and Banco do Brasil entered into a private instrument for the assignment of credit receivables, from accounts receivable, aimed at ensuring the payment of all the obligations assumed and to be assumed by the bank. The global limit on the value of the instrument is US\$

16,150,000 (sixteen million, one hundred and fifty thousand USD), translated at the selling exchange rate of R\$ 4.1644 as at September 30, 2019, equivalent to R\$ 67,255.

In 2014 and 2015, the Company entered into private instruments for the assignment of credit receivables from accounts receivable, with Banco Safra, to ensure the payment of BNDES Automático's operations. As at September 30, 2019, the amount of R\$ 371 (R\$ 1,570 as at December 31, 2018) pledged as collateral, represented 70% of the updated debt balance.

07. Inventory

	Parent company		Consolidated	
	09/30/2019	12/31/2018	09/30/2019	12/31/2018
Raw materials	530,690	533,423	530,690	533,423
Work in progress	338,137	368,869	338,137	368,869
Finished products	336,181	283,611	336,181	283,611
Imports in transit	166,387	277,510	166,387	277,510
Advances to suppliers for purchases of raw materials	819	50,413	819	50,413
Maintenance materials and others	78,218	76,325	78,218	76,325
Resale materials	1,661	1,345	22,619	39,622
Raw materials in transit	9,276	441	11,912	441
Estimated loss on recoverable value	(3,620)	(3,639)	(3,620)	(3,639)
Current assets	1,457,749	1,588,298	1,481,343	1,626,575

The inventory is initially measured at its historical cost, and subsequently recorded under the inventory hedge accounting program (see Note 28.6.3). The portion related to the cost of metals (Copper, Gold, Silver, Lead, Zinc and Tin) is adjusted to reflect the average market price in US Dollars based on the future market price curve. The translation of each metals price from US\$ to R\$ is made using the availability of foreign exchange hedges, marked-to-market at the closing exchange rate for the month, in the program for the hedge accounting treatment of the fair value of inventory.

The balance of estimated losses in the amount of R\$ 3,620 as at September 30, 2019 and December 31, 2018 was established based on the assessment of materials and products with no turnover for more than two years as at December 31, 2018.

The Company offered 255 tons of electrolytic copper rods as a guarantee for a tax lawsuit which, as at September 30, 2019, totaled R\$ 6,286 (R\$ 5,670 as at December 31, 2018). In the case of an unfavorable decision, the full amount will be paid in cash.

08. Recoverable taxes and contributions

	Notes	09/30/2019		Parent company 12/31/2018	
		Current assets	Non-current	Current assets	Non-current
Exclusion of ICMS from the COFINS assessment base	(f)	57,000	443,582	-	-
Exclusion of ICMS from the PIS assessment base	(f)	15,000	94,336	-	-
Value-added tax on sales and services-ICMS	(a)	5,025	104,800	30,884	104,800
Taxes on fixed assets recoverable		12,248	14,240	14,597	17,600
Income and social contribution taxes to be refunded	(b)	58	10,277	690	12,363
Special Tax Reintegration Regime for Exporting Companies (Reintegra)	(c)	1,094	-	13,376	-
Contribution for social security funding-COFINS	(d)	2,243	-	21,278	-
Social integration program - PIS	(d)	486	-	5,338	-
Withholding income tax-IRRF		930	-	2,071	-
Excise tax-IPI		336	-	1,994	-
Estimated loss on recoverable value	(e)	-	(10,277)	-	(12,363)
Other		49	-	-	-
		94,469	656,958	90,228	122,400

	Notes	09/30/2019		Consolidated 12/31/2018	
		Current assets	Non-current	Current assets	Non-current
Exclusion of ICMS from the COFINS assessment base	(f)	57,000	443,582	-	-
Exclusion of ICMS from the PIS assessment base	(f)	15,000	94,336	-	-
Value-added tax on sales and services-ICMS	(a)	7,997	104,800	36,371	104,800
Taxes on fixed assets recoverable		12,248	14,240	14,597	17,600
Income and social contribution taxes to be refunded	(b)	1,024	10,277	750	12,363
Special Tax Reintegration Regime for Exporting Companies (Reintegra)	(c)	1,094	-	13,376	-
Contribution for social security funding-COFINS	(d)	3,167	-	24,063	-
Social integration program - PIS	(d)	687	-	5,938	-
Withholding income tax-IRRF		963	-	2,072	-
Excise tax-IPI		336	-	1,994	-
Prepaid income and social contribution taxes		431	-	2,581	-
Estimated loss on recoverable value	(e)	-	(10,277)	-	(12,363)
Other		49	-	-	-
		99,996	656,958	101,742	122,400

- a) Refers mainly to the credit balance on the circulation of goods and services (ICMS), generated from the operations of the Santo André-SP unit, as shown at its net realizable value, and the Company continues to act to reduce the credit amount.
- b) Refers to income tax (IT) and social contribution (CSLL) credits to be recovered from previous fiscal years. For the amounts classified as non-current assets, the Company has already applied for a refund through judicial proceedings and is awaiting a decision to compensate or receive the amount. The amount of R\$ 10,277, classified in non-current assets, is subject to provision as a loss, since realization is not certain, as indicated in item (e).
- c) Special Tax Reintegration Regime for Exporting Companies. The amounts were calculated in accordance with the parameters defined in Law 12546/2011, with amendments to Law 13043/2014 due to the effects of Decree 9148/2017.
- d) Refers mainly to federal tax credits based on Law 10,637/02 (PIS) and 10,866/03 (COFINS) related to the non-cumulative calculation regime.

- e) The provision for losses on income tax credits in respect of several lawsuits in the amount of R\$ 10,277 (item “b”). Th
- f) The Company’s legal advisors classified the possibility of loss as being remote for the purposes of obtaining a favorable outcome from the lawsuits.

This arises from amounts from favorable decisions obtained in favor of the merged company and the Company in lawsuits challenging the inclusion of ICMS in the PIS and COFINS calculation basis, and final and unappealable decisions in these lawsuits occurred in February 28, 2019 and April 25, 2019.

In accordance with CPC 00 (R1), which addresses the “Conceptual Framework for Financial Reporting” (Recognition of the elements of the financial statements), an item must be recognized if it is probable that any future economic benefits will occur, which must have a value that can be reliably measured, i.e. in a complete, neutral and error free manner.

As disclosed in the second quarter, the Company engaged a specialized consulting company to help quantify the amounts involved, whose report was concluded during the third quarter of 2019.

Accordingly, to record those credits on June 30, 2019, the Company used its best available estimate to date, taking into account several aspects, specifically the criteria provided for in COSIT Internal Consultation Solution No. 13, dated October 18, 2018, of the Brazilian Internal Revenue Service, the respective monetary update, and the related judicial and monetization perspectives.

For the quarter ended September 30, 2019, the Company improved the methodology adopted to measure the credits, taking into account events that occurred during the period, such as: (i) the publication of a new decision favorable to the Company in another lawsuit related to the matter, not yet final and unappealable, which indicated that the method of calculation adopted should be based on the amounts determined in the operations that generated the PIS / COFINS credits; (ii) updating to reflect current main market practices; (iii) an increasing number of judicial decisions on the subject for the quarter; and (iv) the opinion of its external legal advisors specializing in this matter, considering the new context presented, advising the Company to recognize its best estimate of the credits based on the final and unappealable decisions handed down.

This analysis led the Company to determine a complementary amount resulting from the events above mentioned in R\$ 226,808 main amount and R\$ 208,073 of restatement. The total credit accounted for is R\$ 609,918, of which R\$ 327,988 represents the main amount and R\$ 281,920 of restatement.

Management projects that the future taxable income of the Company and its subsidiaries will be adequate to realize the tax credits classified under non-current assets over a six-year term.

These estimates are reviewed annually to ensure that any eventual change in the collection prospects is reflected in the Company’s financial information.

09. Other current and non-current assets

09.1 - Other current and non-current assets

		09/30/2019		Parent company 12/31/2018	
	Note	Current assets	Non-current	Current assets	Non-current
Municipal writs of payment	(a)	-	88,271	-	67,730
City of Manaus	(b)	-	-	-	12,686
Federal writs of payment	(c)	-	4,615	-	1,177
Collective Plan Brasilprev Recovery	(d)	2,425	-	3,255	-
Margin call deposits	(e)	17,634	-	287	-
Accounts receivable – related parties		-	-	3,147	-
Advances to employees		2,472	-	2,237	-
Amount receivable - Disposal of Cibrafertil		-	1,001	-	1,001
Advances to suppliers		9,480	-	217	-
Accounts receivable from insurance		30	-	421	-
Advances to suppliers		-	-	-	-
Amounts receivable from suppliers		-	1,192	-	-
Amounts receivable from the sale of energy		1,519	-	-	-
Other		601	234	1,694	1,359
Estimated loss on recoverable value		(482)	-	(449)	-
		33,679	95,313	10,809	83,953

		09/30/2019		Consolidated 12/31/2018	
	Note	Current assets	Non-current	Current assets	Non-current
Municipal writs of payment	(a)	-	88,271	-	67,730
City of Manaus	(b)	-	-	-	12,686
Federal writs of payment	(c)	-	4,615	-	1,177
Collective Plan Brasilprev Recovery	(d)	2,454	-	3,284	-
Margin call deposits	(e)	17,634	-	287	-
Accounts receivable – related parties		-	-	-	-
Advances to employees		2,478	-	2,239	-
Amount receivable - Disposal of Cibrafertil		-	1,001	-	1,001
Advances to suppliers		9,609	-	217	-
Accounts receivable from insurance		30	-	421	-
Advances to suppliers		-	-	-	-
Amounts receivable from suppliers		-	1,192	-	-
Amounts receivable from the sale of energy		1,519	-	-	-
Other		601	234	1,694	1,359
Estimated loss on recoverable value		(482)	-	(449)	-
		33,843	95,313	7,693	83,953

- a) Refers to writs of payment from the Cities of São Paulo, Santo André and Manaus, to be received starting in 2020. In September 2019, the Company received court-ordered debt payments from the municipal government of Manaus, according to item “b” below.

The Company offered a guarantee on a tax lawsuit, the municipal court-ordered debt payments which, on September 30, 2019, totaled R\$ 68,315 (R\$ 67,730 as at December 31, 2018). If there is an unfavorable decision, the amount will be paid in cash.

- b) Refers to the lawsuit filed by a former Paranapanema construction company against the City of Manaus to collect amounts incurred in relation to the infrastructure work on the Flores road grid. The final ruling from the Court was favorable to the Company, but the Court has not presented the final ruling on the updated amount, which is to be reimbursed and converted into a court-ordered debt payment in September 2019.
- c) Value of federal bonds issued to cover Court-ordered debt payments to be received in connection with the tax repayment action.

- d) Refers to the collective account of the private pension plan managed by BrasilPrev, the sum total of which was made up of the amounts not released by the Company according to the criteria described in Note 31. It is defined in the contract that the amount accumulated in the collective reserve may be used to adjust or improve the benefits or to settle future contributions.
- e) The line "Margin call deposits" refers to amounts deposited with Metal Brokers to cover the Company's exposure when limits are exceeded. The Company is limited to transacting with certain Brokers and in certain cases, because of the contracted volumes and changes in commodities prices (copper/zinc/tin/lead) published by the LME, this limit can be exceeded, and when this occurs the margin is called.

09.2 Deposits for judicial claims

	Parent company/Consolidated	
	09/30/2019	12/31/2018
Labor	6,857	15,157
Tax	17,962	11,698
Social Security	756	789
Writs of payment	-	3,453
Civil	979	827
Other	386	385
Non-current assets	26,940	32,309

Judicial deposits made for judicial guarantees in labor, tax, social security and civil proceedings, which will remain in the account at the disposal of the court. If there is any decision to withdraw the deposits, for example due to the replacement of the guarantee, the said values can be obtained before the end of the lawsuits. The judicial deposits related to probable risks are reported as reductions in the contingencies provisioned according to Note 19.1.

10. Assets held-for-sale

These represent real estate available for sale in the amount of R\$ 112,892 as at September 30, 2019, (R\$ 112,745 as at December 31, 2018) measured at the acquisition cost less accumulated depreciation, which is lower than the expected realization value which, according to the appraisal report as at the base date of December 31, 2018, is the same as the break-up value, which is R\$ 343,306.

This group of assets includes real estate no longer used in the Company's operations, and real estate legally confiscated from clients who defaulted against the Company, which is available for immediate sale under the current conditions.

The Company continues to seek to monetize of assets through an internal team that studies possible alternatives, in conjunction with a consulting firm engaged in August 2018 for the sale of assets. This demonstrates that the entity remains committed to the asset sale plan, as well as indicating that it is unlikely that there will be material changes to the plan, or that the plan will be abandoned. The consulting firm has been assisting the Company with the definition of the market value, as well as on the definition of a marketing plan to communicate effectively with all target audiences, using printed materials, email, marketing, signs, telephone monitoring and the websites.

On April 11, 2016, the Company signed with Plano Madeira Empreendimentos Imobiliários Ltda., a subsidiary of Plano & Plano Construções e Empreendimentos Ltda., Sale and Purchase

Agreements with Resolving Clauses and Other Covenants. The subject of the Transaction is a land area of approximately 150,000 m² covering the municipalities of Santo Andre and Maua, on which the old Capuava plant, which was shut down in February 2015, was installed.

Guarantee:

The Company offered real estate properties in the total amount of R\$ 78,845 as guarantees to financial institutions, as a fiduciary assignment, two properties with a total value of R\$ 20,163, as guarantees for the administrative lawsuit related to the collection of the social contribution on net income (CSLL), and five real estate assets as guarantees for loans in the amount of R\$ 7,560.

If the real estate is sold, the Company shall replace the assets pledged as collateral, and in the event of an unfavorable decision on the operations, the amounts will be paid in domestic currency.

11. Investments, related parties and others

11.1 Summary information and investment movements as at September 30, 2019

	CDPC - Centro de Distrib.Prods. Cobre Ltda.	Paranapanema Netherland B.V.	CINC - Caraiba International	Paraibuna Agropec. Ltda.	Total
Summarized financial information of subsidiaries					
Current assets	91,104	6	384	-	91,494
Non-current assets	14,552	-	-	598	15,150
Total assets	105,656	6	384	598	106,644
Current liabilities	81,447	207	-	-	81,654
Non-current liabilities	146	-	-	-	146
Equity	24,063	(201)	384	598	24,844
Total liabilities and equity	105,656	6	384	598	106,644
Income from sales of goods and/or services	1,081,267	434,007	(14)	-	1,515,260
Cost of goods and/or services sold	(1,067,808)	(434,007)	-	-	(1,501,815)
Gross income	13,459	-	(14)	-	13,445
Operating expenses or income	(2,632)	192	4	-	(2,436)
Loss before financial income (loss) and taxes	10,827	192	(10)	-	11,009
Financial income (loss)	(6,477)	8	(14)	-	(6,483)
Loss before income tax	4,350	200	(24)	-	4,526
Income and social contribution taxes	(1,461)	-	-	-	(1,461)
Net Income (loss) for the period	2,889	200	(24)	-	3,065
Balance as at December 31, 2018	21,174	-	(2,746)	598	19,026
Breakdown / capital increase	-	-	2,948	-	2,948
Foreign exchange variations on foreign investment	-	(15)	207	-	192
Equity in net income of subsidiaries	2,889	(186)	(25)	-	2,678
Balance as at September 30, 2019	24,063	(201)	384	598	24,844

11.2 Parent Company balances and transactions with subsidiaries and other related parties

a) Subsidiaries

	09/30/2019		12/31/2018
	CDPC - Centro de Distrib.Prods. Cobre Ltda.	Paranapanema Netherland B.V.	CDPC - Centro de Distrib.Prods. Cobre Ltda.
Current assets			
Accounts receivable	74,869	-	159,855
Other current assets	-	-	3,147
	74,869	-	163,002
Current liabilities			
Suppliers	21,449	-	52,020
Advances from clients	927	-	-
	22,376	-	-
Gross income			
Sales of goods and services	1,038,045	434,007	1,420,272
Purchases of goods and services	(293,237)	-	(463,741)
	744,808	434,007	956,531

b) Related parties and others

	09/30/2019		12/31/2018	
	Glencore International Investments Ltd	Caixa Econômica Federal	Glencore International Investments Ltd	Caixa Econômica Federal
Current assets				
Accounts receivable	39,413	-	274,238	-
Derivative financial instruments	31,993	-	88,122	-
	71,406	-	362,360	-
Current liabilities				
Suppliers	525,593	-	911,443	-
Advances from clients	8,148	-	120,550	-
Loans and financing	-	41,167	-	2,868
	533,741	41,167	1,031,993	2,868
Current liabilities				
Loans and financing	-	203,904	-	225,863
	-	203,904	-	225,863
Gross income				
Sales of goods and services	1,041,071	-	1,577,517	-
Purchases of goods and services	(1,675,418)	-	(2,783,433)	-
	(634,347)	-	(1,205,916)	-

11.3 Transactions with subsidiaries, related parties and others

The Executive Board or the Board of Directors, within the scope of the respective authority levels, in compliance with the Company's Policy for Related Party Transactions and Conflicts of Interest, authorized transactions that are agreed at arm's length market conditions, based on the amounts, terms and the usual fees applied to transactions with non-related parties.

a) Caixa Econômica Federal

Credit facilities, in compliance with the Company's Related Party Policy, authorized the Company to contract credit lines up to R\$ 370,000 with Caixa Econômica Federal (CEF), a shareholder holding 16.18% of the total shares. The contract is subject to the terms and conditions offered by CEF, which are equal to or more competitive than the other credit facilities available to the Company.

