

Financial Statements

December 31, 2019

Annual report

Financial statements

Notes

Independent auditor's report

Opinion of the Statutory Audit Board

Opinion of the Audit and Risks Committee

Management



(A free translation of the original in Portuguese)



MESSAGE FROM MANAGEMENT

Dear shareholders, clients, suppliers and colleagues,

Thank you for your support, commitment and investment in Tupy. Our progress would not be possible without your trust in our mission.

After the important results of 2018, we are happy to have implemented our strategy last year. We increased our operations in more complex products and enhanced our position in the supply chain, with a expansion of machining and component assembly, thus leading to better results. We conducted our business by strengthening our position in new markets and renewed our product portfolio, which will bring long-term benefits to Tupy. With consistent work being done close to the Board of Directors, we moved forward with our strategic execution and created sources of growth for a prosperous future.

We believe that diesel engines will continue to be the technological platforms for powertrains in most of our markets, and we will keep supporting our clients who wish to use natural gas, biodiesel and other fuels. We will continue exploring and expanding our leadership to offer the best technological solution in structural components for capital goods.

We envision new opportunities to add value to our clients' supply chain, through the offer of machining and component assembly services.

World development as a growth driver

For decades, Tupy has been forming partnerships with the main global capital goods players in segments such as cargo transport, infrastructure, agriculture and energy generation. Our business model is prepared to move forward in our clients' chain, following an outsourcing trend and enabling them to dedicate their focus and resources to new challenges. This will be a very important value driver for our growth in the coming years.

However, it is important to point out that everything we do is guided by a deep sense of purpose, which goes beyond an outstanding customer service. We want our knowledge to be applied and to enable our clients to improve people's quality of life. Through them, we have the opportunity — and the responsibility — to put our technology at the service of the world population, by expanding access to drinking water, basic sanitation, energy, safe housing and food. This adds up to a longer and better life!

A purpose that creates results

Once again, Tupy's team, which I am very proud to lead and represent, demonstrated its determination and focus on results. Our revenues totaled R\$5.1 billion, an increase of 6.9% over 2018, even in face of a drop of 5.4% in sales volume.

We increased the share of machined products in 2019, from 20% of our production volume in 2018 to 24%. Meanwhile, Compacted Graphite Iron (CGI) products accounted for 22% of production volume, versus 14% in the previous year.

The implementation of new programs brought outstanding medium-term prospects, but made our processes more complex, especially regarding the wide renewal of Mexican products, with the first quarter result being impacted by the learning curve. However, throughout the year, we observed the positive effect of these initiatives in our margins, and the effects will become more evident in 2020 and the following years.

We increased our operational efficiency, reaping the benefits of numerous projects implemented during the year, which reduced scrap and consumption of materials and optimized the use of furnaces and other processes.

We extended our commitment to research and development to our production system. Therefore, we are applying the concept of open innovation by developing initiatives with startups and technology companies in Brazil and abroad. Living in this ecosystem and sharing experiences with our technicians and engineers have been contributing to the development of pioneering projects involving mathematic modeling and the use of data analytics to manage quality and productivity.

We have also been working to obtain the necessary flexibility to deal with fluctuating demand, which is inherent in our business. This way, we have managed to concentrate our production in certain plants, mitigating the occasional impacts of volume declines on our margins. This ability to adapt quickly, added to strict cost control and operational efficiency gains, allowed the Company to increase margins in the second half of the year, despite the decline in production volume.

As a result, for the first time, the Company's adjusted EBITDA (excluding non-recurring revenues and expenses) reached the mark of R\$700.1 million. Another record was the net profit for the period, which totaled R\$279 million. Strong cash generation, inherent in our business model, contributed to the reduction in our operational leverage, to a net debt/EBITDA ratio of 0.9x.

Living our values

People are our first value, since our business' success depends on them. To this end, we need to guarantee a respectful and inclusive environment, nurturing a team that is increasingly diverse in terms of ideas, ethnicities, genders, education, etc. Although we have made progress in this regard – something we noticed through our engagement indicators –, we believe there is still room for improvement.

Therefore, we will strengthen our organizational culture, which is based on the teamwork of a motivated, challenged and continuously trained staff. We are talking about 250,000 hours of training in 2019 alone. This spirit of partnership also reaches out into the community, whether through social actions promoted by the Company our through the engagement of our employees with the "Tupy Transformers" volunteer program. This initiative, recently recognized by the Brazilian Human Resources Association, brings together volunteers in food drives; renovation of schools, nursing homes and hospitals; and distribution of meals to homeless people, among other initiatives.

Growth through an increase in our global presence

In addition to numerous positive results, 2019 will be marked in our history by the acquisition of the cast iron components business of Teksid, a company from the FCA group, subject to conditions precedent, such as the approval of antitrust authorities.

It is a great joy for us to welcome into Tupy the talent of these professional and the technological knowledge of this extraordinary team. In addition, the fact that FCA chose Tupy as a strategic partner to new product generations is a great recognition of our solid business practice.

This transformative deal increased our exposure to perennial sectors, especially heavy trucks, agricultural and construction machinery and industrial products, among others. We also expanded our client portfolio, which can benefit from our know-how of products with special alloys, complex geometries and machining and component assembly services, which present great opportunities to growth. From an operational point of view, there are countless synergies and scale gains that will be implemented over time, while we will continue to seize opportunities arising from global growth and inherent demand for our products. It is a privilege to be conducting this process!

Respectfully,

Fernando Cestari de Rizzo

MAIN INDICATORS

Consolidated (R\$ thousand)

SUMMARY	2019	2018	Var.[%]
Revenues	5,163,585	4,828,216	6.9%
Cost of goods sold	(4,328,633)	(4,032,290)	7.3%
Gross profit	834,952	795,926	4.9%
% of revenues	16.2%	16.5%	
Operating expenses	(397,172)	(348,444)	14.0%
Other operating expenses	(34,785)	(111,230)	-68.7%
Reversion (constitution) of impairment	(46,404)	33,631	-
Income before financial results	356,591	369,883	-3.6%
% of revenues	6.9%	7.7%	
Net financial result	(18,021)	(12,615)	42.9%
Income before tax effects	338,570	357,268	-5.2%
% of revenues	6.6%	7.4%	
Income tax and social contribution	(59,638)	(85,547)	-30.3%
Net income	278,932	271,721	2.7%
% of revenues	5.4%	5.6%	
EBITDA (CVM Instruction 527/12)	682,646	649,260	5.1%
% of revenues	13.2%	13.4%	
Adjusted EBITDA	700,144	677,065	3.4%
% of revenues	13.6%	14.0%	
Average exchange rate (USD/BRL)	3.95	3.66	7.9%
Average exchange rate (EUR/BRL)	4.42	4.31	2.5%

SALES VOLUME

Sales volume fell 5.4% year on year in 4Q19.

Consolidated (ton)			
	2019	2018	Var. [%]
Domestic market	110,557	112,417	-1.7%
Transportation, Infrastructure & Agriculture	96,555	98,645	-2.1%
Hydraulics	14,002	13,772	1.7%
Foreign market	455,615	485,933	-6.2%
Transportation, Infrastructure & Agriculture	441,463	467,853	-5.6%
Hydraulics	14,152	18,080	-21.7%
Total sales volume	566,172	598,350	-5.4%

In the second half of 2019, sales volume was affected by the performance of off-road applications, resulting in postponed investments, due to political uncertainties (especially the U.S.-China trade dispute), impacting the demand for machinery and equipment.

Regarding the domestic market, in the second half of 2019, we also observed one-off adjustments to inventory made by our clients, and lower indirect exports.

The transportation, infrastructure and agriculture segment accounted for 95.3% of the Company's portfolio and the Hydraulic segment (pipe fittings and iron bars) accounted for 4.7%. Partially or fully machined goods accounted for approximately 24.1% of the transportation, infrastructure and agriculture segment portfolio (vs. 20.3% in 2018). The breakdown of iron alloy among the automotive products increased by 21.5% in Compacted Graphite Iron - CGI (vs. 14.4% in 2018), due to the start of new programs.



Revenues came to R\$5,163.6 million in 2019, up 6.9% from 2018, due to a high value-added product mix (reflecting the Company's strategy of gaining market share in the supply chain), the depreciation of the BRL in the year, and the new contracts.

Consolidated (R\$ th	ousand)		
	2019	2018	Var.[%]
Revenues	5,163,585	4,828,216	6.9%
Domestic market	932,396	832,714	12.0%
Share %	18.1%	17.2%	
Foreign market	4,231,189	3,995,502	5.9%
Share %	81.9%	82.8%	
Revenues per segment	5,163,585	4,828,216	6.9%
Transportation, Infrastructure & Agriculture	4,922,909	4,596,219	7.1%
Share %	95.3%	95.2%	
Hydraulics	240,676	231,997	3.7%
Share %	4.7%	4.8%	

Note: The division between commercial and off-road vehicles considers our best inference of the same product for these two applications.

In 2019, 63.6% of Tupy's revenues came from North America; 18.8% from South and Central America; 12.0%, from Europe; and the remaining 5.6%, from Asia, Africa and Oceania.

Revenues from the domestic market increased by 12.0% compared to the previous year, especially the applications used in the commercial vehicle segment. In the foreign market, revenues rose by 5.9%, chiefly due to the performance of applications in the light commercial vehicle segment.



COST OF GOODS SOLD AND OPERATING EXPENSES

The cost of goods sold (COGS) in 2019 amounted to R\$4,328.6 million, up 7.3% from 2018.

Conso	lidated ((R\$ thousand)	١

	2019	2018	Var.[%]
Revenues	5,163,585	4,828,216	6.9%
	()	/ \	
Cost of goods sold	(4,328,633)	(4,032,290)	7.3%
Raw material	(2,358,982)	(2,292,324)	2.9%
Labor, profit sharing and social benefits	(1,031,405)	(908,692)	13.5%
Maintenance and third parties	(384,569)	(341,665)	12.6%
Energy	(245,178)	(219,585)	11.7%
Depreciation	(250,187)	(217,617)	15.0%
Other	(58,312)	(52,407)	11.3%
Gross profit	834,952	795,926	4.9%
% of revenues	16.2%	16.5%	
Operating expenses	(397,172)	(348,444)	14.0%
% of revenues	7.7%	7.2%	

The first quarter of 2019 was impacted by delay of the new CGI and machining programs in Mexico, resulting in lower productivity levels (dilution of fixed costs, higher waste and consumption of materials). Regarding Brazilian operations, in January, we noticed the extension of the scheduled maintenance in one of our furnaces, leading to production stops and several changes in the production process, which were necessary to meet the strong demand from our clients, and, consequently, higher costs with materials and logistics, as well as the lower dilution of fixed cost, given the volume losses.

In the following quarters, we observed a substantial increase in gross margin, caused, among other factors, by various productivity gain projects implemented by the Company in the year.

Operating expenses increased 14,0% vs 2018 due to increasing freight and personnel expenses (headcount, collective bargaining agreement and payroll taxes - REINTEGRA) and Brazilian Real depreciation.



OTHER OPERATING INCOME (EXPENSES)

Other net operating income (expenses) was R\$34.8 million in 2019, versus R\$111.2 million in 2018.

Consolidated	(R\$ thousand)
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	2019	2018	Var.[%]
Depreciation of non-operating assets	(819)	(728)	12.5%
Amortization of intangible assets	(62,868)	(49,066)	28.1%
Others*	28.902	(61.436)	-
Other net operating expenses	(34,785)	(111,230)	-68.7%
PP&E impairment	(920)	-	-
Reversion (constitution) of impairment	(45,484)	33,631	-
Total impairment adjustments	(46,404)	33,631	-

^{*} Includes the restatement/creation of contingency provisions, reversal of impairment of ICMS tax recoverable, exclusion of ICMS tax from the PIS/COFINS tax base, recognition of tax credit of Reintegra, write-off of property, plant and equipment items and result from the sale of unserviceable assets.