As at September 30, 2019 the Company had foreign exchange contract advance loans (ACC), with Caixa Econômica Federal, in the amount of R\$ 245,071 (US\$ 58,849 thousand at the rate of 4.1644), and R\$ 228,731 as at December 31, 2018 (US\$ 59,030 thousand at the rate of 3.8748).

b) Glencore International AG (Glencore)

The Company signed and complied with agreements with Glencore, a shareholder with an interest equivalent to 5.73% of the total shares issued by the Company, to purchase 180,000 tons of copper concentrate during 2018 and sell the equivalent volume of refined copper, with the same financial liquidation dates, and to sell 100% of the anode slime produced by the Company in 2018.

The Company had agreements for the sale of anode slime covering the period from March 1, 2019 to February 28, 2021, the purchase of 240kt of copper concentrate and sale of copper cathode until December 2019.

On September 30, 2019, the Company had R\$ 533,741 payable to Glencore, and recorded this in the line item Suppliers in the amount of R\$ 525,593, and in the line of advances from clients in the amount of R\$ 8,148, and a balance receivable of R\$ 71,406, and recognized this in the line item Trade notes receivable totaling R\$ 39,413 and in the line item Financial instruments in the amount of R\$ 31,993.

c) CDPC – Centro de Distribuição de Produtos de Cobre Ltda.

The Company signed a cost sharing agreement on January 2, 2015 with its subsidiary CDPC, which provides for the charging of expenses, costs, related labor contributions and taxes related to shared resources. Given the not-for-profit nature of this contract, neither party will charge any premium for shared services and costs.

11.4 Fees of Directors and Fiscal Council

The Company considered as "key management personnel", as intended by CVM Resolution 642/2010 and IAS 24/CPC 05 (R1), the members of its Executive Board, the Board of Directors and the Fiscal Council. The Company has no controlling shareholder and no Shareholders' Agreement.

	Note	9M19			Total
		Statutory Board	Administrative Council	Supervisory Board	
Remuneration of Executives from Management		2,552	1,267	321	4,140
Labor benefits		537	-	-	537
Compensation for participation in Committee		-	419	-	419
Social burden		544	337	64	945
Fixed remuneration		3,633	2,023	385	6,041
Post-employment benefit		14	-	-	14
Others		170	-	-	170
Other remuneration		184	-	-	184
Management fees		3,817	2,023	385	6,225
Bonus (ICP)	32	3,296	-	-	3,296
Bonus (ILP)	32	3	-	-	3
Social Burdens		660	-	-	660
Variable remuneration	32	3,959	-	-	3,959
Total remuneration		7,776	2,023	385	10,184

	Note	9M18			Total
		Statutory Board	Administrative Council	Supervisory Board	
Remuneration of Executives from Management		2,275	1,151	366	3792
Labor benefits		476	-	-	476
Compensation for participation in Committee		-	458	-	458
Social burden		455	321	73	849
Fixed remuneration		3,206	1,930	439	5,575
Management fees		3,206	1,930	439	5,575
Bonus (ICP)	32	5,135	-	-	5,135
Bonus (ILP)	32	4	-	-	4
Social Burdens		1,028	-	-	1,028
Variable remuneration	32	6,167	-	-	6,167
Total remuneration		9,373	1,930	439	11,742

The members of the Fiscal Council and the Board of Directors are not parties to contracts for additional business benefits, such as post-employment benefits, other long-term benefits or remuneration in the form of shares.

12. Property, plant and equipment and intangible assets

								Parent company
	Average depreciation rate	12/31/2018	Additions	Write-offs	Transfers	Provision for losses	Depreciation Amortization	09/30/2019
PROPERTY, PLANT AND EQUIPMENT								
Land		119,685	-	-	-	-	-	119,685
Industrial landfill		8,573	-	-	12,309	-	-	20,882
Improvements		21,632	-	-	(17,857)	-	-	3,775
Buildings		283,473	-	436	46,510	-	-	330,419
Installations		96,695	-	-	(37,436)	-	-	59,259
Machines and Equipment		1,759,218	46	(521)	(154,866)	-	-	1,603,877
Furniture and fixtures		21,344	-	-	(2,599)	-	-	18,745
Vehicles		1,375	-	-	(316)	-	-	1,059
Property, plant and equipment in progress		30,584	84,370	-	(10,606)	-	-	104,348
Provision for impairment losses		(1,926)	-	-	-	1,926	-	-
Spare parts		8,334	994	-	-	-	-	9,328
Cost		2,348,987	85,410	(85)	(164,861)	1,926	-	2,271,377
Industrial landfill	25%	(8,573)	-	-	2,445	-	-	(6,128)
Improvements	5%	(10,325)	-	-	8,755	-	(982)	(2,552)
Buildings	3%	(85,964)	-	(312)	(27,678)	-	(7,570)	(121,524)
Installations	16%	(18,265)	-	-	4,289	-	(9,646)	(23,622)
Machines and Equipment	9%	(941,661)	-	507	171,923	-	(91,648)	(860,879)
Furniture and fixtures	8%	(16,521)	-	-	3,246	-	(1,024)	(14,299)
Vehicles	20%	(1,123)	-	-	318	-	(72)	(877)
Accumulated depreciation:		(1,082,432)	-	195	163,298	-	(110,942)	(1,029,881)
Total assets		1,266,555	85,410	110	(1,563)	1,926	(110,942)	1,241,496
INTANGIBLES								
ERP/Software		62,898	-	-	(30,138)	-	-	32,760
Cost		62,898	-	-	(30,138)	-	-	32,760
ERP/Software	20%	(52,733)	-	-	31,701	-	(2,915)	(23,947)
Accumulated amortization:		(52,733)	-	-	31,701	-	(2,915)	(23,947)
Intangible assets		10,165	-	-	1,563	-	(2,915)	8,813

								Consolidated
	Average depreciation rate	12/31/2018	Additions	Write-offs	Transfers	Provision for losses	Depreciation Amortization	09/30/2019
PROPERTY, PLANT AND EQUIPMENT								
Land		120,283	-	-	-	-	-	120,283
Industrial landfill		8,573	-	-	12,309	-	-	20,882
Improvements		22,123	-	-	(17,857)	-	-	4,266
Buildings		283,473	-	436	46,510	-	-	330,419
Installations		96,695	-	-	(37,436)	-	-	59,259
Machines and Equipment		1,759,318	46	(521)	(154,866)	-	-	1,603,977
Furniture and fixtures		21,444	-	-	(2,599)	-	-	18,845
Vehicles		1,375	-	-	(316)	-	-	1,059
Property, plant and equipment in progress		30,584	84,370	-	(10,606)	-	-	104,348
Provision for impairment losses		(1,926)	-	-	-	1,926	-	-
Spare parts		8,334	994	-	-	-	-	9,328
Cost		2,350,276	85,410	(85)	(164,861)	1,926	-	2,272,666
Industrial landfill	25%	(8,573)	-	-	2,445	-	-	(6,128)
Improvements	5%	(10,513)	-	-	8,755	-	(1,056)	(2,814)
Buildings	3%	(85,964)	-	(312)	(27,678)	-	(7,570)	(121,524)
Installations	16%	(18,265)	-	-	4,289	-	(9,646)	(23,622)
Machines and Equipment	9%	(941,732)	-	507	171,923	-	(91,655)	(860,957)
Furniture and fixtures	8%	(16,596)	-	-	3,246	-	(1,035)	(14,385)
Vehicles	20%	(1,123)	-	-	318	-	(72)	(877)
Accumulated depreciation:		(1,082,766)	-	195	163,298	-	(111,034)	(1,030,307)
Total assets		1,267,510	85,410	110	(1,563)	1,926	(111,034)	1,242,359
INTANGIBLES								
ERP/Software		62,899	-	-	(30,139)	-	-	32,760
Cost		62,899	-	-	(30,139)	-	-	32,760
ERP/Software	20%	(52,734)	-	-	31,702	-	(2,915)	(23,947)
Accumulated amortization:		(52,734)	-	-	31,702	-	(2,915)	(23,947)
Intangible assets		10,165	-	-	1,563	-	(2,915)	8,813

The balances in the consolidated of R\$ 111,034 in property, plant and equipment related to depreciation expenses and R\$ 2,915 in intangible assets related to amortization, totaling R\$ 113,949, refer to the following:

			Consolidated
	9M19	9M18	
Cost of goods sold	108,851	104,538	
Commercial expenses	1,869	1,658	
General and administrative expenses	3,229	2,654	
Total depreciation and amortization expenses	113,949	108,850	

12.1. Property, plant and equipment in progress

As at September 30, 2019, the balance of the account Property, plant and equipment in progress presented in the Parent Company and Consolidated was R\$ 104,348 (R\$ 30,584 as at December 31, 2018), and was substantially represented by: expenditure on projects under execution and advances to suppliers:

12.1.1. The Unit at Dias D'Ávila (Bahia) has a balance of R\$ 96,331 as at September 30, 2019 (R\$ 27,651 as at December 31, 2018), referring to several projects to improve the production, operational guarantees, safety and environment, with the main one being the new tower for Intermediate absorption.

12.1.2. The Santo André-SP unit has a balance of R\$ 8,017 as at September 30, 2019 (R\$ 2,933 as at December 31, 2018). The main projects are aimed at maintaining and improving operating activities, technological upgrades and corporate safety.

12.2. Losses on the impairment of fixed and intangible assets

In compliance with the requirements set out in IAS 36/CPC 01 (R1) – “Impairment of Assets”, the Company carried out the physical inventory of fixed assets in the 3rd quarter of 2019, which found that the estimated market value was in excess of the net book value as at the assessment date.

As at December 31, 2018, the Company had an allowance for losses of R\$ 1,926, regarding machines and equipment unused. The amount was reversed after the completion of the physical inventory.

12.3. Property, plant and equipment in guarantee

The Company offered its fixed assets as guarantees for tax lawsuits, the financing of expansion projects and production line technological updates, and loans under the debt re-profiling process. As at September 30, 2019, total guarantees were R\$ 782,609 in the line item Residual value of property, plant and equipment, as shown in the table below:

Guarantees for lawsuits	Modality	Plant and
Labor		229
Fiduciary assignment of rights - CSLL	Fiduciary alienation contract	58,313
Fiduciary assignment of rights - HSBC	Fiduciary alienation contract	68,817
Total		127,359

Loan Guarantees	Modality	Plant and
FINAME		2,881
FINEN		12,879
FNE		194,089
Sub-total (previous to restructuring)		209,849
Mortgage (Post debt reprofiling)	First-degree mortgage	75,196
Pledge (Post debt reprofiling) - Dias D'ávila		274,675
Pledge (Post debt reprofiling) - Utinga		94,611
Pledge (Post debt reprofiling) - Serra		919
Sub-total (Mortgaged/Pledged post debt reprofiling)		445,401
Total Loan Guarantees		655,250
Total Guarantees		782,609

13. Suppliers

	Notes	Parent company		Consolidated	
		09/30/2019	12/31/2018	09/30/2019	12/31/2018
Domestic					
Goods		95,133	44,677	95,154	44,709
Freight and transportation		10,003	10,738	10,790	12,424
Services		20,827	16,252	20,883	16,285
Electric power/Water and sewage/Gas		7,663	4,881	7,663	4,881
Insurance		131	1,749	131	1,749
Others		687	3,045	688	3,045
Related parties	11.2	21,449	52,020	-	-
Adjustment to present value		(239)	(610)	(241)	(611)
		155,654	132,752	135,068	82,482
Foreign					
Goods	(a)	851,739	1,175,505	851,946	1,175,505
		851,739	1,175,505	851,946	1,175,505
		1,007,393	1,308,257	987,014	1,257,987
Current liabilities		1,006,572	1,308,257	986,193	1,257,987
Non-current liabilities		821	-	821	-

- a) As at September 30, 2019, the Company had R\$ 525,593 (R\$ 911,443 as at December 31, 2018) of concentrate purchases pursuant to an agreement entered into with Glencore (Note 11.3.b).

14. Forfeiting and letters of credit operations

These operations relate to signed copper concentrate purchase contracts with suppliers that use banking operations called “forfeiting” and letters of credit. As part of such transactions, suppliers transfer their rights to receive securities to the banks which, in turn, become the creditors under the respective transactions. This type of transaction does not significantly alter the prices and other conditions set by the Company's suppliers. However, the use of financial institutions allows suppliers to extend the payment terms to clients and, at the same time, anticipate the receipt of payments for forward sales, contributing to improvements in operating cash flow.

Considering the characteristics of such transactions and an awareness of how the Company's suppliers are funding their operations, the amounts related to these transactions are presented within a specific line item. The terms and conditions are presented below:

			Parent company/Consolidated			
	Interest rate	Deadline	09/30/2019		12/31/2018	
			US\$	R\$	US\$	R\$
Letter of credit	Exchange Variation + 4.0% to 4.4% p.y.	up to 360 days	8,220	34,232	8,220	31,852
Forfeiting - Domestic suppliers	0.99% to 1.4% p.y.	up to 120 days	-	97,469	-	35,062
			8,220	131,701	8,220	66,914

15. Lease

			Consolidated					
			09/30/2019					
Contract	Months should be capitalized	Interest rate	Non-current assets			Liabilities		Payments
			Additions	Reduction	Amortization	Non-current Assets	Current	Non-current
Rental of communication radios-BA	aug-19	0.92%	251	-	(251)	-	-	-
Car rental for Board of Directors	sep-21	0.92%	585	(355)	(64)	166	97	97
Forklift Rental-ES	aug-23	0.92%	118	-	(19)	99	32	95
Rental of Forklifts-SP	dec-20	0.92%	131	-	(49)	82	73	18
Rental Truck Munc	jan-20	0.92%	502	-	(348)	154	164	-
Scaffolding Rental + Assembly and Dismantling	feb-20	0.92%	1,763	-	(1,133)	630	674	-
Crane rental-BA	mar-20	0.92%	910	-	(546)	364	391	-
Lifting Platforms rental-BA	apr-20	0.92%	715	-	(402)	313	338	-
Forklifts rental-SP	jul-23	0.92%	4,211	-	(689)	3,522	1,175	3,328
Commercial Room Rental	mar-23	0.92%	1,177	-	(208)	969	362	906
Forklift Rental-BA	jul-21	0.92%	2,965	-	(861)	2,104	1,324	1,103
Equipment Rental for Internal Handling	nov-21	0.92%	20,947	-	(5,385)	15,562	8,431	9,836
Forklift Rental-RJ	jul-21	0.92%	435	-	(126)	309	194	162
Generator Rental	apr-21	0.92%	760	-	(158)	602	425	248
Equipment Rental for scrap movement	may-21	0.92%	438	-	(73)	365	245	164
Equipment Rental	Set-22	0.92%	1,620	-	-	1,620	639	1,273
			37,528	(355)	(10,312)	26,861	14,564	17,230
Adjustment to present value							(1,617)	(2,286)
							12,947	14,944

The exemptions amount proposed by the lease agreements regulations with 12 months contract termination and lease agreements whose purpose are small amounts is R\$ 9,368 in the consolidated period, classified as rents as per note 23.

16. Loans and financing

The main conditions renegotiated as part of the debt re-profiling process in 2017, which were applied on a common basis to all creditors, were related to the total payment terms of up to seven years, with a grace period of two years for principal amortization and annual interest payments.

Transaction costs directly attributable to the process of debt re-profiling, mainly involving the contracting of legal and financial advisors, external audit services, costs for the preparation of prospectuses and reports, as well as fees, commission and entrance, are calculated in a reduction account within liabilities, as shown in the table below.

Loan balances, net of transaction costs, at the end of each period are also shown in the table below:

	Parent company/Consolidated			
	09/30/2019		12/31/2018	
	Current liabilities	Non-current liabilities	Current liabilities	Non-current liabilities
Contracted in US\$ Currency				
Import financing	-	-	12,932	-
Foreign trade loans	149,673	607,770	38,260	673,219
Loans in foreign currency	259,185	1,031,390	20,389	1,199,582
Bank Credit Notes	16,876	67,166	1,305	78,119
	<u>425,734</u>	<u>1,706,326</u>	<u>72,886</u>	<u>1,950,920</u>
Contracted in R\$ Currency				
Project financing	997	85	9,664	345
Banco do Nordeste do Brasil – FNE	24,331	23,802	24,472	41,802
Working capital	27,261	24,596	29,166	44,721
Credit Export Notes - NCE	30,293	-	-	-
	<u>82,882</u>	<u>48,483</u>	<u>63,302</u>	<u>86,868</u>
Transaction Costs - reprofiling	<u>(4,359)</u>	<u>(17,435)</u>	<u>(4,359)</u>	<u>(20,704)</u>
	<u>504,257</u>	<u>1,737,374</u>	<u>131,829</u>	<u>2,017,084</u>

Long-term installments have the following maturities:

Long-term installments on September 30, 2019 mature as follows:

	Parent company/Consolidated	
	09/30/2019	12/31/2018
2020.....	40,645	437,003
2021.....	450,678	421,516
2022.....	704,401	655,113
2023.....	270,280	251,181
2024.....	271,370	252,271
	<u>1,737,374</u>	<u>2,017,084</u>

Summary of changes in loans during the period

	12/31/2018	Entry	Payment Principal	Payment Interest	Exchange rate variation	Parent company/Consolidated 09/30/2019
Import financing	12,932	-	(13,274)	(430)	772	-
Foreign trade loans	711,479	23,264	(28,266)	(26,584)	77,550	757,443
Loans in foreign currency	1,219,970	-	-	(74,779)	145,384	1,290,575
Project financing	10,010	-	(8,939)	(380)	391	1,082
Banco do Nordeste do Brasil – FNE (Northeast Regional Fund)	66,274	-	(18,000)	(4,176)	4,035	48,133
NCE (Export Credit Loans)	-	30,000	-	-	293	30,293
Working capital	73,887	-	(21,803)	(2,797)	2,570	51,857
Bank Credit Note	79,423	-	-	(4,832)	9,451	84,042
Transaction costs - reprofiling	(25,062)	-	-	-	3,268	(21,794)
Loans and financing	2,148,913	53,264	(90,282)	(113,978)	243,714	2,241,631

Debt breakdown by financial institution after debt re-profiling.

Modality	Bank	Payment	Maturities Principal	Tax	09/30/2019			In US\$		
					Current liabilities - Principal	Current liabilities - Interest	Non-current liabilities	Current liabilities - Principal	Current liabilities - Interest	Non-current liabilities
Contracted in R\$ Currency										
FINAME	Banco Safra S.A.	Monthly	2018 to 2020	9.50% p.y.	45	-	-	-	-	-
BNDES AUT.	Banco Safra S.A.	Monthly	2018 to 2020	2.5% to 18.5% p.y.	443	2	85	-	-	-
FINEM	Banco Safra S.A.	Monthly	2018 to 2019	TJLP + 3.35% p.y.	504	3	-	-	-	-
NCE	Banco Safra S.A.	Annual	2019	3.70% p.y.	30,000	293	-	-	-	-
FNE	Banco do Nordeste do Brasil S.A.	Monthly	2018 to 2023	10% p.y.	24,000	331	23,802	-	-	-
GIRO	Banco do Nordeste do Brasil S.A.	Monthly	2018 to 2021	CDI + 0.5% p.y.	26,833	427	24,597	-	-	-
Total contracted in Currency BRL					81,825	1,056	48,484	-	-	-
Contracted in US\$ Currency										
ACC	Banco Bnp Paribas Brasil S.A.	Half Yearly	2018	LIBOR 12 + 1.75% p.y.	18,657	1,119	97,946	4,480	269	23,520
ACC	Banco Do Brasil S.A.	Half Yearly	2020 to 2022	LIBOR 12 + 1.75% p.y.	18,657	1,119	97,947	4,480	269	23,520
ACC	Caixa Economica Federal	Half Yearly	2020 to 2022	LIBOR 12 + 1.75% p.y.	38,839	2,328	203,904	9,326	559	48,964
ACC	China Construction Bank	Half Yearly	2020 to 2022	LIBOR 12 + 1.75% p.y.	6,132	368	32,193	1,472	88	7,730
ACC	Ing Bank N.V.	Half Yearly	2020 to 2022	LIBOR 12 + 1.75% p.y.	13,326	799	69,962	3,200	192	16,800
ACC	Scotiabank	Half Yearly	2020 to 2022	LIBOR 12 + 1.75% p.y.	20,156	1,209	105,817	4,840	290	25,410
ACC	Banco Banrisul	Annual	2020	5.20% a 5.30% p.y.	26,127	838	-	6,274	201	-
PPE	Banco Sumitomo Mitsui Br. S.A.	Half Yearly	2020 to 2024	LIBOR 12 + 3.25% p.y.	29,426	153	117,702	7,066	37	28,264
PPE	Scotiabank	Half Yearly	2020 to 2024	LIBOR 12 + 3.25% p.y.	2,982	15	11,926	716	4	2,864
PPE	Ing Bank N.V.	Half Yearly	2020 to 2024	LIBOR 12 + 3.25% p.y.	7,243	38	28,970	1,739	9	6,957
PPE	China Construction Bank	Half Yearly	2020 to 2024	LIBOR 12 + 3.25% p.y.	9,545	49	38,182	2,292	12	9,169
PPE	Cargill Incorporated	Half Yearly	2020 to 2024	LIBOR 12 + 3.25% p.y.	115,328	599	461,319	27,694	144	110,777
PPE	Banco Bradesco S.A.	Half Yearly	2020 to 2024	LIBOR 12 + 3.25% p.y.	47,777	248	191,108	11,473	59	45,891
PPE	Banco Do Brasil S.A.	Half Yearly	2020 to 2024	LIBOR 12 + 3.25% p.y.	22,612	117	90,448	5,430	28	21,719
PPE	Bladex Representação Ltda	Half Yearly	2020 to 2024	LIBOR 12 + 3.25% p.y.	22,934	119	91,735	5,507	29	22,028
CCB	Banco Itaú Bba S.A.	Half Yearly	2018 to 2019	LIBOR 6 + 3.25% p.y.	16,791	85	67,166	4,032	20	16,129
Total contracted in Currency US\$					416,532	9,203	1,706,325	100,021	2,210	409,742
Transaction Costs - reprofiling					(4,359)	-	(17,435)	-	-	-
Total					493,998	10,259	1,737,374	100,021	2,210	409,742

Guarantees:

As at September 30, 2019, loans and financing were guaranteed by property, plant and equipment items with a residual value of R\$ 655,250 as described in Note 12.3.

Covenants:

In relation to financial covenants, such as those under the Debt Re-profiling Global Agreement, the Company is obliged to comply with the following ratios:

a) Net Debt/EBITDA:

- Equal to or less than -50.9x on December 31, 2017;
- Equal to or less than 63.1x on June 30, 2018;
- Equal to or less than 16.6x on December 31, 2018;
- Equal to or less than 14.6x on June 30, 2019;
- Equal to or less than 10.4x on December 31, 2019;

- Equal to or less than 9.0x on June 30, 2020;
- Equal to or less than 7.0x on December 31, 2020;
- Equal to or less than 6.5x on June 30, 2021;
- Equal to or less than 5.8x on December 31, 2021;
- Equal to or less than 5.8x on June 30, 2022;
- Equal to or less than 5.2x on December 31, 2022;
- Equal to or less than 5.0x on June 30, 2023;
- Equal to or less than 4.3x on December 31, 2023;
- Equal to or less than 4.6x on June 30, 2024; and
- Equal to or less than 3.9x on December 31, 2024.

b) Current liquidity

The Company must also present a current liquidity ratio based on the division of current assets by current liabilities equal to or higher than 1.0x (one), assessed as at June 30 and December 31 of each year, in accordance with the accounting principles generally accepted in Brazil, based on the financial statements published by the Company after the first publication of quarterly information reviewed after the execution hereof.

The Company was in compliance with this ratio for the periods ended June 30, 2018, December 31, 2018, and June 30, 2019.

c) Minimum limits on inventory and receivables

For the quarter ending September 30, 2017 (including that day), the Company must deliver to the creditors a detailed calculation of the Minimum Limit on Inventory and Receivables for the corresponding fiscal period, based on the financial information disclosed on a quarterly basis by the Company, under the terms of the Brazilian Securities Exchange Commission (CVM), i.e. the Quarterly Financial Information (ITR) for the quarters ended in March, June and September, and the annual financial information for the quarter ended in December.

In view of the projected performance, the Company will continue with the regular monitoring of the indices related to these covenants.

17. Salaries and social security charges

	Parent company		Consolidated	
	09/30/2019	12/31/2018	09/30/2019	12/31/2018
Provision for vacations	25,665	27,057	25,707	27,110
Profit sharing	16,538	24,299	16,572	24,388
Provision for 13th month's salary	11,069	-	11,093	-
Social security	5,614	5,840	5,622	5,853
Contribution to the Severance Indemnity Fund	1,099	1,537	1,101	1,541
Social security	450	454	451	454
Other	149	715	149	715
Current liabilities	60,584	59,902	60,695	60,061

18. Taxes and contributions payable

	Notes	Parent company		Consolidated	
		09/30/2019	12/31/2018	09/30/2019	12/31/2018
Contribution for social security funding—COFINS		13,506	-	14,070	-
Value-added tax on sales and services-ICMS		6,849	4,198	6,890	4,218
Employees' Profit Participation Program-PIS		2,315	-	2,433	-
Municipal Real Estate Tax-IPTU		132	190	132	190
Excise Tax-IPI		2,336	1,861	2,336	1,861
Withholding income tax—IRRF		1,594	2,505	1,596	2,509
Income tax and social contribution	26.2	-	-	219	1,424
Withheld PIS, COFINS, income tax and social		523	470	523	470
Service Tax - ISS		519	431	519	431
Other		2	36	2	36
Current liabilities		27,776	9,691	28,720	11,139
Current liabilities		27,776	9,691	28,720	11,139

The Brazilian tax system is based on self-assessment, with tax filing declarations available for review by the fiscal authorities for a period of five years from the filing date.

19. Provision for judicial claims

19.1. Accrued risks

The Company makes provisions for tax, labor and civil lawsuits and administrative proceedings against the Company and its subsidiaries in cases where the likelihood of loss is deemed probable by its Legal Advisors.

The balances of the provision for contingencies, with a statement of the net balance of judicial deposits related to the respective claims, are given below. Judicial deposits are provided as guarantees and surveyed by the opposing parties upon settlement of the claim, in the event of an unfavorable final decision.

	Parent company			Consolidated		
	Provision	Judicial Claims	09/30/2019	Provision	Judicial Claims	12/31/2018
Labor	190,477	(18,331)	172,146	164,562	(142)	164,420
Tax	2,318	-	2,318	2,204	-	2,204
Social Security	6,353	-	6,353	792	-	792
Civil	7,410	-	7,410	6,744	-	6,744
	206,558	(18,331)	188,227	174,302	(142)	174,160

The changes in the provisions are as shown below:

	Parent company/Consolidated				
	Labor	Tax	Civil	Social Security	Total
Balance as at December 31, 2017	179,350	1,875	4,980	-	186,205
Provision (Reversal)	30,369	1,894	896	792	33,951
Monetary Restatement	14,954	54	905	-	15,913
Write-offs	(60,253)	(1,619)	(37)	-	(61,909)
Balance as at December 31, 2018	164,420	2,204	6,744	792	174,160
Provision (Reversal)	22,376	(814)	11,291	5,594	38,447
Monetary Restatement	8,397	972	1,753	-	11,122
Deposits in court	(7,893)	-	(10,438)	-	(18,331)
Write-offs	(15,154)	(44)	(1,940)	(33)	(17,171)
Balance as at September 30, 2019	172,146	2,318	7,410	6,353	188,227

The provision for labor contingencies refers to lawsuits in progress before the Labor Court which, individually, are not material to the Company's business.

The provision for civil lawsuits consists mainly of indemnity suits related to contractual disputes.

19.2. Risks assessed as possible

In addition to the abovementioned lawsuits, there are other lawsuits in progress with a likelihood of loss deemed possible by the Legal Advisors. Therefore, in accordance with the accounting practices of the Company, no provision was recorded.

	Parent company		Consolidated	
	09/30/2019	12/31/2018	09/30/2019	12/31/2018
Labor	45,410	67,479	45,410	67,479
Tax	709,178	678,197	712,544	679,937
Social security	34,011	20,070	34,011	20,070
Civil	448,869	471,324	448,869	471,324
	<u>1,237,468</u>	<u>1,237,070</u>	<u>1,240,834</u>	<u>1,238,810</u>

Most relevant lawsuits with a risk of loss assessed as possible are tax-related, and are commented on in items "a" and "b" below:

a) Social contribution on net income - CSLL

Based on a final legal decision, in 1994 the company Caraíba Metais S.A., merged by Paranapanema S.A. on November 13, 2009, obtained the right not to pay Social Contribution on Income, as established by Law 7689/88.

Following this decision favorable to Caraíba Metais S.A., a company merged by Paranapanema, this decision was challenged by the National Treasury through a motion for a new trial, proposed in 1994, with the object of reestablishing the obligation of the Company (the successor company of Caraíba Metais S. A.) to pay the contribution. The motion for a new trial was accepted, and the final ruling favorable to the Federal Government was issued on March 29, 2010.

The Company, based on the opinion of its legal advisors, believes that the decision that canceled the Company's right not to pay CSLL cannot have its effects canceled from the year of the Law's enactment. For this reason, the merged Company ceased recording a provision for this contribution beginning from the base year 1994. For periods prior to this date, the Company did not determine a positive calculation basis for Social Contribution on Net Income (CSLL).

In relation to this matter, the Brazilian Internal Revenue Service filed five infraction notices regarding facts generated between 1996 and 2008. Furthermore, one of these notices was segregated, keeping part of the discussion at the administrative level and the other at the judicial level. Currently, four of these notices are subject to Tax Foreclosures, duly guaranteed, which were accepted by the judge in the case.

As at September 30, 2019, the Company estimated non-provisioned amounts of R\$ 353,923 and R\$ 259,051 as representing possible risks and R\$ 94,872 as remote risks (R\$ 348,022 as at December 31, 2018, R\$ 254,562 were assessed as representing possible risks and R\$ 93,460 as remote risks) according to the opinion of its legal advisors.

b) Isolated IPI and IRPJ fine

The Brazilian Internal Revenue Service filed an infraction notice to collect a one-off fine related to the incorrect payment of IPI and IRPJ debits between 2004 and 2006 by Caraíba Metais S.A. This payment was made by the Company before the final Court ruling on the validity of the use of the credits.

On August 24, 2010, the merged company Caraíba Metais S.A. had a partial success at the Appeals Court, recognizing the lack of a legal basis for the enforcement of a “one-off/non-cumulative” fine until the Enactment of ILaw 11196/2005.

The Company, supported by the opinion of its legal advisors, believes that this collection is not due, in accordance with the decision issued by the Supreme Court of Justice in special appeal 1.164.452/MG, which states that the requisite final ruling can only be applied to lawsuits filed after Complementary Law 104/2001 was published on January 11, 2001. The lawsuit which allowed the use of the credit was published on August 17, 1998.

Presently, the case is under discussion in the lower court, with the collection of the fine being contested by the Company through the tax foreclosure .

As at September 30, 2019, the Company estimates the amount, not subject to provision and duly updated to R\$ 110,318 (R\$ 107,788 as at December 31, 2018), and the risk was evaluated as possible.

c) BTG Pactual S.A. and Banco Santander (Brasil) S.A.

There was a disagreement involving the Company, BTG Pactual S.A. (BTG Pactual) and Banco Santander (Brasil) S.A. (Santander, referred to together with BTG Pactual as Bancos), regarding certain obligations under a Credit Facility Agreement executed between the parties, including collections from Swap Agreements, also executed between the parties. As a result, Santander, in April 2010, initiated arbitration proceedings with the Arbitration and Mediation Center of the Chamber of Commerce Brazil-Canada (CAM-CCBC and the First Arbitration, respectively). The judgment issued by this body, in favor of Santander, required the payment by the Company of R\$292,000, restated from the dates set out in the judgment, at the IGP-M + 1% per month. That judgment was an annulment of the action proposed by Paranapanema in common law, which was upheld in the first and second instances (interest on equity reserve), determining the annulment of the decision by the Arbitration Court. After the special appeals filed by Paranapanema and BTG Pactual, the Supreme Court of Justice (STJ), on September 18, 2018, upheld the decision rendered by the Court of Justice of Sao Paulo (TJSP), ratifying the annulment of the First Arbitration. The lawsuit was judged in November 2018.

At the beginning of 2015, after the aforementioned decision held by the TJSP, Santander requested the filing of a new arbitration claim with CAM-CCBC. The new arbitration was established under Number 02/2015/SEC1 (the Second Arbitration). This Arbitration involves Santander and BTG Pactual as applicants, and the Company as defendant. This new arbitration was aimed at disputing the same matter as the First Arbitration. On August 10, 2018, Paranapanema was summoned for the partial arbitration decision awarded in this Second Arbitration, which annulled certain obligations set out in the Credit Facility Agreement, with repercussions for swap contracts. On the other hand, the partial arbitration decision recognized the existence of counter-credits between the parties. Thus it determined, as part of the same arbitration procedure, a settlement phase to determine the possible amounts due between the parties, based on the criteria still to be established by the Arbitration Court, thus not giving a precise result, considering that this discussion is in progress.