The "Other" line was positively impacted by tax effects, due to initiatives carried out by the Company in the year, especially:

- (i) Reversal of impairment of ICMS tax recoverable in SC in the amount of R\$45.6 million, given the expectation of consuming the remaining balance.
- (ii) Final and unappealable decision of a lawsuit discussing the exclusion of ICMS tax from the PIS/COFINS tax base in the amount of R\$36.8 million; and
- (iii) Recognition of tax credit from Reintegra, due to remaining taxes totaling R\$28.0 million between 2015 and June 2018.

The Company recognizes as intangible asset the contractual relationship with clients, arising from the acquisition of Mexican operations in 2012. The aggregate of the portfolios that make up the asset presents and projects, in the long term, volumes and profitability substantially higher than those that sustained the initial recognition of the asset, which make the profitability of the plants reach an appropriate level. However, since the intangible asset was recognized per portfolio and the rule does not allow compensation among them, at the end of 2019, we carried out an individual analysis and observed a decline in the demand of some portfolios, resulting in the recognition of impairment in the amount of R\$45.5 million. Regarding 2018, the evaluation of the client portfolio determined the reversal of impairment created in previous years in the amount of R\$33.6 million.



NET FINANCIAL INCOME (LOSS)

The Company recorded net financial loss of R\$18.0 million, versus net financial loss of R\$12.6 million in 2018. Financial expenses increased by 5.1%, mainly due to the depreciation of the BRL against the USD (average exchange rate of R\$3.95 in 2019 vs. R\$3.66 in 2018) in the period, which affected the recognition of interest on loans denominated in USD.

Consolidated (R\$ thousand)

	2019	2018	Var. [%]
Financial expenses	(120,179)	(114,321)	5.1%
Financial revenues	90,086	89,641	0.5%
Net monetary and exchange rate variations	12,072	12,065	0.1%
Net financial income/loss	(18,021)	(12,615)	42.9%



EARNINGS BEFORE TAXES AND NET INCOME

Due to the above-mentioned factors, net income in 2019 was R\$278.9 million, versus R\$271.7 million in 2018.

Consolidated (R\$ thousand)

	2019	2018	Var. [%]
Income before tax effects	338,570	357,268	-5.2%
Tax effects before foreign exchange impacts	(74,856)	(91,871)	-18.5%
Gains before exchange effects on the tax base	263,714	265,397	-0.6%
Exchange effects on the tax base	15,218	6,324	140.6%
Net income	278,932	271,721	2.7%
% of revenues	5.4%	5.6%	

Income tax and social contribution before foreign exchange variations on the tax base was a negative R\$74.9 million, resulting from the expense difference at the rate of 34% on profit before tax effects and the effects of permanent additions/exclusions. The effect of the exchange rate on the tax base was R\$15.2 million in the period. The effective rate in the fiscal year of 2019 was 17.6%, vs. 23.9% in 2018.



The combination of the above-mentioned factors resulted in record EBITDA of R\$682.6 million and adjusted EBITDA of R\$700.1 million in 2019, up 5.1% and 3.4% from 2018, respectively.

Consolidated (R\$ thousand)		
RECONCILIATION OF NET INCOME TO EBITDA	2019	2018
Net Income for the Period	278,932	271,721
(+) Net financial results	18,021	12,615
(+) Income and social contribution taxes	59,638	85,547
(+) Depreciation and amortization	326,051	279,377

(+) Income and social contribution taxes	59,638	85,547	-30.3%
(+) Depreciation and amortization	326,051	279,377	16.7%
EBITDA (CVM Instruction 527/12)	682,642	649,260	5.1%
% of revenues	13.2%	13.4%	
(+) Other net operating expenses	17,502	27,805	-
Adjusted EBITDA	700,144	677,065	3.4%

13.6%

14.0%

Despite this increase, the result of the period was impacted by the beginning of large-scale production, the inherent learning curve for products of high complexity and high value added (CGI and machined goods), unscheduled stops at the Joinville operation and the consequent loss of volumes and operational efficiency in the first quarter of 2019. This impact was mitigated throughout the year with the implementation of several initiatives to improve operational efficiency.

INVESTMENTS

% of revenues

Total investments in property, plant and equipment and intangible assets were R\$270.6 million in 2019, up 46.3% from 2018, accounting for 5.2% of the net revenue in the period.

Consolidated (R\$ thousand)				
	2019	2018	Var. [%]	
PP&E				
Strategic investments	130,083	43,200	201.1%	
Maintenance and sustenance	122,583	122,660	-0.1%	
Environment	6,537	9,009	-27.4%	
Interest and financial expenses	1,739	1,967	-11.6%	
Intangible assets				
Software	5,999	4,924	21.8%	
Projects under development	3,633	3,143	15.6%	
Total	270,574	184,903	46.3%	
% of revenues	5.2%	3.8%		

The increase was due to the development and launch of new projects, including CGI and machining programs and initiatives to increase productivity (including automation processes related to Industry 4.0), and renovations and environment and occupational safety projects.

2.7% 42.9%

The list of investments in affiliated companies and/or subsidiaries, with the changes made in the year, is available in Note 12 (Investments) of the Financial Statements for the fiscal year of 2019, which is part of this document.

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INDEBTEDNESS

The Company closed 2019 with net debt of R\$639.2 million and a net debt/LTM adjusted EBITDA ratio of 0.91x.

Foreign currency liabilities represented 98.4% of the total (3.6% short-term and 96.4% long-term debt), while 1.6% of the debt is denominated in BRL (46.7% short-term and 53.3% long-term debt). Regarding the cash balance, 39.9% is denominated in BRL and 60.1% in foreign currency.

Consolidated (R\$ thousand)

consonated (ity thousand)							
2019	2018						
62,920	47,591						
1,421,061	1,359,492						
1,483,981	1,407,083						
844,781	724,545						
639,200	682,538						
2.12x	2.08x						
0.91x	1.01x						
	2019 62,920 1,421,061 1,483,981 844,781 639,200						

^{*} Includes derivative financial instruments



Consolidated (R\$ thousand)

	2019	2018
Balance sheet		
Accounts receivables	672,356	688,495
Inventories	654,107	523,623
Accounts payable	627,565	621,292
Sales outstanding [days]	48	52
Inventories outstanding [days]	55	47
Payables outstanding [days]	52	56
Cash conversion cycle [days]	51	43

The 4-day decrease in the sales outstanding period was mainly due to contractual negotiations with clients in the year, and the receipt of amounts related to tooling development.

Regarding inventory, we had an 8-day increase, resulting in initiatives to make production more flexible, in order to mitigate volume reduction. Therefore, we transferred, from Mexico to Brazil, the production of some products that will continue to be machined in Mexico or directly delivered to the USA, causing the inventory of finished goods in transit to increase, in exchange of margin protection.

We observed a 4-day decrease in the payables outstanding period, due to changes in the share of various input categories that make up the Company's costs and expenses, which have different payment terms.

The combination of the above-mentioned factors led to a higher cash conversion cycle (51 days).



Consolidated (R\$ thousand)

CASH FLOW SUMMARY	2019	2018	Var.[%]
Cash and cash equivalents at the beginning of period	713,733	865,368	-17.5%
Cash from operating activities	566,656	577,392	-1.9%
Cash used in investments	(268,547)	(166,588)	61.2%
Cash used in financing activities	(179,609)	(591,388)	-69.6%
Effect of the exchange rate on cash for the period	7,797	28,949	-
Decrease in cash and cash equivalents	126,297	(151,635)	-
Cash and cash equivalents at the end of period	840,030	713,733	17.7%

Cash and cash equivalents came to R\$566.7 million due to operating activities in 2019, accounting for approximately 80.9% of the adjusted EBITDA for the period.

Investment activities totaled R\$268.6 million, due to additions to property, plant and equipment and intangible assets, resulting in investments made by the Company, which are mainly related to the beginning of new programs.

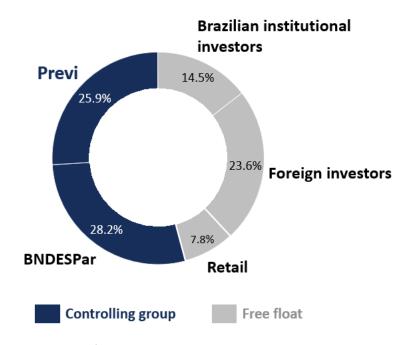
In 2019, financing activities came to R\$179.6 million, versus R\$591.4 million in the previous year. The variation was due to the lower amortization of loans and financing (R\$4.7 million in 2019 vs. R\$414.6 million in 2018).

The combination of these factors with the exchange rate effect on cash led to higher cash and cash equivalents, in the amount of R\$126.3 million in the period. As a result, cash and cash equivalents totaled R\$840.0 million at the end of the year.



OWNERSHIP STRUCTURE

Tupy's ownership structure as of December 31, 2019 was as follows:



The Company is subject to the rules of the Novo Mercado Arbitration Chamber, pursuant to article 60 of its Bylaws.



RELATIONSHIP WITH INDEPENDENT AUDITORS

In compliance with the provisions of CVM Instruction 381/03, dated January 14, 2003, Tupy S.A. preserves the independence of the auditor, in accordance with applicable regulations, for the contracting of services not related to the external audit. In the fiscal year ended December 31, 2019, the independent auditors only rendered services related to external auditing, and auxiliary of elaboration of accessory related to ECF (Fiscal Accounting Deed).



EXECUTIVE OFFICER'S STATEMENT

In compliance with the provisions established under Article 25 of CVM Instruction No. 480, of December 7, 2009, Tupy S.A.'s Executive Board declares that it has reviewed, discussed and agreed with the opinion presented in the Independent Auditor's Report on the Financial Report, issued on this date, and the Financial Statements relating to the fiscal period ended on December 31, 2019.

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BALANCE SHEETS AT DECEMBER 31, 2019 AND DECEMBER 31, 2018 (All amounts in thousands of reais)

<u>ASSETS</u>

		Parent co	ompany	Consolidated		
	Note	12/31/19	12/31/18	12/31/19	12/31/18	
CURRENT ASSETS		_,,				
Cash and cash equivalents	3	362,600	328,350	840,030	713,733	
Derivative financial instruments	31	2,635	6,781	4,751	10,812	
Trade account receivables	4	422,012	329,043	672,356	688,495	
Inventories	5	254,156	234,188	654,107	523,623	
Tooling		38,052	37,280	141,128	162,445	
Income tax and social contribution recoverable	6	50,118	49,919	65,004	61,534	
Other taxes recoverable	7	94,000	86,081	162,854	137,980	
Related parties	9	1,904	5,982	-	-	
Notes and other receivables		49,058	26,997	59,112	52,125	
Total current assets		1,274,535	1,104,621	2,599,342	2,350,747	
NON-CURRENT ASSETS Income tax and social contribution recoverable	6	88,349	166,857	88,349	166,857	
Income tax and social contribution recoverable	6	88,349	166,857	88,349	166,857	
Other taxes recoverable	7	194,459	157,979	194,459	157,979	
Deferred income tax and social contribution	8	139,304	170,452	195,887	143,668	
Credits - Eletrobrás	10	152,149	170,974	152,149	170,974	
Judicial deposits and other		41,175	40,076	42,261	41,171	
Investments in equity instruments		2,429	1,789	9,461	8,303	
Properties for investments	11	-	-	6,363	6,363	
Investments	12	1,872,764	1,793,940	-	-	
Property, plant and equipment	13	702,832	734,611	1,634,336	1,557,292	
Intangible assets	14	52,110	54,842	201,560	304,837	
Total non-current assets		3,245,571	3,291,520	2,524,825	2,557,444	
Total assets		4,520,106	4,396,141	5,124,167	4,908,191	

BALANCE SHEETS AT DECEMBER 31, 2019 AND DECEMBER 31, 2018 (All amounts in thousands of reais)

LIABILITIES

		Parent company		Consolidated		
	Note	12/31/19	12/31/18	12/31/19	12/31/18	
CURRENT LIABILITIES					_	
Trade accounts payables		276,374	260,607	627,565	621,292	
Loans and financing	15	55,595	49,792	62,920	47,431	
Derivative financial instruments	31	-	-	-	160	
Income taxes payable		-	-	6,162	8,992	
Other taxes payable		7,204	2,810	53,261	30,012	
Salaries, social security charges and profit sharing	16	129,195	125,084	168,544	163,959	
Advances from customers		21,320	37,064	121,687	159,724	
Related parties	9	1,203	1,239	-	-	
Dividends and interest on capital		191	37,624	191	37,624	
Provision for tax, civil, social security and labor contingencies	18	40,536	28,043	40,536	28,043	
Notes and other payables		38,610	149,504	45,629	77,526	
Total current liabilities		570,228	691,767	1,126,495	1,174,763	
NON-CURRENT LIABILITIES	15	1 410 051	1 262 007	1 421 051	1 250 402	
Borrowings		1,419,051	1,363,887	1,421,061	1,359,492	
Provision for tax, civil, social security and labor contingencies	18	140,544	136,204	141,848	136,215	
Retirement benefit obligations	17			44,069	32,965	
Other long term liabilities		2,880	4,320	3,291	4,793	
Total non-current liabilities		1,562,475	1,504,411	1,610,269	1,533,465	
EQUITY						
Share capital	19	1,060,301	1,060,301	1,060,301	1,060,301	
Share issuance costs		(6,541)	(6,541)	(6,541)	(6,541)	
Share-based payments		7,968	8,564	7,968	8,564	
Treasury shares		-	(292)	-	(292)	
Carrying value adjustments		613,252	589,910	613,252	589,910	
Income reserves		712,423	548,021	712,423	548,021	
Total equity		2,387,403	2,199,963	2,387,403	2,199,963	
Total liabilities and equity		4,520,106	4,396,141	5,124,167	4,908,191	

STATEMENTS OF INCOME PERIOD ENDED DECEMBER 31, 2019 AND 2018 (All amounts in thousands of reais, except earnings per share)

	Parent company			Consolidated		
	Note	12/31/19	12/31/18	12/31/19	12/31/18	
NET REVENUE	20	2,824,206	2,568,227	5,163,585	4,828,216	
Cost of products sold	21	(2,231,237)	(2,093,923)	(4,328,633)	(4,032,290)	
GROSS PROFIT		592,969	474,304	834,952	795,926	
Selling expenses	21	(114,622)	(112,267)	(208,698)	(185,599)	
Administrative expenses	21	(136,432)	(122,012)	(178,307)	(152,060)	
Management fees	9	(10,167)	(10,785)	(10,167)	(10,785)	
Other operating expenses, net except impairment	23	32,849	(69,401)	(34,785)	(111,230)	
Share of results of subsidiaries, except impairment	12	4,831	154,821	-	-	
INCOME (LOSSES) BEFORE IMPAIRMENT		369,428	314,660	402,995	336,252	
Impairment reversal (losses)	23	(920)	-	(46,404)	33,631	
PROFIT BEFORE FINANCE RESULTS						
AND TAXES		368,508	314,660	356,591	369,883	
Finance costs	22	(115,935)	(111,857)	(120,179)	(114,321)	
Finance income	22	85,807	85,450	90,086	89,641	
Monetary and foreign exchange variations, net	22	24,490	8,463	12,072	12,065	
INCOME (LOSSES) BEFORE TAXATION		362,870	296,716	338,570	357,268	
Income tax and social contribution	24	(83,938)	(24,995)	(59,638)	(85,547)	
NET INCOME (LOSS) FOR THE YEAR		278,932	271,721	278,932	271,721	
EARNINGS PER SHARE						
Basic earnings (loss) per share	25	1.93464	1.88463	1.93464	1.88463	
Diluted earnings (loss) per share	25	1.92889	1.87884	1.92889	1.87884	

STATEMENTS OF COMPREHENSIVE INCOME PERIOD ENDED DECEMBER 31, 2019 AND 2018

(All amounts in thousands of reais, except earnings per share)

		Parent co	ompany	Consolidated	
	Note	12/31/19	12/31/18	12/31/19	12/31/18
NET INCOME FOR THE YEAR		278,932	271,721	278,932	271,721
Components of other comprehensive income to be reclassified to the results					
Foreign exchange variation of investees located abroad	12	67,940	237,715	67,940	237,715
Hedge of net investment abroad		(54,408)	(197,810)	(54,408)	(197,810)
Tax effect on hedge of net investment abroad		18,499	67,255	18,499	67,255
		32,031	107,160	32,031	107,160
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		310,963	378,881	310,963	378,881

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TUPY S.A. AND SUBSIDIARIES

STATEMENT OF CHANGES IN EQUITY (All amounts in thousands of reais)

					Carrying value adjustments			Revenue	reserves		
			Share	Shared		Exchange	Deemed			Retained	
		Share	issue	based	Treasury	variation of	cost of	legal	Reserve for	earnings	
	Note	capital	cost	payments	stock	investees	fixed assets	reserve	investments	(losses)	Total
AT DECEMBER 31, 2017		1,060,301	(6,541)	9,172	-	440,932	51,467	68,223	359,764		1,983,318
Comprehensive income for the period											
Profit for the period		-		-	-		-		-	271,721	271,721
Realization of carrying value adjustments		-		-	-	-	(9,649)		-	9,649	-
Foreign exchange variation of investees located abroad		-		-	-	237,715	-		-	-	237,715
Hedge of net investment abroad		-		-	-	(197,810)	-	-	-	-	(197,810)
Tax impact on hedge of net investment abroad		-		-	-	67,255	-		-	-	67,255
Total comprehensive income for the período		-	-		-	107,160	(9,649)	-	-	281,370	378,881
Contributions from stockholders and distributions to stockholders											
Management stock option plan			-	2,073				-	-	-	2,073
Realization of management stock option plan		-	-	(1,164)	-		-	-	-	1,164	-
(-) Shares in treasury acquired		-			(1,809)	-	-		-	-	(1,809)
(-) Stock options exercised		-		(1,517)	1.517	-	-		-	-	-
Allocation of profit:											
Legal reserve		_			-			13,586	-	(13,586)	-
Investment reserve		-			-			-	268,948	(268,948)	-
Interest on capital		-			-			-	(162,500)	-	(162,500)
Total contributions from stockholders and distributions to stockholders		-	-	(608)	(292)	-	-	13,586	106,448	(281,370)	(162,236)
AT DECEMBER 31, 2018		1,060,301	(6,541)	8,564	(292)	548,092	41,818	81,809	466,212		2,199,963
AT DECEMBER 31, 2018		1,060,301	(6,541)	8,564	(292)	548,092	41,818	81,809	466,212		2,199,963
Comprehensive income for the period											
Profit for the period		-	-	-	-	-	-	-	-	278,932	278,932
Realization of carrying value adjustments		-	-	-	-	-	(8,689)		-	8,689	-
Foreign exchange variation of investees located abroad	12	-	-	-	-	67,940	-	-	-	-	67,940
Hedge of net investment abroad		-	-	-	-	(54,408)	-	-	-	-	(54,408)
Tax impact on hedge of net investment abroad		-	-	-	-	18,499	-		-	-	18,499
Total comprehensive income for the year		-	-	-	-	32,031	(8,689)	-	-	287,621	310,963
Contributions from stockholders and distributions to stockholders											
Management stock option plan		-	-	1,477	-		-		-	-	1,477
Realization of management stock option plan		-	-	(1,781)	-		-		-	1,781	-
(-) Stock options exercised		-		(292)	292	-	-		-	-	-
Allocation of profit (loss):											
Investment reserve		-	-	-			-	13,947	-	(13,947)	-
Interest on capital		-	-	-	-	-	-	-	275,455	(275,455)	-
Interest on capital		-	-	-		-	-	-	(125,000)	-	(125,000)
Total contributions from stockholders and distributions to stockholders		-	-	(596)	292	-	-	13,947	150,455	(287,621)	(123,523)
AT DECEMBER 31, 2019		1,060,301	(6,541)	7,968	-	580,123	33,129	95,756	616,667	-	2,387,403

STATEMENTS OF CASH FLOW PERIOD ENDED DECEMBER 31, 2019 AND 2018 (All amounts in thousands of reais, except earnings per share)

		Parent co	mpany	Consoli	dated
Cash flow from operating activities:	Note	12/31/19	12/31/18	12/31/19	12/31/18
Profit for the period before income tax and social contribution		362,870	296,716	338,570	357,268
Adjustment to reconcile profit (losses) with cash provided by operating					
activities:					
Depreciation and amortization	13 e 14	140,740	138,640	326,051	279,377
Impairment	13 e 14	920	-	46,404	(33,631
Share of results of subsidiaries	12	(4,831)	(154,821)	-	-
Disposals of property, plant and equipment		(3,778)	22,901	2,880	28,985
Interest accrued and foreign exchange variations		71,120	72,332	81,645	83,639
Provision for impairment of trade receivables		7	41	(333)	(624)
Provision for losses on inventory		(3,947)	(5,200)	(5,781)	(3,478
Provision for contingencies	18	58,812	54,779	60,116	54,648
Stock option plan		1,477	2,073	1,477	2,073
Change in monetary exchange - IPI premium credit		-	3,688	-	3,688
Change in Eletrobrás credit		(54,285)	(69,151)	(54,285)	(69,151
•		569,105	361,998	796,744	702,794
Changes in operating assets and liabilities:					
Trade accounts receivables		(94,248)	(12,454)	27,854	(22,424)
Inventories		(16,021)	(12,379)	(117,182)	(72,954)
Tooling		(772)	(11,586)	26,504	(39,929)
Other taxes recoverable		(381)	3,801	(14,038)	21,162
Notes and other receivables		(22,061)	5,065	(7,239)	(7,902)
Eletrobras		72,470	-	72,470	-
Judicial deposits and other		(1,099)	10,063	(1,090)	10,063
Trade payables		16,315	19,174	(6,350)	66,378
Other taxes payable		4,394	115	22,035	1,207
Salaries, social security charges and profit sharing		4,111	14.075	2,342	19,937
Advances from customers		(15,744)	14,166	(43,757)	87,495
Notes and other payables		(86,371)	16,776	(7,319)	7,391
Retirement benefit obligations		(00,371)	-	13,205	11,764
Other long term liabilities		(43,419)	(42,827)	(43,492)	(42,786)
Cash generated by operations		386,279	365,987	720,687	742,196
Interest paid		(92,382)	(100,321)	(92,019)	(96,439)
Income tax and social contribution paid		- (0 = ,0 0 =)	-	(62,012)	(68,365)
Net cash generated from operating activities		293,897	265,666	566,656	577,392
Cash flow from investment activities:					
		_	40,386		
Cash from capital reduction in subsidiaries			40,380		<u>-</u>
Additions to investments Additions to fixed assets or intangibles	12 0 14	(6,053)			(169 560)
Advances from investment property sales	13 e 14	(95,158)	(64,555)	(273,706)	(168,560)
· · /		6 205		5,000 159	
Cash generated on PPE disposals Financial investment		6,295	3,861	- 159	895
Subsidiaries and associates		4.042	1,077		1,077
Cash used in investment activities		4,042 (90,874)	(201) (19,432)	(268,547)	(166,588)
Cach flow from financing activities:					
Cash flow from financing activities: Payment of loans		(4 720)	(414 627)	(4 720)	(111 627)
,		(4,739)	(414,627)	(4,739)	(414,627)
Lease payment from right of use		(4,075)	(165 500)	(12,437)	/16F F00
Interest on capital and dividends paid		(152,666)	(165,590)	(152,666)	(165,590)
Income tax of interest on capital and dividends paid		(9,767)	(9,362)	(9,767)	(9,362)
Treasury stock Cash used in financing activities		(171,247)	(1,809) (591,388)	(179,609)	(1,809) (591,388)
Effect of exchange rate differences on cash for the period		2,474	5,677	7,797	28,949
harmon (demonstrate and and and and and		24.050	(220, 422)	425 207	(AF4 CC=
Increase (decrease) in cash and cash equivalents		34,250	(339,477)	126,297	(151,635)
Cash and cash equivalents at the beginning of the period		328,350	667,827	713,733	865,368
Cash and cash equivalents at the end of the period		362,600	328,350	840,030	713,733