Supported by Technical Pronouncement CPC 25, Paranapanema's management understands that the circumstances, risks and uncertainties of the case should be taken into account to obtain the best estimate of the possible contingency, asset or liability. Contingencies should be revalued at each balance sheet date and adjusted to reflect the current best estimates. Thus, in view of the extent of the decision by the Arbitration Court in the Second Arbitration to this moment , as well as the fact that certain criteria are still subject to discussion between the parties and definition by the arbitrators, Paranapanema's management, supported by discussions, reports and analysis by its

external advisors, understands that it is not possible to predict the outcome or the financial effects of this issue (items 84 onwards of CPC 25).

In March 2019, BTG Pactual filed an Annulment Action concerning the Second Arbitration, with an injunction requesting the suspension of the effectiveness of the partial arbitration decision. The lawsuit is public Knowledge before the arbitration court of São Paulo /SP. The injunction was denied, maintaining up to the present.

20. Other current liabilities

	Notes	Parent company		Consolidated	
		09/30/2019	12/31/2018	09/30/2019	12/31/2018
Dividends payable	(a)	27,351	26,274	27,351	26,274
Advances from customers	(d)	8,586	192,515	13,606	193,122
Attorneys' fees and services		11,380	9,661	11,380	9,661
Various provisions		12,711	26,662	12,749	26,843
Sales commission		8,581	9,571	8,711	9,690
Provision for environmental expenses	(b)	5,853	6,681	5,853	6,681
Customer credits	(c)	1,400	1,709	696	2,034
Others		1,039	1,069	1,039	1,070
Current liabilities		76,901	274,142	81,385	275,375
Dividends payable		27,351	26,274	27,351	26,274
Advances from customers		8,586	192,515	13,606	193,122
Other current liabilities		40,964	55,353	40,428	55,979
		76,901	274,142	81,385	275,375

- a) Refers to a mandatory minimum dividend equivalent to 25% of the net income in 2015, adjusted to reflect the legal reserve, with inflation adjustments based on the IGP-M (General Inflation index), as shown in Note 21k.
- b) Refers to the expenditure forecast to be required to fulfill the obligations under the Conduct Adjustment Agreement (TAC) signed on December 4, 2015 between the Public Ministry of Bahia, Paranapanema and other companies. The objective of the agreement is to implement mitigation, reparation and compensation measures related to environmental impacts within the Ilha da Maré area.
- c) Customer credit refers to adjustments between price parameters, volumes and / or metallic levels charged in invoicing and the final parameters of the transaction.
- d) Advances from clients (mainly on export sales) where the final sales price is later adjusted to reflect the final volume, metal yield or quality, as verified by the clients.

21. Shareholders' equity

a) Capital

The subscribed and paid-up capital as at September 30, 2019 corresponded to R\$ 2,069,566,247.56 represented by 43,403,849 book-entry shares, and as at December 31, 2018 it corresponded to R\$ 1,990,707,732.56, represented by 692,370,186 book-entry shares, all common, registered and with no par value. The change in capital from December 31, 2018 to

September 30, 2019, in the amount of R\$ 78,858,515.00, refers to the conversion of debentures into shares, pursuant to Note 1.

According to the relevant event on March 29, 2019, the Company, at its Annual and Extraordinary Shareholders' Meetings held on that same date, approved the proposal regarding the grouping of the total shares representing the capital of the Company, with no change in the value of capital under Article 12 of Law 6404/76.

The grouping of all the shares representing the Company's capital stock, in the proportion of seventeen (17) common shares to one (1) share of the same Kind, began to be traded as a group from May 2, 2019.

The ownership structure of the Company at September 30, 2019, as well as the ownership structure disclosed at December 31, 2018 and the status after the grouping, as follow:

	%	09/30/2019	%	12/31/2018 Grouping	12/31/2018
Mineração Britirama S.A.	27.77	12,052,033	9.20	3,748,864	63,730,682
Caixa Econômica Federal	16.18	7,022,365	17.32	7,054,165	119,920,814
João José Oliveira de Araujo	9.53	4,135,900	0.04	16,959	288,300
Cargill Financial Services Internat, Inc	8.84	3,838,867	6.70	2,729,712	46,405,116
Bonsucex Holding S.A.	6.91	2,998,675	6.27	2,555,128	43,437,178
Glencore International Investments Ltd	5.73	2,488,687	6.11	2,488,687	42,307,692
Fund. Petrobras de Seguridade Social - PETROS	-	-	5.10	2,078,307	35,331,221
Caixa de Previd. dos Func. do Banco do Brasil - PREVI	-	-	19.80	8,065,918	137,120,603
Treasury shares	0.00	1,441	0.00	1,441	24,509
Market	25.03	10,865,881	29.44	11,988,479	203,804,071
Total shares outstanding		43,403,849		40,727,658	692,370,186

b) Debentures into shares

On August 29, 2017, the Board of Directors approved the launch of the public offering of debentures, mandatorily convertible into the Company's shares. As described in Note 1.b., with the release of a debenture public offering with restricted placement efforts, these debentures are mandatorily convertible into shares in the Company, and are issued in two series, unsecured, without any additional guarantees, for public distribution and with restricted placement efforts under the terms of CVM Instruction 476. Banco Modal S.A. is the fiduciary agent, together with Pentágono S.A. Distribuidora de Títulos e Valores Imobiliários. Banco Bradesco S.A. is the underwriter agent. The Unit Value is R\$ 1.00.

334,216,991 Series 1 debentures and 25,786,827 Series 2 debentures were issued. The Series 1 debentures matured on September 1, 2019 and the Series 2 debentures mature on September 1, 2021. The subscription amount was R\$360,004 of debentures, convertible into 207,694,550 shares. As at September 22, 2017, the investors converted their debts into debentures, as described in Note 1.

The Series 1 debentures were fully converted into shares, according to their maturity. The Series 2 debentures may be converted into shares at any time. Moreover, and up to their maturity dates, the conversion will occur automatically and will be mandatory.

As at September 30, 2019, the total debentures translated into shares totaled R\$ 334,217, and the balance to be reversed is R\$25,787, as outlined in Note 1.

c) Authorized capital

The Company's management is authorized to increase its capital without a decision of a Shareholders' Meeting, up to the limit of R\$ 3,500,000, through a resolution of the Board of Directors, which will also establish issuance and placement conditions for the said securities, among the assumptions permitted under the law.

d) Rights of shares

Each year, the shareholders will receive minimum dividends of 25% of the net income calculated pursuant to the terms of the Brazilian Corporate Law, which must be paid within a maximum period of 60 days after the date on which they are declared by the General Shareholders' Meeting. The shareholders are also entitled to voting rights on all of the shares that comprise the capital, which are fully subscribed and paid-in.

In accordance with the regulations of the B3 S.A. (Brasil, Bolsa, Balcão) New Market segment, owners of common shares have the right to sell their shares at the same prices as the shares negotiated by a controlling group/shareholder (tag-along rights of 100%).

e) Legal reserve

The Brazilian Public Corporate Law requires corporations to allocate 5% of their net income for the year to the legal reserve, before profit sharing, and limits this reserve to 20% of the paid-in capital.

f) Treasury shares

As at September 30, 2019, the Company had 1,441 treasury shares, equivalent to 24,509 shares as at December 31, 2018, after grouping, in a proportion of 17:1, all of which are common shares. The market value of total treasury shares, calculated based on the latest stock exchange quotation as at September 30, 2019, is R\$ 45 (R\$ 34 as at December 31, 2018).

g) Tax incentive reserve

Paranapanema is a tax beneficiary until 2027 of a 75% fixed reduction in the income tax rate and additions calculated based on the operating profit. This tax benefit is established under the Regulation of Tax Incentives of the Northeast Development Superintendence (SUDENE), as established by the Minister of National Integration (MIN) 283, dated July 4, 2013 (the Regulation). This profit is calculated based on the net income for the period, excluding the tax benefits of: (i) financial results; and (ii) capital gains.

According to Article 11: "The amount of tax not paid because of tax benefits described in this Regulation may not be distributed to partners or shareholders, and constitutes the tax incentive reserve, which can only be used to offset losses or increase capital." Thus, it is an obligation of the Company to allocate to the tax incentive reserve account the amount arising from the tax benefit (the tax amount not paid) which, by definition, does not form part of the net income, because it does not arise from the delivery of goods or services by the Company.

h) Equity valuation adjustments

The reserve for equity valuation adjustments includes:

- Net changes in the fair value of financial instruments used as a cash flow hedge, which will later be recognized in the profit or loss upon liquidation (see Note 28).
- Accumulated translation adjustments, including all foreign currency differences deriving from the translation of the Financial Statements of subsidiaries with foreign operations.
- The balance of the Deemed Cost Reserve refers to values recognized prior to the coming into effect of Law 11638/07, and will be maintained up to its effective realization. The realization of the reserve is reflected in the account Retained earnings or losses. The same treatment is given to the reversal of deferred taxes and contributions, which were recorded on a deemed costs basis.

Changes in equity valuation adjustments are as follow:

	Export revenue ACC/PPE	NDF sales revenue	Metal cost x exchange future	Other debts	Revaluation reserve	Exchange variations on investments abroad	Total
Balance as at December 31, 2017	(433,145)	(147,526)	81	(424,584)	218,917	(102)	(786,359)
Other comprehensive income	2,168	31,524	3,157	-	(12,479)	499	24,869
Balance as at December 31, 2018	(430,977)	(116,002)	3,238	(424,584)	206,438	397	(761,490)
Other comprehensive income	(5,358)	33,966	(2,917)	-	(5,357)	192	20,526
Balance as at September 30, 2019	(436,335)	(82,036)	321	(424,584)	201,081	589	(740,964)

i) Market value of the Company's shares.

The market value of the Company's shares, in accordance with the latest average quotation of shares traded on B3 S.A., corresponded as at September 30, 2019 to R\$ 1,324,251 (R\$ 934,700 as at December 31, 2018). As at September 30, 2019, the Company had shareholders' equity of R\$ 832,397 (R\$ 602,497 as at December 31, 2018), and the shares' book value was R\$ 19.18 (R\$ 14.79 as at December 31, 2018).

j) Earnings (loss) per share

The basic calculation of the (loss) per share is made by dividing the (loss) for the period attributable to the Company's common shareholders by the weighted average number of common shares outstanding during the period.

The diluted (loss) per share is calculated by dividing the net (loss) attributable to the common shareholders of the Company by the weighted average number of common shares outstanding during the period, plus the weighted average number of common shares that would be issued in the event of the conversion of all common shares with dilutive potential into common shares.

The following table shows the results and share data used for the calculation of the basic loss per share:

	9M19	9M18 Clusters	9M18
Profit (Loss) per common share			
Income (Loss) for the period	204,017	(356,044)	(356,044)
Weighted average of shares outstanding(*)	40,703,950	40,537,919	689,144,631
Profit (Loss) per common share	5.01222	(8.78299)	(0.51665)
Profit (Loss) per diluted common share			
Income (Loss) for the period	204,017	(356,044)	(356,044)
Weighted average of shares outstanding(*)	40,703,950	40,537,919	689,144,631
Convertible debentures	875,120	3,551,313	60,372,328
Weighted average of shares diluted with convertible debentures	41,579,070	44,089,233	749,516,959
Profit (Loss) per diluted common share	4.90672	(8.07553)	(0.47503)

(*) The weighted average quantity of shares considers the effect of changes in the weighted average quantity of shares during the year (except treasury shares).

There were other transactions involving common shares or potential common shares between the balance sheet date and the date of completion of these Financial Statements.

k) Profit allocation

The Company's bylaws provide a mandatory minimum dividend payment of 25% of the adjusted net income after the establishment of the legal reserve, in compliance with the Public Companies (S.A.) regulations.

l) Payment of dividends

The Ordinary and Extraordinary Shareholders' Meeting (AGOE) held on April 28, 2017 unanimously approved the renewal of the postponement date for dividend payments declared in the Ordinary Shareholders' Meeting held on April 29, 2016 (AGO 2016). Dividends will be paid until December 31, 2019 including inflation adjustments based on the inflation index IGP-M from June 24, 2016 until the effective payment date.

22. Net sales

a) Breakdown of net revenue

	3Q19	9M19	Parent company	
			3Q18	9M18
Gross sales	1,601,493	4,902,643	1,755,266	4,057,931
Domestic market	713,716	2,392,661	781,777	2,074,320
Foreign market	887,777	2,509,982	973,489	1,983,611
Taxes and sales deductions	(211,550)	(578,680)	(159,652)	(411,797)
Excise Tax - IPI	(6,090)	(17,450)	(7,109)	(19,614)
Value-added tax on sales and services - ICMS	(77,015)	(261,300)	(84,716)	(221,788)
Tax Incentive Fiscal ICMS - Desenvolve (I)	12,288	59,876	23,521	68,211
Social Integration Program-PIS	(9,329)	(32,271)	(10,129)	(28,418)
Contribution for social security funding-COFINS	(42,943)	(148,613)	(46,654)	(130,896)
Other taxes and sales deductions	(88,461)	(178,922)	(34,565)	(79,292)
Net revenue from sales	1,389,943	4,323,963	1,595,614	3,646,134
Net revenue DM	575,020	1,932,092	641,715	1,702,203
Net revenue FM	814,923	2,391,871	953,899	1,943,931
	1,389,943	4,323,963	1,595,614	3,646,134

			Consolidated	
	3Q19	9M19	3Q18	9M18
Gross sales	1,520,478	4,569,372	1,610,511	3,799,420
Domestic market	632,821	2,059,510	637,022	1,696,534
Foreign market	887,657	2,509,862	973,489	2,102,886
Taxes and sales deductions	(191,291)	(502,774)	(131,575)	(348,764)
Excise Tax - IPI	(6,090)	(17,450)	(7,109)	(19,614)
Value-added tax on sales and services - ICMS	(68,785)	(221,667)	(64,555)	(171,570)
Tax Incentive Fiscal ICMS - Desenvolve (I)	12,288	59,876	23,521	68,211
Social Integration Program-PIS	(8,220)	(26,898)	(7,401)	(21,662)
Contribution for social security funding-COFINS	(37,833)	(123,864)	(34,090)	(99,777)
Other taxes and sales deductions	(82,651)	(172,771)	(41,941)	(104,352)
Net revenue from sales	1,329,187	4,066,598	1,478,936	3,450,656
Net revenue DM	511,473	1,670,481	525,134	1,392,341
Net revenue FM	817,714	2,396,117	953,802	2,058,315
	1,329,187	4,066,598	1,478,936	3,450,656

- (I). The industrial headquarters located in Dias D'Ávila, in the State of Bahia, was granted an ICMS tax incentive, within the scope of the Industrial Development and Economic Integration Program of the State of Bahia (DESENVOLVE). In August 2016, through Decree 16,970, Law 13,564 the Government established that every company enjoying fiscal and financial benefits, or incentives that result in a reduction in the amount of ICMS paid, must contribute the corresponding amount of 10% of the benefit or incentive to the State Fund to Combat and Eradicate Poverty.

b) Geographical information – gross revenue from clients abroad

			Consolidated	
	3Q19	9M19	3Q18	9M18
America	185,566	621,044	215,642	639,386
Europe	637,613	1,649,788	679,835	1,332,806
Asia	63,969	237,921	72,981	117,219
Africa	510	1,110	5,031	13,476
	887,658	2,509,863	973,489	2,102,887

Exports to Europe and Asia mainly represent sales to trading companies, with the main destination being China.