STATEMENT OF VALUE ADDED PERIOD ENDED DECEMBER 31, 2019 AND 2018 (All amounts in thousands of reais, except earnings per share)

		Parent co	mpany	Consolidated		
	Note	12/31/19	12/31/18	12/31/19	12/31/18	
Origination of value added		3,080,065	2,799,644	5,419,784	5,060,298	
Sale of products, net of returns and rebates	20	3,080,072	2,799,685	5,419,451	5,059,674	
Provision for impairment of trade receivables		(7)	(41)	333	624	
(-) Inputs acquired from third parties		(1,756,443)	(1,865,134)	(3,279,394)	(3,332,745)	
Raw materials and processing material consumed		(1,462,880)	(1,399,689)	(2,412,674)	(2,417,130)	
Materials, energy, third party services and other		(293,563)	(465,445)	(866,720)	(915,615	
GROSS VALUE ADDED		1,323,622	934,510	2,140,390	1,727,553	
Retentions:		(141,660)	(138,640)	(372,455)	(245,746	
Depreciation and amortization	13 and 14	(140,740)	(138,640)	(326,051)	(279,377)	
Impairment		(920)	-	(46,404)	33,631	
Net value added generated by the Company		1,181,962	795,870	1,767,935	1,481,807	
Value added received through transfer		90,638	240,271	90,086	89,641	
Share of results of subsidiaries	12	4,831	154,821	-	-	
Finance income	22	85,807	85,450	90,086	89,641	
VALUE ADDED TO DISTRIBUTE		1,272,600	1,036,141	1,858,021	1,571,448	
Distribution of value added						
Personnel		620,286	584,568	1,211,989	1,059,475	
Employees		446,554	410,089	1,024,866	871,430	
Social charges - Government Severance Indemnity Fund for Employees (FGTS)		31,464	29,728	31,464	29,728	
Profit sharing		45,750	43,088	57,825	55,258	
Management fees		10,167	10,785	10,167	10,785	
Workplace healthcare and safety		60,598	66,546	60,598	66,546	
Food		11,941	10,569	11,941	10,569	
Professional education, qualification and development		787	1,114	1,449	1,528	
Other amounts		13,025	12,649	13,679	13,631	
Government		281,937	76,458	258,993	137,996	
Federal taxes and contributions		305,541	29,452	282,595	90,979	
State taxes and rates		(34,885)	40,454	(34,884)	40,455	
Municipal taxes, rates and other		11,281	6,552	11,282	6,562	
Third party capital		91,445	103,394	108,107	102,256	
Finance costs	22	115,935	111,857	120,179	114,321	
Monetary and foreign exchange variations, net	22	(24,490)	(8,463)	(12,072)	(12,065)	
Own capital		278,932	271,721	278,932	271,721	
Retained earnings (losses)		278,932	271,721	278,932	271,721	
TOTAL VALUE ADDED		1,272,600	1,036,141	1,858,021	1,571,448	

(A free translation of the original in Portuguese)

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(A free translation of the original in Portuguese)

1. GENERAL INFORMATION

Tupy S.A. (the "Parent company") and its subsidiaries (together the "Company" or "Consolidated") have domestic and foreign operations in the iron casting markets, especially engine blocks and cylinder heads. The Company also operate in the transportation, infrastructure and agriculture (blocks, cylinder heads and parts) and hydraulics (steel shots and iron bar) segments. With a diversified customer base in the Americas, Europe and Asia. The Company has plants in Brazil, at Joinville and Maua, and Mexico, at Saltillo and Ramos Arizpe. In addition, the Parent Company has investments in companies abroad that operate in logistics, trading, technical assistance and centralization of foreign corporate operations.

Tupy S.A. is a publicly-held corporation headquartered in Joinville, State of Santa Catarina, listed on the São Paulo Stock Exchange (BOVESPA: ticker TUPY3) and in the Novo Mercado segment of B3 S.A.

On December 19, 2019, the Company entered into a Share Purchase Agreement with Fiat Chrysler Automobiles NV, for the acquisition of 100% of Teksid's iron castings business, including operations located in Brazil, Mexico, Poland, Portugal and China (the latter, a joint venture in which Teksid holds a 50% stake), as well as offices in the United States and Italy. The acquisition price (Enterprise Value) is €210,000,000 (two hundred and ten million euros), which will be subject to price adjustments common to this type of operation and will be paid at the time of closing the deal. The transaction is subject to approval by antitrust authorities in the competent jurisdictions, as well as to the verification of other certain suspensive conditions usual for similar operations.

The issue of these financial statements was approved by the Board of Directors on March 03, 2020.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

2.1 Statement of compliance and basis of preparation

The Company's financial statements which have been prepared in accordance with accounting practices adopted in Brazil, including the pronouncements, interpretations and orientations, issued by the Brazilian Accounting Pronouncements Committee (CPC), as well as in accordance with the International Financial Reporting Standards (IFRS), issued by the International Accounting Standards Board (IASB), and all financial statements' material information, and only material information, is being disclosed, which are consistent with those used by management.

The presentation of statements of value added (DVA), for parent company and consolidated statements, is required by the Brazilian corporate legislation for listed companies. These statements were not required by IFRS. As a result, for IFRS, those statements are considered supplementary information, without any impact for the financial statements.

The financial statements have been prepared under the historical cost convention, except for certain financial instruments measured at their fair values, as described in the accounting policies. The historical cost is generally based on the fair value of the consideration paid in exchange for assets.

The preparation of financial statements requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the Company's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where

assumptions and estimates are significant to the financial statements, are disclosed in Note 2.4.

2.2 Consolidation

Subsidiaries are all entities over which the Company has control. Subsidiaries are fully consolidated from the date on which control is transferred. Control is obtained when the Company is exposed or entitled to variable returns based on its investment with the subsidiary and has the capacity to affect those returns through the power exercised in relation to the subsidiary. They are deconsolidated from the date that control ceases. In this situation, at the date of loss of control, the corresponding assets (including goodwill), liabilities, non-controlling interest and other equity components are written off, while any resulting gain or loss is recorded in the income statement. The consolidated subsidiaries at December 31, 2019 are:

Main subsidiaries' activities:

	Interest* (%)	Functional currency	Headquarters
(a)	100,00	U.S. dollar	Mexico
(a)	100,00	U.S. dollar	Mexico
(b)	100,00	U.S. dollar	Mexico
(c)	100,00	U.S. dollar	USA
(c)	100,00	EURO	Germany
(d)	100,00	U.S. dollar	Luxembourg
(e)	100,00	U.S. dollar	USA
(f)	100,00	Real	Brazil
(g)	100,00	Real	Brazil
(h)	100,00	U.S. dollar	Holand
	(a) (b) (c) (c) (d) (e) (f)	(a) 100,00 (b) 100,00 (c) 100,00 (d) 100,00 (e) 100,00 (f) 100,00 (g) 100,00	(a) 100,00 U.S. dollar (b) 100,00 U.S. dollar (c) 100,00 U.S. dollar (c) 100,00 EURO (d) 100,00 U.S. dollar (e) 100,00 U.S. dollar (f) 100,00 Real (g) 100,00 Real

100,00

U.S. dollar

- (a) Industrial plants for the automotive products segment.
- (b) Rendering of industrial services for subsidiaries in Mexico.
- (c) Companies abroad, which operate as an extension of the activities in Brazil in logistics, trading and technical assistance for the automotive products segment.

(b)

- (d) Company abroad, which was established for the purpose of issuing bonds in the international market.
- (e) Company abroad, that has functioned as an extension of the activities of Brazil for the hydraulic segment and which is currently without activity.
- (f) A company that has acted with reforestation activities and is currently without activity.
- (g) Company in liquidation process, with no current activity.
- (h) Company incorporated with the purpose of concentrating abroad corporate activities.

Transactions, balances and unrealized gains on transactions between Group companies are eliminated. Unrealized losses are also eliminated, unless the transaction provides evidence of impairment of the asset transferred. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Parent company.

Mexico

Diesel Servicios Industriales, S.A. de C.V. (*) Interest in capital and in voting capital.

2.3 Foreign currency translation

a. Functional and presentation currency

Items included in the financial statements of each of the Consolidated entities are measured using the currency of the primary economic environment in which the entity operates ("functional currency").

The parent company and consolidated financial statements are presented in Brazilian Real (R\$), which is the Company's functional currency.

b. Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or the dates of valuation when items are remeasured.

Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognized in the statement of income.

Foreign exchange gains and losses that relate to borrowings and cash and cash equivalents are presented in the statement of income within "Monetary and foreign exchange variations, net". All other foreign exchange gains and losses are presented in the statement of income within "Other operating income (expenses), net".

Translation differences on monetary securities denominated in foreign currency carried at amortized cost are recorded in the statement of income. Translation differences on non-monetary financial assets and liabilities such as equities held at fair value through profit or loss are recognized in profit or loss as part of the fair value gain or loss. Translation differences on non-monetary financial assets are included in the "Carrying value adjustments" account, within equity until the write off of the net investment, when they are recognized in the statement of income. Charges and tax effects attributed to exchange variation on these loans are also recognized in shareholders' equity.

c. Subsidiaries with a different functional currency

The results and financial position of all the Consolidated entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet.
- Income and expenses for each statement of income are translated at the average exchange rate.
- All resulting exchange differences are recognized as a separate component of equity, in the account "Carrying value adjustments".

On consolidation, foreign exchange differences arising from the translation of the net investment in foreign operations, and of borrowings and other foreign currency instruments designated as hedges of such investments, are taken to equity. When a foreign operation is partially disposed of or sold, foreign exchange differences that were recorded in equity are recognized in the statement of income as part of the gain or loss on sale.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate.

2.4 Use of critical accounting estimates and judgments

The preparation of Parent Company and Consolidated annual financial statements requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the amounts reported for assets, liabilities, revenue and expenses. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. The effects arising from revised accounting estimates are recognized in the period when the estimates are revised if the revision affects only this period, or also in subsequent periods, when the revision impacts both the current and future periods. The main judgments are presented below:

a. Deferred income tax and social contribution

The Company recognizes in its financial statements the effect of deferred income tax and social contribution arising from tax losses and/or temporary differences. A provision for impairment of tax assets is recognized when it is not probable that these assets will be recovered.

The recognition of a provision for tax assets and liabilities or deferred tax, and provisions for tax losses, requires the Company's management to make estimates. For each future tax credit, the Company assesses the likelihood of a portion or the totality of the tax asset not being recovered. The amount of the valuation allowance depends on the evaluation of the likelihood of generation of taxable profit based on the production and planning of sales, prices, operating costs and other expenditures.

b. Useful life of property, plant and equipment

The Company recognizes the depreciation of its property, plant and equipment based on their estimated useful lives, which is reviewed in annual basis, which is in accordance with the industry practices, as well as previous experiences, reflecting the economic useful lives of property, plant and equipment. However, actual useful lives may differ depending on the technological update of each plant. Useful lives of property, plant and equipment also affect recoverability tests, when necessary.

The Company does not believe that there is evidence of material changes in the estimates and assumptions.

c. Impairment of assets

The Company tests annually its intangible assets and other long-term assets whenever events and circumstances indicate that the estimated discounted cash flows to be generated by such assets are lower than the book value of these items.

Cash flow estimates are based on historical results adjusted to reflect the best market estimate and the Company's operating conditions. The estimates of actual amounts used by the Company to calculate impairment losses, if any, represent the Company's best estimate based on expected cash flows, industry tendencies and reference to rates and market operations. Impairment losses may arise also from the disposal of assets.

d. Provision for tax, civil, social security and labor contingencies

Provisions for tax, civil, social security and labor contingencies are recognized only when the legal advisors consider that the likelihood of loss or obligation to payment is probable. Contingencies are recorded when the amount of loss can be reasonably estimated. By their nature, contingencies will be settled when one or more future events happen or not. Typically, the Company does not have influence over whether these events happen or not, thus making it difficult to make accurate estimates about when these events will happen. The evaluation of these liabilities, but also in other jurisdictions, requires Management to use significant estimates and judgments concerning the results of future events.

e. Eletrobras

The credit against Eletrobras is registered and valuated at the amount restated at December 31, 2018 in accordance with criteria and assumptions determined in an irrevocable court decision. This credit has embedded derivative derived from the option to realize, the partial or total credit, in cash or in shares of Eletrobras. As their choice. Those credits are adjusted to fair value, in order to reflect the lower and more probable realization value in favor of Company.