23. Expenses per type

		Parent company			
		3Q19	9M19	3Q18	9M18
Metal cost		(1,259,858)	(3,776,429)	(1,314,458)	(3,112,838)
Personnel and benefits	(b)	(66,354)	(194,525)	(63,248)	(184,220)
Depreciation		(33,925)	(113,857)	(38,056)	(108,763)
Amortization of asset usage rights		(3,447)	(10,186)	-	-
Electricity/water/gas/fuel and lube oil		(48,733)	(133,862)	(39,611)	(105,918)
Services rendered by third parties and others		(28,556)	(70,650)	(20,513)	(50,497)
Maintenance		(20,572)	(61,900)	(22,656)	(68,721)
Petrochemicals stock used/absorbed		(11,618)	(26,120)	(12,302)	(23,583)
Rent		(3,447)	(8,793)	(6,874)	(16,067)
Institutional and legal issues		(4,214)	(12,168)	(5,065)	(13,829)
Informatics/telecommunications		(3,274)	(8,886)	(4,523)	(9,861)
Other expenses		(3,200)	(9,104)	(2,487)	(7,507)
Travel expenses		(739)	(2,374)	(872)	(2,609)
Sales and marketing		(643)	270	(742)	(2,528)
Expenses transference idle capacity	(a)	38,387	113,455	36,214	134,282
		<u>(1,450,193)</u>	<u>(4,315,129)</u>	<u>(1,495,193)</u>	<u>(3,572,659)</u>
Cost of products sold		(1,420,966)	(4,233,603)	(1,466,999)	(3,495,482)
Sales expenses		(7,369)	(19,713)	(7,137)	(20,428)
Administrative and general expenses		(21,858)	(61,813)	(21,057)	(56,749)
		<u>(1,450,193)</u>	<u>(4,315,129)</u>	<u>(1,495,193)</u>	<u>(3,572,659)</u>

		Consolidated			
		3Q19	9M19	3Q18	9M18
Metal cost		(1,196,269)	(3,508,042)	(1,192,686)	(2,903,460)
Personnel and benefits	(b)	(66,765)	(195,865)	(63,657)	(185,553)
Depreciation		(33,957)	(113,949)	(38,086)	(108,850)
Amortization of asset usage rights		(3,490)	(10,313)	-	-
Electricity/water/gas/fuel and lube oil		(48,741)	(133,904)	(39,689)	(106,053)
Services rendered by third parties and others		(29,717)	(72,390)	(20,597)	(50,760)
Maintenance		(20,576)	(61,910)	(22,657)	(68,741)
Petrochemicals stock used/absorbed		(9,111)	(22,442)	(13,535)	(26,200)
Rent		(3,643)	(9,368)	(7,072)	(16,752)
Institutional and legal issues		(4,228)	(12,195)	(5,076)	(13,869)
Informatics/telecommunications		(3,281)	(8,908)	(4,544)	(9,917)
Other expenses		(3,206)	(9,136)	(2,495)	(7,539)
Travel expenses		(739)	(2,377)	(876)	(2,613)
Sales and marketing		(647)	255	(750)	(2,554)
Expenses transference idle capacity	(a)	38,387	113,455	36,214	134,282
		<u>(1,385,983)</u>	<u>(4,047,089)</u>	<u>(1,375,506)</u>	<u>(3,368,579)</u>
Cost of products sold		(1,355,940)	(3,962,790)	(1,346,454)	(3,288,717)
Sales expenses		(7,849)	(21,212)	(7,668)	(22,080)
Administrative and general expenses		(22,194)	(63,087)	(21,384)	(57,782)
		<u>(1,385,983)</u>	<u>(4,047,089)</u>	<u>(1,375,506)</u>	<u>(3,368,579)</u>

- a) Idleness derives mainly from the lower production volume due to unscheduled downtime caused by operating problems with the smelter, as well as due to the scheduled maintenance at the industrial complex in Dias D'Ávila, in the state of Bahia.
- b) The amounts related to personnel and benefits include salaries, vacations, 13th month's salary, social security and private pension, medical and dental care, meals and transportation.

24. Other revenue (expenses)

	Notes	3Q19	9M19	Consolidated	
				3Q18 Reclassified	9M18 Reclassified
Tax recoveries		1,481	1,481	3,928	10,536
Exclusion of ICMS from the PIS/COFINS assessment base	08.f	226,808	310,416	17,582	17,582
Energy sales revenue	a)	830	8,404	4,755	12,052
Reversal of other estimated loss		1,926	1,926	-	-
Sundry recoveries		27	644	508	1,128
Sundry sales		571	1,749	638	1,812
Reversal provision penalty - Onerous contracts		-	4,020	-	-
Receipt of legal proceedings (Precatory)		8,800	8,800	-	-
Leasing of property and equipment		65	212	73	220
Profits and dividends		-	31	-	18
Property, plant and equipment sales		-	-	-	35
Process Income Municipality Manaus		19,957	19,957	-	-
Other income		(402)	2,854	83	920
Total of other income		260,063	360,494	27,567	44,303
Idleness	23	(38,387)	(113,455)	(36,214)	(134,282)
Provision for judicial claims	19	(5,397)	(38,447)	(14,180)	(37,054)
Severance pay		(3,085)	(6,414)	(1,709)	(3,928)
PIS and COFINS on other income		(3,001)	(4,709)	(744)	(1,837)
Provision for losses - Assets held for sale	10	-	-	-	(3,453)
Provision penalty - Onerous contracts		-	-	-	(7,092)
Provision for judicial claims		(5,809)	(9,274)	(62)	(247)
Write-off of property, plant and equipment		110	110	-	(5)
Fines from infraction notices		(130)	(234)	(174)	(649)
Sundry sales costs		(93)	(255)	(112)	(214)
Other estimated losses		(518)	(2,598)	-	-
Other expenses		(2,453)	(2,995)	(1,025)	(2,283)
Total other expenses		(58,763)	(178,271)	(54,220)	(191,044)
Total other income (expenses), net		201,300	182,223	(26,653)	(146,741)

	Notes	3Q19	9M19	Consolidated	
				3Q18 Reclassified	9M18 Reclassified
Tax recoveries		1,481	1,481	3,928	10,536
Exclusion of ICMS from the PIS/COFINS assessment base	08.f	226,808	310,416	17,582	17,582
Energy sales revenue	a)	830	8,404	4,755	12,052
Reversal of other estimated loss		1,926	1,926	-	-
Sundry recoveries		27	644	508	1,128
Sundry sales		571	1,749	638	1,812
Provision penalty Reversal - Onerous contracts		-	4,020	-	-
Receipt related to legal proceedings (Precatory)		8,800	8,800	-	-
Leasing of property and equipment		65	212	73	220
Profits and dividends		-	31	-	18
Property, plant and equipment sales		-	-	-	35
Process Income Municipality Manaus		19,957	19,957	-	-
Other income		(402)	2,854	83	920
Total of other income		260,063	360,494	27,567	44,303
Idleness	23	(38,387)	(113,455)	(36,214)	(134,282)
Provision for judicial claims	19	(5,397)	(38,447)	(14,180)	(37,054)
Severance pay		(3,085)	(6,414)	(1,709)	(3,928)
PIS and COFINS on other income		(3,001)	(4,709)	(744)	(1,837)
Provision for losses - Assets held for sale	10	-	-	-	(3,453)
Provision penalty - Onerous contracts		-	-	-	(7,092)
Provision for judicial claims		(5,809)	(9,274)	(62)	(247)
Write-off of property, plant and equipment		110	110	-	(5)
Fines from infraction notices		(130)	(234)	(174)	(649)
Sundry sales costs		(93)	(255)	(112)	(214)
Other estimated losses		(518)	(2,598)	-	-
Other expenses		(2,453)	(2,995)	(1,025)	(2,283)
Total other expenses		(58,763)	(178,271)	(54,220)	(191,044)
Total other income (expenses), net		201,300	182,223	(26,653)	(146,741)

a) Revenue from the sale of surplus electricity not used in production.

25. Financial revenue (expenses)

	Note	3Q19	9M19	Parent company	
				3Q18 Reclassified	9M18 Reclassified
Liability foreign exchange fluctuations	a)	(210,323)	(402,054)	(66,300)	(577,192)
Derivative financial instruments		(16,932)	(27,350)	(22,310)	(103,607)
Hedge of fair value of inventory		-	-	(173,157)	(259,240)
Interest expenses		(45,697)	(122,172)	(39,579)	(113,675)
Adjustment to present value		(14,002)	(33,326)	(2,335)	(5,890)
Bank expenses/IOF		(850)	(1,887)	(671)	(2,486)
Liability monetary variation		(29,293)	(38,486)	(3,282)	(12,865)
Other financial expenses		(17,299)	(25,439)	(3,490)	(10,757)
Total financial expenses		(334,396)	(650,714)	(311,124)	(1,085,712)
Asset foreign exchange fluctuations	a)	102,821	321,030	24,749	327,669
Derivative financial instruments		(6,992)	8,294	5,079	14,388
Hedge on fair value of inventory		1,150	1,150	178,492	321,430
Adjustment to present value		6,915	22,432	7,934	19,170
Interest income		4,171	7,468	2,132	9,723
Exclusion of ICMS from the PIS/COFINS assessment base	08.f	208,073	281,920	-	-
Monetary variation – assets		18,189	26,564	745	2,165
Other financial income		463	5,255	2,759	5,889
Total financial income		334,790	674,113	221,890	700,434
Total financial result		394	23,399	(89,234)	(385,278)

	Note	3Q19	9M19	Consolidated	
				3Q18 Reclassified	9M18 Reclassified
Liability foreign exchange fluctuations	a)	(210,323)	(402,054)	(66,300)	(577,192)
Derivative financial instruments		(16,932)	(27,350)	(22,310)	(103,643)
Hedge of fair value of inventory		-	-	(181,206)	(270,109)
Interest expenses		(50,080)	(135,013)	(41,337)	(117,871)
Adjustment to present value		(17,350)	(44,918)	(6,365)	(16,590)
Bank expenses/IOF		(868)	(1,956)	(738)	(2,600)
Liability monetary variation		(29,293)	(38,486)	(3,282)	(12,865)
Other financial expenses		(17,501)	(26,800)	(3,797)	(11,634)
Total financial expenses		(342,347)	(676,577)	(325,335)	(1,112,504)
Asset foreign exchange fluctuations	a)	102,821	321,030	24,749	327,669
Derivative financial instruments		(6,992)	8,294	5,079	14,388
Hedge on fair value of inventory		-	-	178,817	329,176
Adjustment to present value		9,841	32,069	10,428	25,683
Interest income		5,472	9,439	2,225	10,043
Exclusion of ICMS from the PIS/COFINS assessment base	08.f	208,073	281,920	-	-
Monetary variation – assets		18,189	26,564	774	2,194
Other financial income		2,925	14,176	5,602	14,735
Total financial income		340,329	693,492	227,674	723,888
Total financial result		(2,018)	16,915	(97,661)	(388,616)

- a) Exchange variation: Refers to the restatement of assets and liabilities exposed to foreign currency, mainly in US\$, the appreciation of which against the R\$ during the period generated considerable exchange variation, on both the asset and liability sides. The table below presents the net effect of the Company's exchange rate variation:

	Parent company / Consolidated			
	3Q19	9M19	3Q18	9M18
Negative exchange variation	(210,323)	(402,054)	(66,300)	(577,192)
Exchange variation gain	102,821	321,030	24,749	327,669
Net effect of exchange rate variation	(107,502)	(81,024)	(41,551)	(249,523)

26. Deferred income tax and social contribution

26.1 Deferred income tax and social contribution

The parent company received a favorable court decision regarding the non-payment of social contribution on net income (CSLL). The company is only subject to the payment of income tax at a rate of 25% on its profits.

Deferred income tax and social contribution have the following sources:

Rate	Note	09/30/2019			12/31/2018		
		Parent company 25%	Parent company 34%	Consolidated	Parent company 25%	Parent company 34%	Consolidated
Credits on tax losses		1,252,242	31,285	1,283,527	1,315,219	31,584	1,346,803
Income tax on fiscal loss	a)	313,061	10,637	323,698	328,805	10,739	339,544
Net exchange variations		(513,074)	-	(513,074)	(602,455)	-	(602,455)
Estimated losses (reversals) on allowance for doubtful assets		54,339	1,148	55,487	58,524	1,402	59,926
Shareholders' deficit		201	-	201	2,746	-	2,746
Provision for lawsuits		188,226	-	188,226	174,159	-	174,159
Estimated loss (reversal) on recoverable inventory sums		(18,180)	-	(18,180)	(10,649)	-	(10,649)
Estimated sundry losses (reversals)		25,539	-	25,539	33,257	-	33,257
Provision (Reversals) for financial instruments and others		(52,327)	447	(51,881)	(46,178)	1,135	(45,043)
Management profit sharing and others		4,105	18	4,123	8,319	76	8,395
Provision for adjustment to present value		(1,911)	536	(1,375)	1,450	2,890	4,340
Total temporary differences		(313,082)	2,149	(310,934)	(380,827)	5,503	(375,324)
Income tax on temporary differences	b)	(78,271)	731	(77,540)	(95,207)	1,871	(93,336)
Deferred income tax and social contribution		234,790	11,368	246,157	233,598	12,610	246,208
Tax on revaluation reserve	c)	(67,027)	-	(67,027)	(68,813)	-	(68,813)
		167,763	11,368	179,130	164,785	12,610	177,395
Non-current assets		167,763	11,368	179,130	164,785	12,610	177,395
Non-current liabilities		-	-	-	-	-	-

- The Company has consolidated tax losses generated in Brazil in the amount of R\$ 1,283,527 (R\$ 1,346,803 as at December 31, 2018), subject to offsetting against future taxable income. In Brazil, the offsetting of tax losses has no statute of limitations, being limited to the offsetting of 30% of the annual profits.
- As at September 30, 2019, the Company had recorded under the account "Deferred income tax" amounts calculated on temporarily non-deductible expenses arising from the calculation of the taxable income for income tax purposes, which are available for future offsetting against the said tax.
- The realization of the deferred income tax on equity valuation adjustments is proportional to the realization of the revaluation reserve.

Additionally, based on the technical study of the generation of future taxable profits, various financial and business assumptions were considered, such as the optimization of the installed capacity, the dilution of fixed costs and optimizing cash generation, an increase in the sales volume mainly due to exports, management's focus on reducing the cash conversion cycle through customs actions, and shortening the terms of receivables to ensure that the working capital needs are not increased. The Company continues to adopt a conservative approach to cash management, combined with greater use of operating assets and the streamlining of costs and expenses.

The projected realization of deferred taxes has been prepared based on management's best estimates, and on the projections of profit or loss approved by the Company's corporate governance bodies. However, since they involve various assumptions that are not under the Company's control, such as inflation rates, exchange rate volatility, international market prices and other economic uncertainties in Brazil, future results may differ materially from those considered in the preparation of the said projection.

The Company and its subsidiaries expect to recover tax credits arising from taxable losses within a period of up to ten years, as shown below:

	Consolidated
2020.....	6,430
2021.....	7,178
2022.....	17,870
2023.....	21,658
2024 to 2026.....	118,903
2027 to 2029.....	151,659
	323,698

The Company has a 75% exemption on income tax and non-refundable additional taxes on earnings from the exploration and production of copper and its byproducts, up to the base period of 2027. This exemption is applied to the balance of income tax payable after the offsetting of tax losses, as described in item a.

The income tax benefits enjoyed by the Company depend on the recognition of a capital reserve at an amount equivalent to the tax not paid. Recognized tax incentive reserves may only be used to increase capital or to absorb losses.

26.2 Reconciliation of income tax and social contribution expenses

The reconciliation between the tax expense calculated at the combined nominal rates and the income and social contribution tax expense charged to income is presented below:

	Parent company		Consolidated	
	9M19	9M18	9M19	9M18
Income (Loss) before income and social contribution taxes	201,040	(486,763)	202,502	(482,928)
Nominal combined statutory rates	25%	25%	25% e 34%	25% e 34%
Income tax	50,260	-	50,642	1,304
Permanent additions	(16,542)	(7,248)	(16,542)	(7,238)
Realization of revaluation reserve (depreciation/write-off)	1,794	3,479	1,794	3,479
Provisions for doubtful credit	(1,046)	(5,170)	(1,132)	(5,247)
Provisions for litigation	3,517	5,305	3,517	5,301
Other deductible provision	(7,245)	(2,058)	(8,300)	(2,587)
Net exchange variation (cash basis)	22,345	78,058	22,345	78,058
Shareholders' deficit	(636)	1,435	(636)	1,435
Exemption of exploration profit	(36,066)	-	(36,066)	-
Deferred income tax and social contribution on tax losses				
Tax loss and negative basis of social contribution	(15,190)	51,659	(15,893)	47,120
Deferred income tax on revaluation reserve	1,786	5,259	1,786	5,259
Current income tax credits	2,977	130,719	1,515	126,884
Income tax for the current year	-	-	(156)	(1,650)
Social contribution for the current year	-	-	(63)	(600)
Current taxes	-	-	(219)	(2,250)
Deferred income tax	1,191	125,460	277	124,294
Deferred social contribution	-	-	(329)	(419)
Deferred income tax on revaluation reserve	1,786	5,259	1,786	5,259
Deferred taxes	2,977	130,719	1,734	129,134
Credit from income and social contribution taxes	2,977	130,719	1,515	126,884
Total effective rate	1.48%	-26.85%	0.75%	-26.27%
Current effective rate	0.00%	0.00%	-0.11%	0.47%

27. Operating segments

The Company only operates in the copper segment, which includes the production and sale of electrolytic refined copper, its byproducts and related services, as well as semi-finished copper and its alloys.

28. Financial instruments

28.1 Market Risk Management Policy

The Company recognizes that certain financial risks, such as changes in commodities prices, foreign exchange (FX) rates and interest rates, are inherent to its business. However, the Company's policy is to avoid unnecessary risks, and to guarantee that the business risk exposure has been identified and measured, and can be controlled and minimized using the most effective and efficient methods to eliminate, reduce or transfer such exposure.