2.5 Company-specific accounting policies

a. Cash and cash equivalents

Cash equivalents are held for the purpose of attended short-term cash commitments, not for investment or other purposes. The Company considers investments as cash equivalents considering these investments are immediately convertible in cash and there is no significant risk of change in value. Therefore, an investment typically qualifies as cash equivalent when it has a short-term maturity, for example three months or less, from the date of the engagement. The conditions of these investments are presented in Note 3.

b. Inventory

Inventories are carried at the average acquisition and/or production cost, considering the full manufacturing costs absorption method, adjusted to the net realizable value, when applicable.

The analysis for recording a provision is based on the inventory applicability, recoverability, expected realization and evidence of obsolescence. These provision are reviewed and adjusted at each reporting date.

c. Tooling

Refer to tools used in production to complete contracts with customers. They are carried at the acquisition and production cost, less the provision for adjustment to probable realizable values, when applicable. When completed, the tools are billed to customers and remain in the Company under free-lease agreements, to be used in the production process.

d. Financial assets

The Company classifies its financial assets in the following categories: at fair value through profit or amortized cost. The classification depends on the purpose for which the financial assets were acquired.

(i) Recognition and measurement

Classifications of financial assets are based on the Company's business model for the management of these assets in the characteristics of contractual cash flows, and are classified as follows:

- Debt instruments measured at amortized cost ("CA");
- Debt instruments measured at fair value through other comprehensive income ("VJORA");
- Debt instruments, derivatives, equity instruments and debt instruments measured at fair value through profit or loss ("VJR");

The Company determines the classification of financial assets at the time of its initial recognition, when it becomes part of the contractual provisions of the instrument.

Financial assets are initially recognized at fair value, plus, in the case of investments not designated at fair value through profit or loss, transaction costs that are directly attributable to the acquisition of financial assets.

The Company's financial assets include cash and cash equivalents, trade accounts receivable and other accounts receivable, other loans and receivables are classified as financial assets at amortized cost.

(ii) Subsequent measurement

Subsequent measurement of financial assets depends on their classification, which can be as follows:

At amortized cost

They should be measured at amortized cost if both of the following conditions are met:

- (a) the financial asset is maintained within a business model whose objective is to maintain financial assets in order to receive contractual cash flows; and
- (b) the contractual terms of the financial asset give rise, on specified dates, to cash flows that exclusively comprise payments of principal and interest on the principal amount outstanding.
 - Fair value through other comprehensive income

Financial assets should be measured at fair value through other comprehensive income if both of the following conditions are met:

- (a) the financial asset is maintained within a business model whose objective is achieved by both the receipt of contractual cash flows and the sale of financial assets; and
- (b) the contractual terms of the financial asset give rise, on specified dates, to cash flows that exclusively comprise principal and interest payments on the principal amount outstanding.
 - Fair value through profit or loss

Financial assets must be measured at fair value through profit or loss, unless measured at amortized cost or at fair value through other comprehensive income.

(iii) Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount presented in the balance sheet when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the asset and settle the liability simultaneously.

(iv) Impairment of financial assets

The Company evaluates at the balance sheet dates whether there is any objective evidence that determines whether the financial asset or group of financial assets is not recoverable. A financial asset or group of financial assets is considered to be non-recoverable if, and only if, there is objective evidence of non-recoverability as a result of one or more events that occurred after the initial recognition of the asset (a "loss event") and this loss event has an impact on the estimated future cash flow of the financial asset or the Company from financial assets that can be reasonably estimated. Evidence of impairment may include indicators that borrowing parties are experiencing a time of significant financial hardship.

(v) Derecognition

Derecognition of a financial asset occurs only when the contractual rights on the cash flow of the asset are realized or when the Company transfers the financial asset and substantially all its risks and returns to third parties. In transactions where such financial assets are transferred to third parties, but without the actual transfer of the respective risks and returns, the asset is not derecognized.

(vi) Derivative financial instruments and hedge of net investment abroad

In order to mitigate its exposure to exchange rates, the Company uses derivative financial instruments such as ZCC – zero cost collar and net investment hedges.

Derivative financial instruments

In order to mitigate its exposure to exchange rates in net revenue, the Company uses derivative financial instruments such as ZCC – zero cost collar and net investment hedges.

Adjustments (gain or losses) from derivative financial instruments are recognized at fair value thought profit and loss, and are recognized as financial results.

The derivative financial instrument fair value is classified as current assets or liabilities if the due date are less than 12 months.

Hedge of net investment abroad

The Company designates borrowings in foreign currency as hedging instruments against the foreign exchange variation risk arising from investments that the Company maintains abroad, resulting from the translation of those investments into the Company's financial statement presentation currency.

At the beginning of each transaction, the Company documents:

- the relationship between the hedging instruments and the hedged items;
- the risk management objectives;
- the hedge accounting strategy;

the appraisal that the hedging instruments used in the transactions are highly effective in offsetting changes in the fair value of the hedged items.

The effective portion of gains or losses of a hedging instrument designated and qualified as hedge of net investment abroad is recognized in equity within the "Carrying value adjustments" account. The gain or loss relating to the ineffective portion is recognized immediately in the Company's finance result. Changes in the hedging amounts classified in "Carrying value adjustments" within equity are shown in Note 31.

Gains and losses accumulated in equity are included in the statement of income when the foreign operation is partially or fully disposed of or sold.

e. Borrowings

Borrowings are recognized initially at fair value, net of transaction costs incurred, and are subsequently carried at amortized cost. Any difference between the proceeds (net of transaction costs) and the total amount payable is recognized in the statement of income over the life of the borrowings using the effective interest method. (Note 15)

f. Financial liabilities

They are classified, as initial recognition, as financial liabilities at fair value through profit or loss, loans and financing, accounts payable, or derivatives classified as hedging instrument, as applicable. The classification depends on the purpose of the financial liabilities were acquired.

(i) Initial recognition and measurement

Financial liabilities are initially measured at fair value, net of transaction costs and are subsequently measured at amortized cost using the effective interest method to calculate interest expenses. The effective interest method calculates the amortized cost of a liability and allocates interest expense during the relevant period. These are classified as balances of suppliers, loans and financing, related parties and notes payable and others.

(ii) Derecognition

A financial liability is written off when the obligation is revoked, canceled or expired. When an existing financial liability is replaced by another of the same lender with substantially different terms, or the terms of an existing liability are significantly changed, such replacement or modification is treated as write-off of the original liability and recognition of a new liability, the difference between those accounting values are recognized in the statement of income.

On December 31, 2019, the Company assessed the aspects of the standard and did not identify significant impacts on the recognition of revenues in its financial statements.

g. Employee benefits

The Company has defined benefit plans for Mexicans employees, which are funded through payments to funds, determined by periodic actuarial calculations. The Company also has a defined contribution plan for its operations in Brazil.

The liability recognized in the balance sheet in respect of defined benefit pension plans is the present value of the defined benefit obligation at the balance sheet date minus the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined

by discounting the estimated future cash outflows using market interest rates that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related pension obligation.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise. Past-service costs are recognized immediately in the statement of income.

For defined contribution plans, in Brasil, the Company pays contributions to privately administered pension insurance plans on a contractual or voluntary basis. The Company has no further payment obligations once the contributions have been paid. The contributions are recognized as employee benefit expense when they are due. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in the future payments is available.

h. Advances from customers

This account refers to advances of funds to build the tools that will be used in the production process. Advances from customers are recorded at the contractual amounts and adjusted for foreign exchange differences when applicable, and settled upon the billing of the object of the transaction; the resulting revenue is recorded when the construction of tools is concluded and approved by the customer.

i. Share-based payments

The Company offers a share-based remuneration plan to its management. The variable portion of management remuneration is settled through the issuance of equity instruments. The fair value of the services received in exchange for the grant of the options is recognized as an expense. The total amount to be expensed is determined with reference to the fair value of the options granted.

The total expense is recognized over the vesting period, which is the period over which all of the specified vesting conditions are to be satisfied.

j. General provisions

Provisions are recognized when the Company has a present obligation (legal or non-formalized) as a consequence of a past event, it is probable that economic benefits are required to settle the obligation and a reliable estimate of the value of the obligation can be made. When the Company expects the value of a provision to be totally paid or in part, for example, under an insurance contract, the reimbursement is recognized as a separate asset, but only when the reimbursement is practically certain.

The expense related to any provision is presented in the statement of income, net of any reimbursement.

k. Revenues

Revenues are presented net of taxes and discounts. Taxes on sales are recognized when sales are billed and discounts are recognized when granted. Revenue from sales of goods is recognized when the sales amount can be measured reliably, the Company no longer controls the goods sold or has any other responsibility related to the ownership of the goods and costs incurred or to be incurred in respect of the transaction can be measured reliably, it is probable that the economic benefits

associated with the transaction will flow to the Company, and the Company has transferred to the buyer all the risks and rewards of ownership of the good.

I. Indirect Taxes

Revenues are recognized net of taxes. Likewise, purchases of goods, services, assets and expenses are also recognized net of taxes, except in situations where, in acquisitions, taxes are not liable to credit, in which case such taxes are recognized as a party of the cost of purchasing the goods, service, assets and expenses, as the case may be.

The amount of taxes levied on sales and purchases are included as a component of the amounts receivable or payable in the Company's balance sheet.

The value of taxes, after being determined, (as opposed to credits for acquisitions and debits for sales), will present a recoverable or payable balance, and are presented, respectively, as assets or liabilities, in the balance sheet.

Sales revenues from operations are subject to the following taxes and contributions at the following basic rates:

	Taxes	Percent (%)
PIS	Social integation program	1.65
COFINS	Social contribution on Revenues	7.60
ICMS	Value added tax on sales and services	0 to 17
ISS	Tax over services	5.00
IPI	Excise tax	0 to 15
IVA	Value-added tax	16.00

These charges are deducted from net income in the statement of income. The credits arising from non-cumulative PIS / COFINS are deducted from the cost of services rendered in the income statement.

m. Information by segment

For management purposes, the Company is divided into business units, based on the products, considering two operating segments subject to the disclosure of information:

- Transportation, infrastructure & agriculture
- Hydraulic

Management monitors the operational results of the business units separately, in order to be able to make decisions on resource allocation and to evaluate performance. Segment performance is assessed based on EBITDA in conjunction with operating profit or loss, which in some cases is measured differently from operating income or loss in the consolidated financial statements. The Company's financing (including income and expenses from financing) and taxes on profits are managed within the Company, and are not allocated to operating segments.

Financial income and financial costs, as well as gains and losses at fair value over financial assets, are not allocated to individual segments, since the underlying instruments are managed consolidated.

Current taxes, deferred taxes and certain financial assets and liabilities are not allocated to these segments, since they are also managed consolidated.

Capital expenditures consist of additions of property, plant and equipment, intangible assets and investment property, including assets arising from the acquisition of subsidiaries.

2.6 New standards, amendments and interpretations of standards issued by the IASB and CPC

The changes in the existing standards listed below have been published and will be mandatory for subsequent accounting periods and the Company will adopt them at the effective date required.

a. IFRS 16 - Leases

Effective since January 1, 2019, the CPC 06 (R2) Leasing operations, issue by CPC is equivalent to the international standard IFRS 16 – Leases. CPC 06 (R2) establishes the principles for recognition, measurement, presentation and disclosure of leasing operations and requires tenants to account for all leases according to a single model balance sheet.

The standard includes two exemptions from recognition for tenants - leases of "low-value" assets (eg personal computers) and short-term leases (ie leases with maturity of 12 months or less). At the commencement date of a lease, the lessee recognizes at fair value a liability to make the payments (a lease liability) and an asset representing the right to use the asset subject during the lease term (a right of use asset).

The amounts recognized by the Company and the impacts in the period are as follows:

	Parent company	Consolidated
Depreciation in costs	(4,577)	(13,329)
Depreciation in general expenses	(209)	(209)
Leasing in general expenses	5,778	15,122
PROFIT BEFORE FINANCE RESULTS AND TAXES	992	1,584
Finance costs	(1,754)	(2,808)
Income tax and social contribution	259	416
NET INCOME FOR THE PERIOD	(503)	(808)

Base inflation effects

Parent company	Consolidated
dec/19	dec/19
9,313	23,892
10,259	26,320
9,578	24,618
10,585	27,207
	dec/19 9,313 10,259 9,578

(*) According CVM circular ofice CVM/SNC/SEP 02/2019.

For comparison, the accumulated initial effects are considered irrelevant by the Company for the Financial Statements taken as a whole.

Due to the adoption of CPC 06 (R2), the Company's earnings before interest and financial expenses were positively impacted in the semester, and interest expenses increased financially. This is due to the change in accounting for lease expenses.

b. IFRIC 23 - Uncertainty over income tax treatments

The Interpretation (equivalent to ICPC 22) clarifies the accounting of income taxes in cases where tax treatments involve uncertainty that affects the application of IAS 12 (CPC 32 - Taxes on income) and impacted systems does not apply to taxes outside the scope of IAS 12 nor specifically includes the requirements relating to interest and fines associated with uncertain tax treatment.

Uncertain tax treatment is any accounting or tax procedure, adopted by the Company in the calculation of taxes on profit that if questioned by the tax authorities, may suffer changes in value.

In this circumstance, the company must measure and recognize current and deferred income and social contribution taxes, which refers to the amount that can be questioned by the tax authorities.

In the Company's assessment, all transactions had an appropriate tax treatment, that is, reflecting the impacts of taxes assessed on profits as well as the records of deferred effects for applicable cases, therefore the adoption of the standard did not generate significant impacts on equity and financial and result.

There are no other standards, changes in standards and interpretations that are not yet in force, and that the Company expects to have a material impact on its financial statements.

3. CASH AND CASH EQUIVALENTS

	Parent con	Parent company		ited
	dec/19	dec/18	dec/19	dec/18
Cash and banks	1,723	2,412	1,754	2,455
Financial investments in Brazil	332,878	282,533	333,096	282,751
Financial investments abroad	27,999	43,405	505,180	428,527
	362,600	328,350	840,030	713,733

The financial investments disclosed as cash and cash equivalents are highly-liquid securities with an immaterial risk of changes in value. Those investments in Brazil are remunerated based on variation of Interbank Deposit Certificate (CDI) rate, with an average rate equivalent to 5.97% per annum (6.48% in December 31, 2018). The investments abroad are denominated mostly in U.S. Dollars (US\$) at the average rate of 2.55% per annum (1.62 % per annum in December 31, 2018) designed as time deposit and overnight.

The increase occurred in the period is mainly due to generation of cash from operating activities. (note 15)

The Company operates with first line banks as detailed in note 32.1.

4. TRADE ACCOUNT RECEIVABLES

The composition of trade account receivables from client by market is as follows:

	Parent company		Consolidated	
	dec/19	dec/18	dec/19	dec/18
Domestic market	71,121	99,015	71,121	99,015
Foreign market	351,004	230,324	602,624	591,421
Provision for impairment of trade receivables	(113)	(296)	(1,389)	(1,941)
	422,012	329,043	672,356	688,495

	Parent company		Consolidated	
	dec/19	dec/18	dec/19	dec/18
Falling due in up to 30 days	157,563	151,664	364,727	386,231
Falling due within 31 to 60 days	101,510	93,397	182,037	159,461
Falling due in more than 61 days	111,354	64,896	50,079	35,751
Total falling due	370,427	309,957	596,843	581,443
Overdue for up to 30 days	36,920	4,660	42,750	79,286
Overdue for 31 to 60 days	8,736	1,949	21,016	16,960
Overdue for more than 61 days	6,042	12,773	13,136	12,747
Total overdue	51,698	19,382	76,902	108,993
Provision for impairment of trade receivables	(113)	(296)	(1,389)	(1,941)
Total	422,012	329,043	672,356	688,495

Trade receivable in the domestic market are denominated in Brazilian Real and in the foreign market primarily in U.S. dollars.

The variation in trade account receivable is mainly due to the reduction in the amount of sales for the period, as opposed to the devaluation of the Real in relation to the U.S. dollar which was 3.8748 in December 31, 2018 and achieve 4.0307 in December 31, 2019.

The Company's trade receivable in the foreign market include related-party amounts which are eliminated upon consolidation, amounting of R\$209,164 (R\$118,980 in December 31, 2018). (Note 9)

The Company performs quantitative and qualitative analyses of its portfolio of trade receivables in order to determine the provision for probable losses with receivables, which changed as follows:

	Parent company	Consolidated			
	dec/19	dec/18	dec/19	dec/18	
Opening balance	(296)	(393)	(1,941)	(2,359)	
Additions	(272)	(561)	(3,407)	(663)	
Reversals	265	521	3,740	748	
Write-offs (*)	190	137	219	333	
Closing balance	(113)	(296)	(1,389)	(1,941)	

^(*) Receivables written off during the year as uncollectible

5. INVENTORIES

	Parent company		Consolidated	
	dec/19	dec/18	dec/19	dec/18
Finished products	96,971	74,713	200,172	167,520
Work in progress	72,579	63,929	269,547	127,034
Raw materials	65,655	73,519	124,860	173,888
Maintenance and other materials	24,721	31,744	75,132	76,566
Provision for losses	(5,770)	(9,717)	(15,604)	(21,385)
	254,156	234,188	654,107	523,623

In December 31, 2019 the Company offered finished product inventory as collateral for labor and social security litigation amounting to R\$7,770 (R\$5,514 in December 31, 2018) in the Parent company and consolidated.

In order to operational gain, during the year the production of some items was transferred from Mexico to Brazil. Such items continue to be machined in Mexico or sold directly to the USA, leading to an increase in the time of inventory in transit. In addition, the Company restored the safety stock levels.

The changes in the provision for losses during the year were as follows:

	Parent co	Parent company		ated
	dec/19	dec/18	dec/19	dec/18
Opening balance	(9,717)	(14,917)	(21,385)	(24,863)
Additions	242	1,594	2,076	(128)
Write-off as loss	3,705	3,606	3,705	3,606
Closing balance	(5,770)	(9,717)	(15,604)	(21,385)

6. INCOME TAX AND SOCIAL CONTRIBUTION RECOVERABLE

Since January 2019, the parent company selected the quarterly calculation of income tax and social contribution, previously made on an annual basis. In some periods the Company overpaid them. These amounts will be used to offset federal tax from Company or third party (withholding tax). Based on the Company's projections, they will be realized during the next five years.

	dec/19			dec/18		
	Current	Non-current	Total	Current	Non-current	Total
Parent Company	50,118	88,349	138,467	49,919	166,857	216,776
Income tax	50,118	50,821	100,939	49,919	112,611	162,530
Social contribution	-	37,528	37,528	-	54,246	54,246
Subsidiaries	14,886	-	14,886	11,615	-	11,615
Income tax	14,886	-	14,886	11,615	-	11,615
Consolidated	65,004	88,349	153,353	61,534	166,857	228,391

7. OTHER TAXES RECOVERABLE

	dec/19			dec/18		
	Current	Non-current	Total	Current	Non-current	Total
Parent company	94,000	194,459	288,459	86,081	157,979	244,060
ICMS recoverable - São Paulo	10,143	12,777	22,920	7,037	26,166	33,203
ICMS recoverable - Santa Catarina	29,981	89,683	119,664	20,806	40,610	61,416
Reintegra benefit	2,047	27,952	29,999	13,458	-	13,458
COFINS, PIS and IPI recoverable	51,829	64,047	115,876	44,780	91,203	135,983
Subsidiaries	68,854	-	68,854	51,899	-	51,899
Value-added tax (VAT)	68,854	-	68,854	51,899	-	51,899
Consolidated	162,854	194,459	357,313	137,980	157,979	295,959

The mentioned credits originate as follows:

a. Value-added Tax on Sales and Services (ICMS) recoverable in São Paulo and in Santa Catarina

Credits arising from the purchase of raw materials used in the process of constructing and purchasing property, plant and equipment assets, originally realizable in 48 installments, according to applicable state legislation. The decrease in the Company's sales in Brazilian market, observed in recent years as a result of the economic crisis, contributed to credit growth.

The Company was accomplishing your credit balance by transfers to third parties. However, according by a State Decree 1,860 / 2018 (effective as of December 2018), the possibility of extraordinary transfers of ICMS credits among taxpayers was revoked. Ordinary format of approval, where the amounts for transfer will be calculated through the SEFAZ system, with automatic distribution among exporting taxpayers (unimpressive when compared to extraordinary ones).

In 2018 projections showing increase in the accumulation of credits, the Company estimates that the credits will be realized in up to 10 years. In that moment, recognize an impairment of R\$45,567.

During 2019 with changes promoted in the state legislation regarding the ICMS of Santa Catarina, the Company obtained approval of Differentiated Tax Treatment that regulated the transfer of ICMS credits to third parties, allowing new projections of consumption of the remaining balance, which allowed the total reversal of the impairment provision recognized in 2018.

b. Special System for Refund of Tax Amounts to Exporting Companies (Reintegra) benefit

Credits arising from the benefit established by Provisional Measure 540 of August 2, 2011, reestablished by Law 13,043/14 and regulated by Decree 8,304/14. The legislation allows an increase of up to 2% percentage points in the benefit, provided that the existence of tax residue in the production chain.

Considering appraisal that prove the existence of tax residue in the production chain, the Company recognized in 2019 the additional amount related to the Reintegra for the period from 2015 to june 2018 in the amount of R\$27,952 that will be used to offset federal taxes.

c. Social Contribution on Revenues (COFINS), Social Integration Program (PIS) and Excise Tax (IPI) recoverable

These are credits generated on the acquisition of inputs used in the production process net of taxes levied on the sale of products in domestic market.

COFINS and PIS credits can be offset other federal taxes and, since 2019, also to offset social security contributions. They can also be reimbursed in cash in proportion to export revenue over total revenue. In this modality, the Company received R\$ 64,952 in October 2019.

The Company expects to realize such credits in up to 5 years.

Exclusion of ICMS from the PIS and COFINS calculation base

The Company, is discussing the right to exclude the ICMS from the calculation basis of the contribution to PIS and COFINS, filed 2 (two) writ of mandamus, one at the judicial subsection of the Federal Justice in São Paulo/SP, the which became final, and another filed in the judicial subsection of Joinville/SC, which is still pending a final decision.

Considering the final decision of the process in the federal court of the 3rd region, the Company have the right to exclude ICMS from the calculation basis of the PIS and COFINS contribution. The amounting of R\$46,567, which was recognized in December 2019. R\$36,827 was recognized in other operating income and expenses and the amount related to the restated amount of R\$9,740 was recognized as financial income.

In order to use the PIS and COFINS credits, the Company must submit, through administrative procedure, the credit for validation by the Federal Revenue of Brazil.

d. Value-added tax (VAT)

These are credits generated on the acquisition of inputs used in the production process of the subsidiaries in Mexico and are regularly reimbursed by the local tax authorities.