The Board of Directors has a Finance, Risks and Contingencies Committee to assist with the establishment of market risk management policies and to guarantee that proper procedures are in place at the Company to ensure that all risk exposure can be identified and evaluated. In addition, the Committee monitors this exposure to ensure that it is within established limits. The identified business risks are as follow:

- Interest rate risk inherent in the Company's debts;
- Foreign exchange risk and commodities price risk derived from raw materials and sold products, forecast transactions and firm commitments;
- Foreign exchange risk derived from assets and liabilities such as: investments abroad and loans, inventory linked to commodities whose prices are denominated in foreign currency, among others; and
- Basis risk arising from differences in timing, volume or indexation that could occur between the contracting and settlement of hedging instruments and objects.

The Market Risk Management policy permits the Company to use approved derivative financial instruments to minimize its exposure to market risks including FX, Commodities and interest rates.

Derivative instruments are only used for hedging purposes, as they limit the financial exposure associated with the risks identified for some of the Company's assets and liabilities. The use of derivatives is not automatic, nor is it necessarily the only way of managing business risk. Their use is permitted only after verifying that the chosen derivative can minimize risks to within certain tolerance levels, as established by this policy.

The Company carries out hedging transactions using derivative or non-derivative financial instruments, and makes such transactions fit the hedge accounting rules, as defined by CVM Resolution 763 (CPC 48). Not all hedge transactions with derivatives are accounted for by applying the hedge accounting rules.

28.2 Fair value methodologies

Derivative financial instruments are measured at fair value and recognized in the respective Statement of Financial Position accounts. The methodology for determining the fair value involves verifiable parameters derived from B3 S.A. - Brasil, Bolsa, Balcão (Foreign Exchange Coupon and Fixed Coupon), LME (copper, zinc, tin and lead) and LBMA (gold and silver), British Bankers' Association (LIBOR), Reuters and Bloomberg (US\$ Spot).

The Company measures the fair value of its FX derivatives by calculating the present value of the future price discounted based on the market curve (Pre- and FX Coupon), with all values published by Bloomberg and B3 S.A. - Brasil, Bolsa, Balcão. Adjustments to embedded derivatives are carried out at average future prices, based on the curves disclosed in the LME and LBMA.

28.3 Embedded derivatives

Purchase contracts with price adjustment clauses for raw materials such as copper, which are based on market prices at a date subsequent to the shipment or delivery date are considered as embedded derivatives, and require segregation and separate accounting. According to CPC 48, the cash flow adjustment of payments indexed to raw materials prices (such as copper, for example) embedded in financial liabilities are not closely related to the principal instrument because the risks inherent in the principal contract and those in the embedded derivative are not similar. An embedded derivative that is separated from its host contract, and is accounted for separately at fair value through profit or loss, like any other derivative instrument, can be designated as a hedge instrument and subject to hedge accounting, such as a fair value hedge of copper inventory.

Purchase contracts for copper concentrate for copper products normally include a provisional price as at the shipment date, with a final price based on the monthly average copper price according to the LME for a certain future period. This period normally varies from 30 to 120 days after the shipment or billing date. This purchase of concentrate at a provisional price contains an embedded derivative that must be separate from the main contract and calculated as a separate derivative in the statement of income (loss).

28.4 Classification of financial instruments

Financial assets and liabilities are classified into two measurement categories: assets and liabilities at fair value through profit or loss, or at amortized cost.

The classification of financial assets and liabilities is as follows:

				Parent company	
				Book value	Fair value
	Notes	At fair value through profit or loss	Amortized cost method	09/30/2019	09/30/2019
Financial assets					
Cash and cash equivalents	05	-	244,993	244,993	244,993
Interest-earning bank deposits	05	-	19,782	19,782	19,782
Trade accounts receivable	06	-	303,085	303,085	303,085
Financial instruments - Hedge accounting	28	9,341	-	9,341	9,341
Financial instruments - Other derivatives	28	73,130	-	73,130	73,130
Total assets		82,471	567,860	650,331	650,331
Financial liabilities					
Suppliers	13	-	1,007,393	1,007,393	1,007,393
Securitization of accounts payable	14	-	131,701	131,701	131,701
Advances from customers	20	-	8,586	8,586	8,586
Customer credit	20	-	1,399	1,399	1,399
Loans and financing	16	-	2,241,631	2,241,631	2,241,631
Financial instruments - Hedge accounting	28	7,048	-	7,048	7,048
Financial instruments - Other derivatives	28	18,159	-	18,159	18,159
Total liabilities		25,207	3,390,710	3,415,917	3,415,917

				Parent company	
				Book value	Fair value
	Notes	At fair value through profit or loss	Amortized cost method	12/31/2018	12/31/2018
Financial assets					
Cash and cash equivalents	05	-	201,571	201,571	201,571
Interest-earning bank deposits	05	-	44,788	44,788	44,788
Trade accounts receivable	06	-	771,710	771,710	771,710
Financial instruments - Hedge accounting	28	25,793	-	25,793	25,793
Financial instruments - Other derivatives	28	103,520	-	103,520	103,520
Total assets		129,313	1,018,069	1,147,382	1,147,382
Financial liabilities					
Suppliers	13	-	1,308,257	1,308,257	1,308,257
Securitization of accounts payable	14	-	66,914	66,914	66,914
Advances from customers	20	-	192,515	192,515	192,515
Customer credit	20	-	1,709	1,709	1,709
Loans and financing	16	-	2,148,913	2,148,913	2,148,913
Financial instruments - Hedge accounting	28	10,367	-	10,367	10,367
Financial instruments - Other derivatives	28	16,082	-	16,082	16,082
Total liabilities		26,449	3,718,308	3,744,757	3,744,757

Consolidated					
				Book value	Fair value
	Notes	At fair value through profit or loss	Amortized cost method	09/30/2019	09/30/2019
Financial assets					
Cash and cash equivalents	05	-	254,480	254,480	254,480
Interest-earning bank deposits	05	-	25,612	25,612	25,612
Trade accounts receivable	06	-	255,850	255,850	255,850
Financial instruments - Hedge accounting	28	9,341	-	9,341	9,341
Financial instruments - Other derivatives	28	73,130	-	73,130	73,130
Total assets		82,471	535,942	618,413	618,413
Financial liabilities					
Suppliers	13	-	987,014	987,014	987,014
Securitization of accounts payable	14	-	131,701	131,701	131,701
Advances from customers	20	-	13,606	13,606	13,606
Customer credit	20	-	696	696	696
Loans and financing	16	-	2,241,631	2,241,631	2,241,631
Financial instr. - Hedge accounting	28	7,048	-	7,048	7,048
Financial instr. - Other derivatives	28	18,159	-	18,159	18,159
Total liabilities		25,207	3,374,648	3,399,855	3,399,855

Consolidated					
				Book value	Fair value
	Notes	At fair value through profit or loss	Amortized cost method	12/31/2018	12/31/2018
Financial assets					
Cash and cash equivalents	05	-	216,668	216,668	216,668
Interest-earning bank deposits	05	-	45,556	45,556	45,556
Trade accounts receivable	06	-	666,685	666,685	666,685
Financial instruments - Hedge accounting	28	25,793	-	25,793	25,793
Financial instruments - Other derivatives	28	103,520	-	103,520	103,520
Total assets		129,313	928,909	1,058,222	1,058,222
Financial liabilities					
Suppliers	13	-	1,257,987	1,257,987	1,257,987
Securitization of accounts payable	14	-	66,914	66,914	66,914
Advances from customers	20	-	193,122	193,122	193,122
Customer credit	20	-	2,034	2,034	2,034
Loans and financing	16	-	2,148,913	2,148,913	2,148,913
Financial instruments - Hedge accounting	28	10,367	-	10,367	10,367
Financial instruments - Other derivatives	28	16,082	-	16,082	16,082
Total liabilities		26,449	3,668,970	3,695,419	3,695,419

Fair value hierarchy

The Company discloses its assets and liabilities at fair value, based on the relevant accounting pronouncements that define the fair value, and the structure for determining the fair value, which refers to the evaluation criteria and practices, and requires certain disclosures related to the fair value.

Financial assets and liabilities recorded at fair value are classified and disclosed with reference to the following hierarchies:

Level 1 – prices quoted (not adjusted) in active markets for identical assets and liabilities as at the measurement date. A price that is quoted in an active market provides more reliable evidence of the fair value, and should be used whenever available.

Level 2 – quoted prices for similar assets or liabilities in active markets or quoted prices for identical assets or liabilities in non-active markets (i.e. markets where few transactions occur involving those assets or liabilities), data other than observable quoted prices for an asset or liability, and data derived from or corroborated mostly by data observable in the market through correlation or other means.

Level 3 –unobservable inputs for an asset or liability. Unobservable inputs should be used to measure the fair value only when observable inputs are not available, and should reflect the business unit's expectations of what other market players would use as assumptions for pricing an asset or a liability, including risk assumptions. None of the company's financial instruments have the characteristics of Level 3.

The table below presents the parent company and consolidated assets and liabilities measured at fair value as at September 30, 2019 and December 31, 2018:

	Notes	Parent company			Consolidated		
		Level 1	Level 2	09/30/2019	Level 1	Level 2	09/30/2019
Financial assets							
Financial instruments - Hedge accounting	28	-	9,341	9,341	-	9,341	9,341
Financial instruments - Other derivatives	28	-	73,130	73,130	-	73,130	73,130
Total assets		-	82,471	82,471	-	82,471	82,471
Financial liabilities							
Suppliers	13	-	1,007,393	1,007,393	-	987,014	987,014
Forfait and letter of credit operations	14	-	131,701	131,701	-	131,701	131,701
Loans and financing	16	2,241,631		2,241,631	2,241,631		2,241,631
Advances from customers	20	-	8,586	8,586	-	13,606	13,606
Customer credit	20	-	1,400	1,400	-	696	696
Financial instruments - Hedge accounting	28	-	7,048	7,048	-	7,048	7,048
Financial instruments - Other derivatives	28	-	18,159	18,159	-	18,159	18,159
Total liabilities		2,241,631	1,174,287	3,415,918	2,241,631	1,158,224	3,399,855

		Parent company			Consolidated		
	Notes	Level 1	Level 2	12/31/2018	Level 1	Level 2	12/31/2018
Financial assets							
Financial instruments - Hedge accounting	28	-	25,793	25,793	-	25,793	25,793
Financial instruments - Other derivatives	28	-	103,520	103,520	-	103,520	103,520
Total assets		-	129,313	129,313	-	129,313	129,313
Financial liabilities							
Suppliers	13	-	1,308,257	1,308,257	-	1,257,987	1,257,987
Forfait and letter of credit operations	14	-	66,914	66,914	-	66,914	66,914
Loans and financing	16	2,148,913		2,148,913	2,148,913		2,148,913
Advances from customers	20	-	192,515	192,515	-	193,122	193,122
Customer credit	20	-	1,709	1,709	-	2,034	2,034
Financial instruments - Hedge accounting	28	-	10,367	10,367	-	10,367	10,367
Financial instruments - Other derivatives	28	-	16,082	16,082	-	16,082	16,082
Total liabilities		2,148,913	1,595,844	3,744,757	2,148,913	1,546,506	3,695,419

Summary of consolidated derivative financial instruments

					Consolidated	
Instrument	Position	Index	Reference Value		Fair value	
			09/30/2019	12/31/2018	09/30/2019	12/31/2018
<u>Designated for hedge accounting</u>						
Risk of commodity prices						
NDF	Purchased	Copper	5,975 tonnes	6,853 tonnes	923	10,367
Firm commitment for sales	Sold	Copper	(5,975) tonnes	(6,853) tonnes	(923)	(10,367)
NDF	Sold	Copper	(17,508) tonnes	(2,000) tonnes	(2,683)	3,127
NDF	Sold	Gold	(4,675) Oz	- Oz	(251)	-
NDF	Sold	Silver	(89,923) Oz	(76,072) Oz	(386)	121
NDF	Sold	Zinc/Tin/Lead	(1,200) tonnes	(1,775) tonnes	(265)	819
Embedded derivative	Sold	Copper	(23,354) tonnes	(12,396) tonnes	8,418	8,932
Embedded derivative	Sold	Gold	(6,330) Oz	(14,607) Oz	(1,036)	1,921
Embedded derivative	Sold	Silver	(215,877) Oz	(268,060) Oz	(1,504)	506
Total					2,293	15,426
Total derivatives designated for hedge accounting					2,293	15,426
<u>Not designated for hedge accounting</u>						
Risk of commodity prices						
Firm commitment for sales	Purchased	Copper	- tonnes	- tonnes	(6,900)	(1,744)
Cash Flow - Cost	Purchased	Copper	5,725 tonnes	4,196 tonnes	(1,109)	(1,259)
NDF	Purchased	Copper	4,758 tonnes	(213) tonnes	23,536	(4,634)
NDF	Sold	Gold	(3,041) Oz	4,285 Oz	1,193	(510)
NDF	Sold	Silver	(114,179) Oz	(207,816) Oz	(663)	(1,263)
NDF	Purchased	Zinc/Tin/Lead	- tonnes	- tonnes	499	(245)
Embedded derivative	Purchased	Copper/Gold/Silver	- tonnes	- tonnes	47,118	99,498
Total					63,674	89,843
Economic Hedge - Exchange Rate US\$ / R\$						
MTM options			- US\$	- US\$	-	(1,984)
MTM NDF	Sold	USD/BRL	(30,000) US\$	(39,000) US\$	(8,703)	(682)
BM&F Futures	Sold	US\$ Future	- US\$	(10,750) US\$	-	137
Total					(8,703)	(2,529)
Risk of interest rate						
Swap	Purchased	LIBOR 3M/6M + VC	- US\$	3,301 US\$	-	12,768
Swap	Purchased	Pre+Foreign exchange variation	- US\$	(3,301) US\$	-	(12,644)
Total					-	124
Total other derivatives					54,971	87,438
Total					57,264	102,864
Current Assets					82,471	129,313
Current liabilities					(25,207)	(26,449)

28.5 Market risks

28.5.1 Foreign exchange risk

The Company has assets and liabilities denominated or indexed to foreign currency, as well as futures operations that will involve revenue and costs denominated or indexed to foreign currencies.

The Policy establishes that risk management has as its objective hedging against the exchange risk of the forecast cash flow denominated in foreign currency using over-the-counter operations (NDFs), stock exchange futures, zero cost collars and non-derivative financial instruments (liabilities indexed in US Dollars).

The foreign currency exposure is shown in the table below:

		Parent company / Consolidated	
		09/30/2019	12/31/2018
		US\$	US\$
Object	Position		
Accounts receivable	Purchased	1,359,391	1,450,783
Inventory	Purchased	268,305	268,077
Instrument designated as hedge accounting			
NDF - Revenue	Sold	(146,423)	(232,883)
Loans and financing	Sold	(851,202)	(857,179)
Suppliers	Sold	(630,071)	(628,798)
Derivatives not designated as hedge accounting			
NDF (US\$/R\$)	Sold	(30,000)	(50,000)
Option Call (US\$/R\$)	Purchased	-	(15,000)
Option Put (US\$/R\$)	Purchased	-	15,000
Future (Pre x US\$)	Purchased	-	11,000
Loans and financing	Sold	(337,966)	(337,297)
Total net exposure		(367,966)	(376,297)

28.5.2 Interest rate risk

The Company has floating exposure to LIBOR, the CDI, the long-term interest rate (TJLP) and Interest Rate Resolution 635/87, derived from investments and loans. LIBOR risk is concentrated on Trade Finance transactions, which consist of LIBOR x fixed rate transactions, as cash flow hedges.

Exposure to interest rates is shown in the table below:

		Parent company/Consolidated	
		09/30/2019	12/31/2018
Designated to hedge accounting			
Loans and financing	LIBOR	(1,235,875)	(1,284,096)
Derivatives – Swap	LIBOR	-	6,396
		(1,235,875)	(1,277,700)
Not designated to hedge accounting			
Loans and financing	TJLP	(1,975)	(6,798)
		(1,975)	(6,798)
Loans and financing	Interest rate Res. 635/87	(278)	(2,939)
		(278)	(2,939)
Investments	PRE	132,156	94,897
Loans and financing	PRE	(51,429)	(73,231)
		80,727	21,666

28.5.3 Commodities risk

Paranapanema's business activities include acquiring raw materials and selling products, both benchmarked against the amounts of metals contained therein, and the prices of these metals on the international exchanges LME and LBMA.

Commodity risk arises from the mismatch between the selling and buying prices of the metals contained in the products and raw materials.

The Company's Market Risk Policy establishes that the exposure to the commodities risk of each metal is derived from the mismatch between the volume of this metal already priced for purchase, and the amounts of this metal already priced for sale, and sets risk exposure limits.

To manage this exposure, the Company has a strategy of keeping all inventory metal costs in US\$ fluctuating (through mark-to-market), and only fixing the metal prices when they are sold and the price can be known for certain.

				Parent company/Consolidated	
Copper				12/31/2018	
	Position	Reference value	Exposure	Reference value	Exposure
Assets, net	Purchased	52,368 tonnes	1,249,180	48,425 tonnes	1,119,252
Designated for hedge accounting					
Embedded derivatives	Sold	(29,805) tonnes	(710,961)	(37,393) tonnes	(853,364)
Firm commitments	Sold	(6,848) tonnes	(163,343)	(7,451) tonnes	(172,214)
NDF	Sold	(1,050) tonnes	(25,055)	8,823 tonnes	203,923
Not designated for hedge accounting					
Embedded derivatives	Purchased	- tonnes	-	(17) tonnes	(393)
Firm commitments	Sold	(13,002) tonnes	(310,138)	(17,033) tonnes	(393,685)
Total net exposure		1,663 tonnes	39,683	(4,646) tonnes	(96,481)

				Parent company/Consolidated	
Gold				12/31/2018	
	Position	Reference value	Exposure	Reference value	Exposure
Assets, net	Purchased	11,480 Oz	71,064	35,511 Oz	176,172
Designated for hedge accounting					
Embedded derivatives	Sold	(3,809) Oz	(23,580)	(22,271) Oz	(110,485)
NDF	Sold	(4,675) Oz	(28,939)	- Oz	-
Not designated for hedge accounting					
Embedded derivatives	Purchased	- Oz	-	5,671 Oz	28,136
Firm commitments	Purchased	106 Oz	653	65 Oz	325
NDF	Sold	(3,041) Oz	(18,824)	4,059 Oz	20,136
Total net exposure		61 Oz	374	23,035 Oz	114,284

				Parent company/Consolidated	
Silver				12/31/2018	
	Position	Reference value	Exposure	Reference value	Exposure
Assets, net	Purchased	348,439 Oz	25,038	509,333 Oz	30,521
Designated for hedge accounting					
Embedded derivatives	Sold	(103,880) Oz	(7,464)	(150,013) Oz	(8,989)
NDF	Sold	(89,923) Oz	(6,462)	(76,072) Oz	(4,559)
Not designated for hedge accounting					
Firm commitments	Purchased	1,731 Oz	124	14,536 Oz	871
NDF	Sold	(114,179) Oz	(8,205)	(209,473) Oz	(12,552)
Total net exposure		42,188 Oz	3,031	88,311 Oz	5,292

				Parent company/Consolidated	
Other				12/31/2018	
	Position	Reference value	Exposure	Reference value	Exposure
Assets, net	Purchased	833 tonnes	9,570	1,496 tonnes	18,277
Designated for hedge accounting					
NDF	Purchased	1,000 tonnes	7,112	(1,513) tonnes	(17,914)
Not designated for hedge accounting					
Firm commitments	Sold	(78) tonnes	(822)	(78) tonnes	(813)
NDF	Sold	(1,970) tonnes	(18,374)	(31) tonnes	(612)
Total net exposure		(215) tonnes	(2,514)	(126) tonnes	(1,062)

28.5.4 Sensitivity analysis

In order to measure the impact on the Company's net income (loss) and shareholders' equity arising from changes to financial market rates, stress scenarios were created based on the rates effective as at September 30, 2019. As required by CVM Instruction 475/08, the Company carried out a sensitivity analysis using the probable scenario, and scenarios involving a 25% and 50% decrease and increase.

Parent company/Consolidated								
	Notional	Unit	Risk factors	Probable scenario	Falling scenario		Rising scenario	
					25%	50%	25%	50%
Impact on profit or loss								
Foreign exchange rate risk								
Subject to hedge								
Accounts receivable	1,359,391	US\$	US\$	5,661,048	(1,415,262)	(2,830,524)	1,415,262	2,830,524
Inventory	268,305	US\$	US\$	1,117,329	(279,332)	(558,665)	279,332	558,665
Hedge instrument								
NDF - Cash flow hedge	(146,423)	US\$	US\$	(90,162)	152,441	304,882	(152,441)	(304,882)
Suppliers	(630,071)	US\$	US\$	(424,584)	655,967	1,311,934	(655,967)	(1,311,934)
Loans	(851,202)	US\$	US\$	(399,105)	886,186	1,772,373	(886,186)	(1,772,373)
Other non-derivative financial instruments								
Liabilities	(337,966)	US\$	US\$	(1,407,426)	351,856	703,713	(351,856)	(703,713)
Other derivatives								
NDF (US\$/R\$)	(30,000)	US\$	US\$	(8,703)	(39,704)	(70,704)	39,704	70,704
Total	(367,966)			4,448,397	312,153	633,008	(312,153)	(633,008)
Interest rate risk								
Subject to hedge								
Liabilities	(296,772)	US\$	LIBOR	(1,373,544)	(80,496)	(64,500)	(112,488)	(128,485)
Other non-derivative financial instruments								
Liabilities	(1,975)	R\$	TJLP	(6,591)	60	121	(59)	(118)
Assets	132,156	R\$	PRÉ	132,156	(69)	(205)	200	333
Liabilities	(51,429)	R\$	PRÉ	(51,687)	(1,469)	(993)	(2,385)	(2,825)
Other derivatives								
Swap	-	R\$	CDI	-	-	-	-	-
Total	(218,020)			(1,299,666)	(81,974)	(65,577)	(114,732)	(131,095)
Commodity price risk								
Subject to hedge								
Firm commitments		ton	Copper					
Stock Copper		ton	Copper					
Hedge instrument								
NDF (Copper) - Fair value hedge	(6,848)	tonnes	Copper	(163,343)	40,836	81,672	(40,836)	(81,672)
NDF (Copper) - Fair value hedge Inventory	(1,050)	tonnes	Copper	(25,055)	6,264	12,528	(6,264)	(12,528)
Embedded derivatives (Cooper) - Fair Value Hedge	(29,805)	tonnes	Copper	(710,961)	177,740	355,481	(177,740)	(355,481)
Total	(37,703)			(899,359)	224,840	449,681	(224,840)	(449,681)
Not designated for hedge accounting								
NDF	(3,041)	Oz	Gold	(18,824)	4,706	9,412	(4,706)	(9,412)
Hedge instrument								
NDF	(4,675)	Oz	Gold	(28,939)	7,235	14,470	(7,235)	(14,470)
Embedded derivatives	(3,809)	Oz	Gold	(23,580)	5,895	11,790	(5,895)	(11,790)
Total	(11,525)			(71,343)	17,836	35,672	(17,836)	(35,672)
Not designated for hedge accounting								
NDF	(114,179)	Oz	Silver	(8,205)	2,051	4,103	(2,051)	(4,103)
Hedge instrument								
NDF	(89,923)	Oz	Silver	(6,462)	1,616	3,231	(1,616)	(3,231)
Embedded derivatives	(103,880)	Oz	Silver	(7,464)	1,866	3,732	(1,866)	(3,732)
Total	(307,982)			(22,131)	5,533	11,066	(5,533)	(11,066)
Hedge instrument								
NDF (Zinc, Lead and Tin)	1,000	tonnes	Other Metals	7,112	(1,778)	(3,556)	1,778	3,556
Not designated for hedge accounting								
Assets, net								
NDF	(1,970)	tonnes	Other Metals	(18,374)	4,594	9,187	(4,594)	(9,187)
Total	(970)			(11,262)	2,816	5,631	(2,816)	(5,631)
Total								
Premises								
Exchange tax	Ptax - USD/BRL			4,1644	3,1233	2,0822	5,2055	6,2466
Copper Price	Official Price Cash LME			\$5,728	\$4,296	\$2,864	\$7,160	\$8,592
Gold Price	Official Price Cash LBMA			\$1,486	\$1,115	\$743	\$1,858	\$2,230
Silver Price	Official Price Cash LBMA			\$17	\$13	\$9	\$22	\$26
Price Zinc	Official Price Cash LME			\$2,377	\$1,783	\$1,189	\$2,971	\$3,566
Tin Price	Official Price Cash LME			\$16,055	\$12,041	\$8,028	\$20,069	\$24,083
Lead Price	Official Price Cash LME			\$2,085	\$1,564	\$1,043	\$2,606	\$3,128

28.6 Hedge accounting

Paranapanema adopted the following hedge accounting programs:

28.6.1 US Dollar Revenue Cash Flow Hedge

The program's purpose is to ensure that a percentage of revenue equivalent to the sales premium pegged to the US\$ is not impacted by exchange rate changes. Together, the derivative and revenue will result in a fixed/constant cash inflow based on the derivative financial instrument's US Dollar rate, collateralized by the derivative financial instrument.

The hedged item refers to a percentage of the revenue equivalent to the highly probable future sales premium, indexed to the US Dollar. The hedging instruments contracted for this program are US\$/R\$ (NDF) currency contracts. In addition to the derivative instruments, the Company also, as authorized by CVM Resolution 604/09, uses changes to the exchange rates of non-derivative financial instruments, such as Advances on Exchange Contracts (ACC), Prepayments for Exports (PPE) and debt contracts in US Dollars to mitigate the exchange risk arising from its highly probable future sales in foreign currencies. This program was implemented from November 2013 for the ACC and PPE instruments, and from December 2013 for other debts such as hedge instruments.

The exchange rate change on debt in US\$ is credited in OCI and debited from loans and financing when the adjustment is positive. In the case of a negative adjustment, the loans and financing account is credited, and the Equity Valuation Adjustment account is debited. The corresponding balance in OCI is recognized within the operating profit or loss only when the hedged item (the revenue percentage equivalent to the sales premium) matures, and the hedge relationship is effective.

Under CPC 48, hedge instruments can be rolled over until the hedged item's expected month of realization. The month of realization is defined upon the date of identification of the hedge relationship.

28.6.2 Firm Sales Commitment Fair Value Hedge

The purpose of the Firm Sales Commitment hedge is to protect the fair value in US Dollars of the fixed sales price of copper against unfavorable trends in the price of copper quoted on the LME.

The hedge covers future copper sales in US Dollars with a pre-fixed price for clients with fixed sales commitments. The hedging instruments used are copper derivatives quoted on the LME.

The metal price mark-to-market adjustments to derivatives contracts designated as hedges are credited to the operating profit or loss, along with the firm sales contracts. The derivative financial instruments account within assets is debited against the operating profit or loss when adjustments are positive, and credited within liabilities against the operational loss when adjustments are negative.

28.6.3 Inventory Fair Value Hedge

The purpose of the Inventory Fair Value hedge is to hedge the Company's highest cost item, which is the metal portion (copper, zinc, lead, tin, gold and silver) of inventory, maintaining them at market prices (the price of the metal in Reais) up to the effective sale date. The costs of transformation of metals (labor and inputs) are not material compared to the total inventory cost, and are denominated in Reais, and therefore are not subject to metal price hedges or exchange hedges.

Instruments hedging the metals price include embedded derivatives of copper concentrate supply contracts, which were separated from the contracts. This program was implemented from December 2013. On March 1, 2014, an inventory fair value hedge was implemented using mercantile exchange derivatives as hedging instruments to protect against changes in the monthly average spot prices. The same strategy was implemented on May 1, 2014 with derivatives on the stock exchange for zinc, lead and tin. The same strategy was implemented on June 1, 2014 with derivatives on the stock exchange for gold and silver. On January 1, 2016, the prices of metals in Reais were marked-to-market through the designation of financial instruments as foreign exchange hedges.

The effects of the marking-to-market of derivative instruments covering the fair value of inventory are subject to retrospective and prospective effectiveness testing, respecting the limits of 80% - 125% effectiveness required to maintain the hedging relationship. The ineffective portion is recorded directly in the result.

The mark-to-market adjustments made to derivatives contracts in the stock exchange and financial instruments are recognized within inventory, as well as the hedged item, which is the metals portion of inventory. The derivative financial instruments account within assets is debited against the operating profit or loss when adjustments are positive, and credited within liabilities against the operational loss when adjustments are negative.

28.6.4 Cost of metal cash flow hedges

The objective of the hedge is to protect the cost of copper of products sold for a particular month of sale, adjusting the cost of the goods sold based on price references (LME) that are identical or close to the price references for revenue from the sale of copper. This hedge, together with the inventory fair value hedge program, allows the US\$ cost of metals in Cost of Goods Sold (COGS) to be similar to the R\$ metal price in the revenue.

The item to be hedged is the cost of copper used in the products sold in a particular month. The hedge instrument consists of forward contracts for copper, the objective of which is to exchange references for average copper prices. This program has been implemented since April 2014.

The mark-to-market adjustments to the derivative contracts designated as hedges are credited to the OCI, and are debited from the derivatives receivable account when the adjustments are positive. In the case of negative adjustments, the derivative financial instruments account within liabilities is credited, and the OCI is debited. The corresponding OCI balance is recognized within operating profit or loss when the hedged item matures.

In compliance with the documentation requirements defined in IFRS 9, the Company made the formal designation of its hedge operations subject to hedge accounting by documenting the following:

- i. The hedge relationship;
- ii. The risk management objectives and strategy of the Company in carrying out hedging activities;
- iii. The identification of the hedge instrument (derivative or non-derivative financial instrument);
- iv. The hedged item or position;
- v. The nature of the risk to be covered;
- vi. The description of the coverage ratio;
- vii. The statement of the correlation between the hedge instrument and the hedged item, when applicable; and
- viii. The prospective and retrospective statement of the hedge's effectiveness.

The transactions which Paranapanema designated as cash flow hedges are highly probable. The deferral of unrealized gains and losses on derivative and non-derivative financial instruments designated for hedging against exchange and interest rates was carried out in OCI within shareholders' equity.

Parent company/Consolidated						
Instrument	Object	Index	Maturities	Reference	Market value(*) 09/30/2019	
Cash flow hedge						
Derivatives – designated						Instrument
NDF – Closed	Income (in US\$)	USD	Jan-19 - Sep-19	(91,392) US\$		(29,920)
NDF – Provision	Income (in US\$)	USD	Oct-19 - Dec-21	(146,423) US\$		(90,163)
NDF – Closed	Cost	Copper	Jan-19 - Sep-19	15,294 tonnes		-
NDF – Provision	Cost	Copper	Oct-19	4,267 tonnes		949
Non-derivative - designated						
ACC / PPE – Provision	Income (in US\$)	USD	Oct-19 - Dec-30	(671,185) US\$		(431,060)
Other debt – provision	Income (in US\$)	USD	Oct-19 - Nov-36	(541,783) US\$		(424,584)
Fair value hedge						
Derivatives						
NDF – Closed	Sales commitment	Copper	Jan-19 - Sep-19	8,438 tonnes		(9,197)
NDF – Provision	Sales commitment	Copper	Oct-19 - Oct-20	5,975 tonnes		923
Embedded derivatives	Inventory	Copper	Jan-19 - Sep-19	74,028 tonnes		8,328
Embedded derivatives	Inventory	Copper	Oct-19 - Dec-19	23,354 tonnes		8,418
Embedded derivatives	Inventory	Gold	Jan-19 - Sep-19	39,740 Oz		(7,506)
Embedded derivatives	Inventory	Gold	Oct-19 - Dec-19	6,330 Oz		(1,036)
Embedded derivatives	Inventory	Silver	Jan-19 - Sep-19	1,056,638 Oz		(1,721)
Embedded derivatives	Inventory	Silver	Oct-19 - Dec-19	215,877 Oz		(1,504)
NDF – Closed	Inventory	Copper	Jan-19 - Sep-19	70,950 tonnes		1,730
NDF – Provision	Inventory	Copper	Oct-19 - Dec-19	17,508 tonnes		(2,683)
NDF – Closed	Inventory	Zinc	Jan-19 - Sep-19	6,250 tonnes		602
NDF – Provision	Inventory	Zinc	Oct-19 - Dec-19	1,100 tonnes		(204)
NDF – Closed	Inventory	Lead	Jan-19 - Sep-19	200 tonnes		(11)
NDF – Provision	Inventory	Lead	Oct-19 - Dec-19	50 tonnes		(6)
NDF – Closed	Inventory	Tin	Jan-19 - Sep-19	360 tonnes		(397)
NDF – Provision	Inventory	Tin	Oct-19 - Dec-19	50 tonnes		(55)
NDF – Closed	Inventory	Gold	Jan-19 - Sep-19	65,912 Oz		(8,328)
NDF – Provision	Inventory	Gold	Oct-19 - Dec-19	4,675 Oz		(251)
NDF – Closed	Inventory	Silver	Jan-19 - Sep-19	776,182 Oz		(499)
NDF – Provision	Inventory	Silver	Oct-19 - Dec-19	89,923 Oz		(386)

(*) The market value for the derivatives designated as providing cash flow hedge accounting are stated in shareholders equity

	Parent company/Consolidated	
	Equity	
	09/30/2019	12/31/2018
Derivatives designated for hedge accounting		
Commodities risk	949	3,238
Foreign exchange risk	(90,163)	(116,002)
	<u>(89,214)</u>	<u>(112,764)</u>
Non-derivatives designated for hedge accounting		
Foreign exchange risk - Outstanding operations	(855,644)	(855,561)
	<u>(855,644)</u>	<u>(855,561)</u>

28.7 Credit risk

The Company's sales policy varies depending on the level of credit risk that it is willing to accept.

Credit is an important instrument for promoting business between the Company and its clients. This is due to the fact that clients leverage their purchasing power to obtain favorable credit terms.

Risk is inherent to credit transactions, and the Company must perform a careful analysis. This work involves quantitative and qualitative evaluations of the clients, as well as considering the industry in which they operate. This analysis takes into consideration the client's past performance, a forecast of its economic-financial robustness, the client's risk management policy, and its future prospects.