8. DEFERRED INCOME TAX AND SOCIAL CONTRIBUTION, NET

The composition of deferred tax assets and liabilities relating to income tax and social contribution, presented in the balance sheet accounts, is as follows:

	Parent cor	npany	Consolida	ated
	dec/19	dec/18	dec/19	dec/18
Deferred assets				
Income tax and social contribution losses	53,745	45,822	71,262	45,822
Provisions for contingencies	67,643	68,143	67,643	68,143
Taxes and contribution recoverable	39,472	53,910	39,472	53,910
Credits – Eletrobrás	11,341	27,030	11,341	27,030
Property, plant and equipment - impairment	29,131	28,818	29,131	28,818
Salaries, social security charges and profit sharing	14,525	15,492	34,890	34,500
Provision for impairment of trade receivables	3,544	7,233	3,544	7,233
Provision for inventory losses	2,348	4,334	2,348	4,334
Share-based payments	2,708	2,911	2,708	2,911
Tools	-	-	24,946	16,840
Otheritems	4,508	12,407	12,989	20,571
Property, plant and equipment - tax base (México)	-	-	4,889	(13,349)
Unrealized profits in subsidiaries	-	-	11,711	4,313
Subtotal	228,965	266,100	316,874	301,076

Total deferred liabilities, net	139,304	170,452	195,887	143,668
Subtotal	89,661	95,648	120,987	157,408
Deferred tax on intangible assets	-	-	31,326	61,760
Property, plant and equipment - carrying value adjustments	17,066	21,542	17,066	21,542
Depreciation rate differences	72,595	74,106	72,595	74,106
Deferred liabilities				

The Mexican tax legislation allows the depreciation of property, plant and equipment on a tax bases, and the Company accordingly records the temporary difference of the depreciation between the tax and the accounting bases. The tax amount of temporary difference at December 31, 2019 was (R\$4,889) (R\$13,349 at December 31, 2018). The change in the year is due to the foreign exchange difference between the currency in which the taxes are charged in Mexico (Mexican pesos) and the functional currency (US Dollar) of the subsidiaries in Mexico.

The subsidiary Sociedade Técnica de Fundições Gerais S.A. - Sofunge (in liquidation) had income tax losses of R\$5,972 at December 31, 2019 (R\$5,930 at December 31, 2018) and social contribution losses of R\$42,531 at December 31, 2019 (R\$42,497 at December 31, 2018). These credits, are not recorded and the management are looking for options of realization of the remaining balance.

The Company estimates that the balance as at December 31, 2019, relating to deferred tax assets, will be recovered through future income tax. Expected future realization, based on the Company's profit projections and the expectation of effective realization of temporary differences, is as follows

	Parent con	npany	Consolida	ited
Years	dec/19	dec/18	dec/19	dec/18
2019	-	61,030	-	81,705
2020	62,542	107,918	109,684	108,094
2021	58,622	20,482	65,924	20,755
2022	32,478	15,982	33,568	16,799
2023	13,819	15,982	15,124	16,799
Thereafter	61,504	44,706	92,574	70,273
	228,965	266,100	316,874	314,425

During the year ended December 31, 2019, changes in deferred tax assets and liabilities were as follows:

	Parent company		Consolid	ated
	dec/19	dec/18	dec/19	dec/18
Opening balance	170,452	113,978	143,668	76,243
Recognized in profit (loss)				
Recognized in profit (loss) for the year	(49,647)	(11,227)	32,278	(127)
Recognized in comprehensive income for the year	18,499	67,255	18,499	67,255
Effects of currency translation into presentation currency	-	-	1,442	(149)
Recognized in assets				
Transfer to income tax and social contribution recoverable	-	1,334	-	1,334
Compensations with other taxes	-	(888)	-	(888)
Closing balance	139,304	170,452	195,887	143,668

9. RELATED-PARTY TRANSACTIONS

The main transactions of the Company with related parties are summarized as follows:

a. Subsidiaries:

Assets	dec/19	dec/18
Trade account receivables	209,164	118,980
Tupy Mexico Saltillo, S.A. de C.V	110,257	13,963
Tupy American Foundry Corporation	76,178	39,012
Tupy Europe GmbH	22,297	60,939
Technocast, S.A. de C.V.	432	5,066
Related parties – loans	1,904	5,982
Tupy Agroenergética Ltda.	1,904	5,982
	211,068	124,962
Liabilities	dec/19	dec/18
	·	·
Tupy Overseas S.A	1,451,487 1,451,487	1,395,346 1,395,346
' '	, ,	
Advances from customers	4,756	3,468
Tupy American Iron & Alloys Corporation	3,608	3,468
Tupy Europe GmbH	1,148	-
Notes and other payables	11,068	101,641
Tupy México Saltillo S.A. de CV	4,789	34
Tupy Europe GmbH	3,435	70,876
Tupy American Foundry Co.	1,337	29,283
Tupy American Iron & Alloys Corporation	1,507	1,448
Related parties – loans	1,203	1,239
Sociedade Técnica de Fundições		
Gerais S.A Sofunge "in liquidation"	1,203	1,239
	1,468,514	1,501,694
Statement of income	dec/19	dec/18
Revenues	1,012,767	912,236
Tupy American Foundry Corporation	606,563	668,826
Tupy Europe GmbH	227,447	205,005
Tupy Mexico Saltillo, S.A. de C.V	178,709	38,405
Technocast, S.A. de C.V.	48	-
Other operating expenses, net	100	11,985
Technocast, S.A. de C.V.	1	6,350
Tupy Mexico Saltillo, S.A. de C.V	99	5,635
Finance costs	(94,023)	(87,911)
Tupy Overseas S.A.	(94,023)	(87,912)
Sociedade Técnica de Fundições		
Gerais S.A Sofunge "in liquidation"	-	1
	918,844	836,310

Information from operations of the subsidiaries is provided in Note 2.2.

The receivables (Note 4) and sales revenue of the Company with its subsidiaries mainly represent sales of products from the transportation, infrastructure & agriculture segment. Prices charged are in compliance with the Company's price lists, and terms range from 60 to 90 days, as established by the parties. At December 31, 2019, the Company's related parties had no overdue receivables, because of deb loss, and, therefore, the Company did not record a provision for the impairment of these receivables.

Advances from customers correspond to amounts sent by the subsidiaries abroad for the future delivery of goods.

Notes and other payables to subsidiaries abroad represent a current accounts between the subsidiaries and the Parent company, with an unspecified maturity. Refers mainly, to quality assistance for transportation, infrastructure & agriculture products, with 30 and 60 maturity days.

The loan conditions granted by Tupy Overseas S.A. to the Parent company are disclosed in Note 15.

The other operations refer to loan agreements between the subsidiaries in Brazil and the Company, with no defined maturities, which bear interest equivalent to the Referential Rate (TR).

Other operations expenses, net, refer to transfer by sale of fixed assets of the machining line to Technocast S.A. de C.V. and Tupy México Saltillo, S.A. de C.V. subsidiaries.

b. Main stockholders:

The Company's main stockholders are BNDES Participações S.A. – BNDESPAR and PREVI - Caixa de Previdência dos Funcionários do Banco do Brasil.

c. Management remuneration:

	Boar	Board of Directors		Board of Officers		tal
	dec/19	dec/18	dec/19	dec/18	dec/19	dec/18
Fixed remuneration	2,402	2,181	4,268	2,845	6,670	5,026
Variable remuneration	-	-	1,613	3,003	1,613	3,003
Stock option plan (Note 19)	610	763	1,274	1,993	1,884	2,756
	3,012	2,944	7,155	7,841	10,167	10,785

The overall amount of the annual remuneration for the current year approved for the Board of Directors, the Executive Board and the Statutory Audit Board at the Extraordinary and Ordinary General Meeting for the year ended December 31, 2019 was R\$17,661 (R\$21,684 in December 31, 2018).

Statutory management remuneration is paid only at the Parent Company level and, therefore, no management remuneration has been recorded in subsidiaries.

The amounts recorded as variable remuneration of the Executive Board are considered as a provision, based on to the goals established for the year. Information about the Stock option plan is provided in Note 19.

Officers receive additional corporate benefits, such as company vehicles, reimbursement of vehicle-related expenses, health insurance, pension plan and severance pay. At December 31, 2019, these benefits totaled R\$765 (R\$2,234 in the same previous-year period).

The Company does not offer its officers a post-employment benefit plan.

d. Other related parties:

The Parent company sponsors the Associação Atlética Tupy (Tupy Athletic Association), a not-for-profit foundation that offers leisure activities and sports to the Company's employees. During the year ended December 31, 2019, the Company recognized sponsorship expenses of R\$1,250 (R\$1,232 at December 31, 2018).

10. CREDITS - ELETROBRAS

Refer to credits arising from the right to additional inflation adjustment of the Eletrobras compulsory loan and related interest, based on a final and unappealable court decision in 2003.

In December 2011, the Federal Regional Court of the 4th Region ("TRF4") confirmed the calculation made by the Company, based on a report signed by a professional expert, regarding the enforcement of the sentence. The Company and Eletrobras lodged appeals with the Superior Court of Justice ("STJ") and the Federal Supreme Court ("STF").

In October 2015, considering the pending proceedings (STJ/STF) does not suspending the proceeding progress. The Company filed petition, requiring compliance with the verdict, meaning that Eletrobras is summoned to deposit the executed value with the court or submitted a defense about the amount calculated by the Company.

In September 2016, the 6th Civil Court in Joinville retained monies, on Eletrobras checking accounts (online seizure), in the full amount claimed by the Company in the respective lawsuit. Until the court final decision is published, such amount will remain retained, by the judicial authority, less the received amount in order to garantee the Company's credit.

Since the initial recognition of the assets in 2003, there are just pro Company effects in the Court, including (a) a receive of a small part in 2008 for Eletrobras, (b) the Company has the right of receive this amount (TRF4 decision at December 2011), (c) the blocking of the total amount of the Company's right, in September 2016; and (d) a appealed by Eletrobras already judged to the STF, through which it was still sought to contest the calculation criteria.

In October 2018, an appeal filed by Eletrobras was judged considering the decision of the TRF4 of December 2011 (above mentioned), which closing of the legal proceedings for which Eletrobras could still discuss the criteria for calculating the appraisal report approved in court.

In regarding of the procedural acts listed above, in the last quarter of 2018, in addition to the right to full monetary restatement (which was already subject to final judge in 2003), the criteria for calculating the credit held by the Company were definitively established. Accordingly, based on a decision made in October 2018, the Company updated and recorded the full entitlement of the compulsory deposit credits, according to criteria and assumptions determined in an irrevocable judicial decision. In addition, an embedded derivative was identified from the option of realizing credit, partial or total, in cash or in shares of Eletrobras, which was valued at its realization value on the balance sheet date by the black-sholes criterion reflecting the lowest and highest probable realization value in favor of the Company. During the period, the variation in the provision substantially reflects the change in market value of Eletrobras shares and the decrease in the estimated credit realization term.

In August 2019, the 6th Federal Court of Joinville determined the updating, by the Judicial Accounting Office, of the amount indicated in the expert report, in order to indicate the amount to be paid in favor of the Company. After the update carried out by the Judicial Accounting Office, the parties manifested themselves, and in December 2019, the undisputed amount was received by the Company, R\$72,470, being deducted the amount of the legal fees that resulted in a net amount of R\$63,049.

After the update of the referred amount, the case was referred to the Judicial Accounting Office, so that the manifestations of the parties on the update of the calculation could be considered and, after the examination, the 6th Federal Court will determine the release of the remaining amount. The Company estimates will occur during the year 2020.

Although the Company confirm that the calculation made by the technical assistant hired by the Company is in line with:

- (a) the criteria of the expert report approved by the Federal Court on which the final judgment has already taken place; and
 - (b) the best interpretation of the jurisprudence on the topic;

the Judicial Accounting Office can present a definitive update of the credit that does not fully correspond with the premises adopted by the technical assistant and the judicial expert. In such scenario, the Company will requiring that the calculation of its technical assistant and the expert report to be accept. Once, in the strict terms of the law that assists it according to judicial decisions and according to the assets now registered by the Company.

Consolidated			
	Credits	Realizable value adjustment	Net realizable value
AT DECEMBER 31, 2018	121,737	(19,567)	102,170
Monetary adjustment	128,736	-	128,736
Registration of the embedded derivative	-	(104,862)	(104,862)
Change in fair value of derivative	-	44,930	44,930
AT DECEMBER 31, 2018	250,473	(79,499)	170,974
Monetary adjustment	7,502	-	7,502
Change in fair value of derivative	-	46,143	46,143
Received	(72,470)		(72,470)
AT DECEMBER 31, 2019	185,505	(33,356)	152,149

11. PROPERTIES FOR INVESTMENT

The Company has assets classified as properties for investment, mainly land and forests, belonging to the subsidiary Tupy Agroenergética Ltda. At December 31, 2019, their carrying value was R\$6,363 (R\$6,363 in 2018), considering the historical cost as the accounting basis. The expected possible result, according an appraisal by a specialized company, in the realization of these assets indicate a range between R\$49.923 (minimum) and R\$91.524 (expected), there are no indications this amount could be significant different from 2018.