The diversification of the receivables portfolio, the selection of clients and the monitoring of terms and credit limits per individual client are among the procedures adopted to minimize delays and defaults on accounts receivable. In addition to performing credit limit checking procedures, individual client balances are limited to 10% of the Company's total revenue. Thus, the Company spreads the credit risk among several clients.

As regards the credit risk associated with interest-earning bank deposits, the Company always invests with low-risk institutions, as evaluated by independent ratings agencies.

Credit risks	Notes	Parent company		Consolidated	
		09/30/2019	12/31/2018	09/30/2019	12/31/2018
Assets					
Cash and cash equivalents	05	244,993	201,571	254,480	216,668
Interest-earning bank deposits	05	19,782	44,788	25,612	45,556
Trade accounts receivable	06	303,085	771,710	255,850	666,685
Other assets	09	128,992	94,762	129,156	91,646
Derivative financial instruments	28	82,471	129,313	82,471	129,313
		779,323	1,242,144	747,569	1,149,868

28.8 Liquidity risk

- The risk management policy requires the maintenance of a safe level of cash and cash equivalents and access to sufficient lines of credit. The Company's investments have immediate liquidity, at amounts sufficient to cover the possible liability to settle with suppliers, loans or financing.
- Liquidity risk represents a shortage of funds intended to pay debts and interest (see Note 1).

The estimate of existing debt contract payments, as at September 30, 2019, is as follows:

The amounts presented include the estimated principal amounts and interest calculated using the USD rate prevailing as at September 30, 2019 (R\$ 4.1644/US\$ 1.0000) for debts denominated in USD (PPE, ACC and FINIMP) and the prevailing contracts' interest rates:

Liquidity risk			Consolidated			
	Notes	Amount	Up to 1 year	1 – 2 years	2 – 5 years	Over 5 years
Assets						
Cash and cash equivalents	05	254,480	254,480	-	-	-
Interest-earning bank deposits	05	25,612	11,597	14,015	-	-
Trade accounts receivable	06	255,850	254,028	1,822	-	-
Other assets	09	129,156	33,843	95,313	-	-
Derivative financial instruments	28	82,471	82,471	-	-	-
		<u>747,569</u>	<u>636,419</u>	<u>111,150</u>	<u>-</u>	<u>-</u>
Liabilities						
Loans and financing	16	(2,241,631)	(504,257)	(40,645)	(1,425,359)	(271,370)
Advances from customers	20	(13,606)	(13,606)	-	-	-
Customer credit	20	(696)	(696)	-	-	-
Derivative financial instruments	28	(25,207)	(25,207)	-	-	-
Suppliers	13	(987,014)	(986,193)	(821)	-	-
Forfait and credit card operations	14	(131,701)	(131,701)	-	-	-
		<u>(3,399,855)</u>	<u>(1,661,660)</u>	<u>(41,466)</u>	<u>(1,425,359)</u>	<u>(271,370)</u>
Net position		<u>(2,652,286)</u>	<u>(1,025,241)</u>	<u>69,684</u>	<u>(1,425,359)</u>	<u>(271,370)</u>

28.9 Book value/fair value

Management considers that the fair value is a tax incentive reserve equivalent to the book value of short-term transactions, once the book value of such transactions is a reasonable approximation of the fair value (CPC-40/item 29), except for loans and financing transactions, for which the fair values are determined and shown in the table in Note 28.4, which sets out the classification of financial instruments.

28.10 Capital management

The main purpose of the capital management of Paranapanema and its subsidiaries is to ensure strong credit ratings for institutions and an adequate capital ratio to support the Company's business and to maximize shareholder value.

The Company includes the following within its net debt structure: loans, financing, derivative financial instruments payable, net of cash, cash equivalents, interest-earning bank deposits and derivative financial instruments receivable.

	Notes	Parent company		Consolidated	
		09/30/2019	12/31/2018	09/30/2019	12/31/2018
Loans and financing	16	2,241,631	2,148,913	2,241,631	2,148,913
Derivatives financial instruments payable	28	33,625	35,346	33,625	35,381
(-) Cash and cash equivalents	05	(244,993)	(201,571)	(254,480)	(216,668)
(-) Interest-earning bank deposits	05	(19,782)	(44,788)	(25,612)	(45,556)
(-) Derivatives financial instruments receivable	28	(37,893)	(27,353)	(37,893)	(27,388)
(=) Net debt		1,972,588	1,910,547	1,957,271	1,894,682
Derivatives financial instruments payable	28	(8,418)	(8,932)	(8,418)	(8,932)
(-) Derivatives financial instruments receivable	28	(44,578)	(101,925)	(44,578)	(101,925)
(=) Net debt on embedded derivative		1,919,592	1,799,690	1,904,275	1,783,825
Equity	21	832,396	602,496	832,397	602,497
Leverage ratio		70.32%	76.03%	70.16%	75.87%
Leverage ratio with embedded derivative		69.75%	74.92%	69.58%	74.75%

29. Assumed commitments

The Company has a contractual commitment with a supplier for the coming years regarding the outsourcing of the management, operations and maintenance of an oxygen gas located in the industrial plant of Dias D'Ávila, maturing in March 2023. The commitment does not subject the Company to any restrictions.

The renewal and adjustment clauses are described in the contract, and are in line with market practices.

The future minimum obligations payable under this contract, if not canceled before maturity, are as follow:

	Parent company/Consolidated	
	09/30/2019	12/31/2018
Up to one year	8,013	7,577
From two to four years	16,026	15,154
Over four years	4,006	9,471
	<u>28,045</u>	<u>32,202</u>

30. Insurance

The Company maintains insurance coverage at amounts considered sufficient to cover potential losses arising from claims, taking into account the nature of the activities, the risks involved in the operations and the guidance of its insurance consultants.

As at September 30, 2019, the amounts insured and the coverage limits contracted within the respective insurance segments were as follow:

Type	Declared value at risk	Maximum Limit Indemnified
Operational Risks	R\$ 1,348,203	R\$ 200,000
General Liability	R\$ 11,000	R\$ 22,000
Liability (D&O)		R\$ 65,000
Transport (National territory)	R\$ 15,000,000	R\$ 15,000,000
Export Credit Insurance	USD 134.376	USD 7.863
Transports (international territory)	USD 2,400,000	USD 2,400,000
Judicial and Financial Actions		Amount set for advocate causes
Vehicles		100% of the vehicle's value (Based on FIPE table)
Group Life insurance		30 x base salary

31. Private pension

The private pension plans offered by the Company and its subsidiaries include a pension plan deductible for income tax purposes (PGBL) and a private pension plan non-deductible for income tax purposes (VGBL) respectively, both administered by BrasilPrev based on joint contributions made by the Company, its subsidiaries and the employees.

PGBL/VGBL: After meeting the cumulative requirement to make contributions for 120 months, and after reaching 60 years of age, the beneficiaries will be entitled to redeem 100% of the savings accumulated from them, the Company and its subsidiaries, provided that they are not employed by the Company at the redemption date. In the case of termination by the Company before becoming eligible, the beneficiary shall be entitled to withdraw up to 80% of the amount deposited by the Company, respecting a policy which provides for a rate of 1% per month of contributions.

Therefore, plans exclude the risk benefits, and thus do not generate actuarial liabilities. If the participant opts for a life income benefit, BrasilPrev is responsible for maintaining reserves under the contract.

The value of the contributions made to the plans by the Company and subsidiaries in the period was R\$ 1,699 (R\$ 1,599 in the same period of 2018).

32. Variable remuneration plan

General terms and conditions

Beneficiaries: All of the Company's executives holding positions such as Director, Manager or Chief are eligible for the Variable Remuneration Program. Consisting of short-term (ICP) and long-term (ILP) incentives. The ICP and ILP incentives are linked to specified team and individual goals, the percentage achievement of which is evaluated at the end of each year.

Until 2016, the ILP was based on the Company's shares using the concept of "phantom shares" whereby, at the end of each period, the goals achieved in the period between January and December were converted into units (URVs) based on the performance, changes and value of the Company's shares (PMAM3), distributed across certain vesting periods. Payment obligations from URVs distributed until 2016 will follow the above described.

Starting in 2017, the Board of Directors approved the change in the definition of ILP incentives, revoking the calculation based on the performance of phantom shares. The ILP is now calculated on salary multiples and based on collective goals established by the Board of Directors, and on previously agreed individual goals.

The Variable Remuneration Program conditions and rules can be changed at any moment by the Company, with such changes to be expressly communicated to the eligible executives.

Exercising conditions: The private contract determines eligibility rights for and payments based on variable remuneration made to all employees who meet the annual goals under the terms of the contract.

The contract provides the following eligibility conditions for variable remuneration:

The eligible employee has the right to receive the ILP only if his/her labor contract is active, otherwise:

- I. In the case of the suspension of a labor contract due to disability, there will be no payments while the labor contract remains suspended; and
- II. In the case of decease of an employee, his/her heirs and/or legal beneficiaries will receive 50% of the amount due as at the date of decease.

Criteria for fixing the exercise term: Except for the ineligibility conditions mentioned above, the vesting will be deferred in two installments, with annual payments, or 50% of the salary multiple per year, being the first payment due for the year following the acquisition of the ILP. The amount to be granted will be based on the salary multiple as at December 31 for the year prior to payment.

Settlement form: Settlement will be through a payroll process when all of the established conditions have been met.

Phantom shares up to 2016:

Criteria for fixing the acquisition or exercise price: For every phantom share payment year, the vesting number of shares ($\frac{1}{4}$ per year) will be multiplied by the average stock price (PMAM3) from January to December of the year prior to payment.

Restrictions on stock transfers: The exercise of phantom shares does not imply the concession of any Company stock, with all remuneration being linked to the phantom shares paid in cash.

All rights and obligations derived from the individual instrument cannot in any circumstances be assigned or transferred to third parties, nor be offered as guarantees for obligations.

Phantom share remuneration based on the stocks recognized in the results in the last social year and forecast to the current social year: In the first quarter of 2017, the Company completed the second evaluation cycle referring to the year 2016, granting phantom shares, which will be deferred for four years, to eligible individuals who fulfilled the criteria established in the individual contracts. The approval of targets having been met, and the phantom share distribution, occurred on April 29, 2017 in the Extraordinary Shareholders' Meeting (ESM), upon approval of the 2016 financial statements.

33. Additional information regarding cash flow

a) Transactions related to investment and financing activities not involving cash were as follow:

	9M19	9M18
Investing activities		
Residual value of written-off fixed assets	(110)	5
Depreciation and amortization	113,949	108,850
Financial charges	(376)	(196)
Transfer to stock of spare parts	-	56,253
Provision for impairment losses	(1,926)	-
Fixed assets and intangible additions	111,537	164,912
Financing activities		
Amortization of right-to-use assets	10,312	-
Financial charges	243,714	458,157
	254,026	458,157

b) Net debt reconciliation

	09/30/2019	12/31/2018
Loans and financing	2,241,631	2,148,913
Forfeiting and letter of credit operations	131,701	66,914
Derivative financial instruments	(57,264)	(102,864)
Indebtedness	2,316,068	2,112,963
Cash and cash equivalents	254,480	216,668
Financial investments	25,612	45,556
Total cash	280,092	262,224
Net debt	2,035,976	1,850,739

	Loans and financing	Forfait and letter of credit operations	Derivative Financial Instruments	Indebtedness	Total cash	Net debt
Net debt at December 31, 2018	2,148,913	66,914	(102,864)	2,112,963	262,224	1,850,739
Transactions with cash impact	(150,996)	62,406	80,682	(7,908)	17,868	(25,776)
Transactions without cash impact	243,714	2,381	(35,082)	211,013	-	211,013
Financial charges and exchange rate variations	243,714	2,381	(35,082)	211,013	-	211,013
Net debt as at september 30, 2019	2,241,631	131,701	(57,264)	2,316,068	280,092	2,035,976

Report on review of quarterly information

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

Introduction

We have reviewed the accompanying parent company and consolidated interim accounting information of Paranapanema S.A. ("Company"), included in the Quarterly Information Form (ITR) for the quarter ended September 30, 2019, comprising the balance sheet as at that date and the statements of income and comprehensive income (loss) for the quarter and nine-month period then ended, and the statements of changes in equity and cash flows for the nine-month period then ended, as well as a summary of significant accounting policies and other explanatory information.

Management is responsible for the preparation of the parent company and consolidated interim accounting information in accordance with the accounting standard CPC 21, Interim Financial Reporting, issued by the Brazilian Accounting Pronouncements Committee (CPC), and the International Accounting Standard (IAS) 34, Interim Financial Reporting, issued by the International Accounting Standards Board (IASB), as well as the presentation of this information in accordance with the standards issued by the Brazilian Securities Commission (CVM), applicable to the preparation of the Quarterly Information (ITR). Our responsibility is to express a conclusion on this interim accounting information based on our review.

Scope of the review

We conducted our review in accordance with Brazilian and International Standards on Reviews of Interim Financial Information (NBC TR 2410 - Review of Interim Financial Information Performed by the Independent Auditor of the Entity and ISRE 2410 - Review of Interim Financial Information Performed by the Independent Auditor of the Entity, respectively). A review of interim information consists in making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Brazilian and International Standards on Auditing and consequently did not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion on the interim information

Based on our review, nothing has come to our attention that causes us to believe that the accompanying parent company and consolidated interim accounting information included in the quarterly information referred to above has not been prepared, in all material respects, in accordance with CPC 21 and IAS 34 applicable to the preparation of the Quarterly Information, and presented in accordance with the standards issued by the CVM.

Emphasis of matter

Lawsuits with possible risk of loss

We draw attention to Note 19.2 to the interim accounting information, in which the Company states that it has various judicial claims arising from its operations in the amounts of R\$ 1,237,468 thousand and R\$ 1,240,834 thousand in the parent company and consolidated, respectively (December 31, 2018 - R\$ 1,237,070 thousand and R\$ 1,238,810 thousand, respectively), for which risks of loss are assessed as possible, based on the position of its legal counsel and, therefore, the Company has not set up a provision against these claims. The main lawsuit refers to a judicial decision determining whether the Company is liable to Social Contribution on Net Income (CSLL). Additionally, as disclosed in Note 19.2, following arbitration decisions on the contract executed with BTG Pactual S.A. and Banco Santander S.A, management, supported by its legal counsel, believes that there is no indication in these decisions determining the calculation of possible amounts due between the parties. Our conclusion is not qualified in respect of these matters.

Other matters

Statements of value added

The quarterly information referred to above include the parent company and consolidated statements of value added for the nine-month period ended September 30, 2019. These statements are the responsibility of the Company's management and are presented as supplementary information for the purposes of IAS 34. These statements have been submitted to review procedures carried out in conjunction with the review of the quarterly information, for the purpose of concluding whether they were reconciled with the interim accounting information and accounting records, as applicable, and if their form and content were in accordance with the criteria defined in Technical Pronouncement CPC 09 - "Statement of Value Added". Based on our review, nothing has come to our attention that causes us to believe that these statements of value added have not been prepared, in all material respects, in accordance with the criteria established in the Technical Pronouncement, and are consistent with the parent company and consolidated interim accounting information taken as a whole.

Barueri, November 7, 2019

PricewaterhouseCoopers
Auditores Independentes
CRC 2SP000160/O-5

José Vital Pessoa Monteiro Filho
Contador CRC 1PE016700/O-0

PARANAPANEMA S.A.
EIN 60.398.369/0004-79 – NIRE 29.300.030.155
PUBLICLY-HELD COMPANY

Statement of the Executive Officers on the Financial Statements

In compliance with Article 25, paragraph 1, subsection VI, of CVM Instruction 480/2009, the Executive Board declares that it has reviewed, discussed and agreed to the Company's financial statements "parent company and consolidated", for the fiscal year ended September 30, 2019.

Dias d'Ávila, November 7, 2019.

CEO and Investor Relations Officer
Luiz Carlos Siqueira Aguiar

CFO
Igor Gravina Taparelli

Chief Legal Officer
Paulo Rodrigo Chung

Operations Director
Alexandro Avila de Moura

PARANAPANEMA S.A.
EIN 60.398.369/0004-79 – NIRE 29.300.030.155
PUBLICLY-HELD COMPANY

Directors' Statement on Independent Auditors' Report

In accordance with Article 25, paragraph 1, items V, of CVM Instruction 480/2009, the Company's Executive Directors declare they have reviewed, discussed and agreed with the report issued on November 07, 2019 by PRICEWATERHOUSECOOPERS, the Independent Auditors of the Company and its subsidiaries, regarding the "Parent Company and Consolidated" financial statements, related to the quarter ended September 30, 2019.

Dias d'Ávila, November 7, 2019.

CEO and Investor Relations Officer
Luiz Carlos Siqueira Aguiar

CFO
Igor Gravina Taparelli

Chief Legal Officer
Paulo Rodrigo Chung

Operations Director
Alexandro Avila de Moura