12. INVESTMENTS

a. Composition of investments

				Profit (loss)	Interest in	Share in the results of	5 1 1 (*)
Parent company	Total assets	Equity	Goodwill	for the period	capital (%)	subsidiaries (*)	Book value (*)
AT DECEMBER 31, 2019							
investment in subsidiary company							
Tupy Mexico Saltillo, S.A. de C.V.	1,561,537	964,093	30,513	65,328	100.00	53,854	983,008
Technocast, S.A. de C.V.	859,803	561,104	10,713	(68,055)	100.00	(68,055)	571,817
Servicios Industriales Technocast, S.A. de C.V.	1,054	657	-	(120)	100.00	(120)	657
Tupy Overseas	1,465,720	18,943	-	1,233	100.00	1,233	18,943
Tupy American Foundry Co.	213,462	126,200	-	7,766	100.00	6,257	120,636
Tupy American Iron & Alloys Co.	5,513	5,514	-	1	100.00	1	5,514
Tupy Europe GmbH	200,187	166,858	-	13,339	100.00	13,898	161,289
Tupy Materials & Components B.V	6,046	6,046	-	-	100.00	-	6,046
Tupy Agroenergética Ltda.	10,640	3,717	-	(899)	100.00	(899)	3,717
Sociedade Técnica de Fundições							
Gerais SA Sofunge "in liquidation"	2,502	1,198	-	(1,338)	100.00	(1,338)	1,198
						4.831	1.872.825

(*) Adjusted by unrealized profits

Parent company AT DECEMBER 31, 2018	Total assets	Equity	Goodwill	Profit (loss) for the period	Interest in capital (%)	Share in the results of subsidiaries (*)	Book value (*)
investment in subsidiary company							
	4.446.006	070.024	20.542	02.222	100.00	04 200	000.404
Tupy Mexico Saltillo, S.A. de C.V.	1,416,806	879,034	30,513	93,322	100,00	94,290	,
Technocast, S.A. de C.V.	847,898	580,674	10,713	34,643	100,00	34,643	591,387
Servicios Industriales Technocast, S.A. de C.V.	10,035	8,131	-	(101)	100,00	(101)	8,131
Tupy Overseas	1,406,540	17,002	-	1,260	100,00	1,260	17,002
Tupy American Foundry Co.	210,685	113,679	-	5,307	100,00	8,809	110,344
Tupy American Iron & Alloys Co.	5,299	5,299	-	(3)	100,00	(3)	5,299
Tupy Europe GmbH	220,382	150,108	-	13,548	100,00	16,053	145,435
Tupy Agroenergética Ltda.	10,613	4,616	-	(369)	100,00	(369)	4,616
Sociedade Técnica de Fundições							
Gerais SA Sofunge "in liquidation"	2,538	2,535	-	239	100,00	239	2,535
				·		154,821	1,793,940

^(*) Adjusted by unrealized profits

b. Changes in investments

Parent company	
AT DECEMBER 31, 2017	1,441,790
Share in the results of subsidiaries	154,821
Exchange variations of investees located abroad	237,715
Dividends received	(40,386)
AT DECEMBER 31, 2018	1,793,940
Share in the results of subsidiaries	4,831
Additions to investments	6,114
Exchange variations of investees located abroad	67,940
AT DECEMBER 31, 2019	1,872,825

c. Tupy Materials & Components B.V.

On December 4, 2019, the Company incorporated Tupy Materials & Components BV in Anrhem, the Netherlands with the payment of capital in the amount of US\$1,500 (R\$6,114), with Tupy S.A. 99% and Tupy Agroenergética Ltda 1% interest in the capital invested.

Tupy Materials & Components B.V. S.A. was created in order to concentrate corporate activities abroad.

d. Impairment

In December 31, 2019, was recognized an impairment of R\$45,484, R\$31,839 after legal appropriation of 30% in Mexico. In December 31, 2018, was recognized a reversal impairment amounting of R\$33,631, R\$23,542 after legal appropriation of 30%. (note 14)

13. PROPERTY, PLANT AND EQUIPMENT

a. Changes in property, plant and equipment

Parent company	Machinery, facilities and equipment	Buildings	Land	Vehicles	Furniture, fittings and other	Right of use	Construction in progress	Total
Cost								
AT DECEMBER 31, 2018	1,644,798	342,072	8,956	22,861	5,928	-	33,493	2,058,108
Addition	3,596		-		-	-	60,374	63,970
Transfer to property, plant and equipment in use	50,109	4,968	-	1,672	408	-	(57,157)	-
Impairment Disposal	(85,513)	(90)	•	(2,225)	(773)	-	-	(88,601)
AT DECEMBER 31, 2018	1,612,990	346,950	8,956	22,308	5,563	-	36,710	2,033,477
Addition	5,409	340,530	6,930	22,300	3,303	14,099	84,164	103,672
Transfer to property, plant and equipment in use	70,749	10,093		1,017	371	14,055	(82,230)	103,072
Impairment	(920)			-,017	3/1		(02,230)	(920)
Disposal	(9,776)	(681)		(1,684)		_		(12,141)
AT DECEMBER 31, 2019	1,678,452	356,362	8,956	21,641	5,934	14,099	38,644	2,124,088
Depreciation								
AT DECEMBER 31, 2018	(1,072,362)	(140,702)		(13,772)	(3,684)	-	-	(1,230,520)
Depreciation in the year	(113,434)	(14,405)	-	(1,948)	(459)	-	-	(130,246)
Disposal	59,517	32	-	1,645	706	-	-	61,900
AT DECEMBER 31, 2018	(1,126,279)	(155,075)		(14,075)	(3,437)	-	-	(1,298,866)
Depreciation in the year	(111,115)	(13,858)	-	(1,859)	(396)	(4,786)	-	(132,014)
Disposal	8,378	3	-	1,243	-	-	-	9,624
AT DECEMBER 31, 2019	(1,229,016)	(168,930)	-	(14,691)	(3,833)	(4,786)	-	(1,421,256)
Carrying amount								
AT DECEMBER 31, 2018	486,711	191,875	8,956	8,233	2,126	-	36,710	734,611
AT DECEMBER 31, 2019	449,436	187,432	8,956	6,950	2,101	9,313	38,644	702,832
	Machinery, facilities				Furniture,	Dieba	Constantion in	
Consolidated	and equipment	Buildings	Land	Vehicles	fittings and other	Right of use	Construction in progress	Total
Consolidated Cost	and equipment	Buildings	Land	Vehicles	other	of use	progress	Total
	and equipment 3,201,812	Buildings 701,113	Land 58,461	Vehicles 24,015	-	_		Total 4,147,409
Cost					other	_	progress	
Cost AT DECEMBER 31, 2018	3,201,812	701,113 - 20,741	58,461		other 22,411 - 3,617	of use	progress 139,597	4,147,409 176,836
Cost AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation	3,201,812 3,596 134,754 271,162	701,113 - 20,741 62,013	58,461 -	24,015 - 2,226 217	22,411 - 3,617 2,605	of use	139,597 173,240	4,147,409 176,836 - 360,484
Cost AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal	3,201,812 3,596 134,754 271,162 (139,139)	701,113	58,461 - (5) 8,412 -	24,015 - 2,226 217 (2,225)	22,411 - 3,617 2,605 (774)	of use	139,597 173,240 (161,333) 16,075	4,147,409 176,836 - 360,484 (142,738)
Cost AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185	701,113 - 20,741 62,013	58,461 - (5)	24,015 - 2,226 217	22,411 - 3,617 2,605	of use	139,597 173,240 (161,333) 16,075 -	4,147,409 176,836 - 360,484 (142,738) 4,541,991
AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409	701,113 - 20,741 62,013 (600) 783,267	58,461 - (5) 8,412 -	24,015 - 2,226 217 (2,225) 24,233	22,411 - 3,617 2,605 (774) 27,859	of use	139,597 173,240 (161,333) 16,075 - 167,579 255,533	4,147,409 176,836 - 360,484 (142,738)
AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454	701,113 - 20,741 62,013 (600) 783,267 - 26,209	58,461 - (5) 8,412 - 66,868	24,015 - 2,226 217 (2,225) 24,233 - 821	22,411 - 3,617 2,605 (774) 27,859 - 2,363	of use	139,597 173,240 (161,333) 16,075 - 167,579 255,533 (244,847)	4,147,409 176,836 - 360,484 (142,738) 4,541,991 297,907
Cost AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454 74,872	701,113 - 20,741 62,013 (600) 783,267	58,461 - (5) 8,412 -	24,015 - 2,226 217 (2,225) 24,233	22,411 - 3,617 2,605 (774) 27,859	of use	139,597 173,240 (161,333) 16,075 - 167,579 255,533	4,147,409 176,836 - 360,484 (142,738) 4,541,991 297,907 - 104,624
AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Impairment	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454 74,872 (920)	701,113 - 20,741 62,013 (600) 783,267 - 26,209 17,378	58,461 - (5) 8,412 - 66,868	24,015 - 2,226 217 (2,225) 24,233 - 821 274	22,411 - 3,617 2,605 (774) 27,859 - 2,363	of use	139,597 173,240 (161,333) 16,075 - 167,579 255,533 (244,847)	4,147,409 176,836 - 360,484 (142,738) 4,541,991 297,907 - 104,624 (920)
Cost AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454 74,872	701,113 - 20,741 62,013 (600) 783,267 - 26,209	58,461 - (5) 8,412 - 66,868	24,015 - 2,226 217 (2,225) 24,233 - 821	22,411 - 3,617 2,605 (774) 27,859 - 2,363	of use	139,597 173,240 (161,333) 16,075 - 167,579 255,533 (244,847)	4,147,409 176,836 - 360,484 (142,738) 4,541,991 297,907 - 104,624
AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Impairment Disposal AT DECEMBER 31, 2019	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454 74,872 (920) (12,675)	701,113 - 20,741 62,013 (600) 783,267 - 26,209 17,378 - (681)	58,461 (5) 8,412 - 66,868 - 2,314	24,015 - 2,226 217 (2,225) 24,233 - 821 274 - (1,684)	22,411 - 3,617 2,605 (774) 27,859 - 2,363 765	of use 36,965 - 663 (8)	139,597 173,240 (161,333) 16,075 - 167,579 255,533 (244,847) 8,357	4,147,409 176,836 360,484 (142,738) 4,541,991 297,907 104,624 (920) (15,048)
Cost AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Impairment Disposal AT DECEMBER 31, 2019 Depreciation	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454 74,872 (920) (12,675) 3,754,325	701,113 	58,461 (5) 8,412 - 66,868 - 2,314	24,015 - 2,226 217 (2,225) 24,233 - 821 274 - (1,684) 23,644	22,411 - 3,617 2,605 (774) 27,859 - 2,363 765 - 30,987	of use 36,965 - 663 (8)	139,597 173,240 (161,333) 16,075 - 167,579 255,533 (244,847) 8,357	4,147,409 176,836 360,484 (142,738) 4,541,991 297,907 104,624 (920) (15,048) 4,928,553
AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Impairment Disposal AT DECEMBER 31, 2019 Depreciation AT DECEMBER 31, 2018	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454 74,872 (920) (12,675) 3,754,325	701,113	58,461 - (5) 8,412 - 66,868 2,314 - 69,182	24,015 - 2,226 217 (2,225) 24,233 - 821 274 (1,684) 23,644	22,411 - 3,617 2,605 (774) 27,859 - 2,363 765 - 30,987	of use 36,965 - 663 (8) 37,620	139,597 173,240 (161,333) 16,075 - 167,579 255,533 (244,847) 8,357	4,147,409 176,836 360,484 (142,738) 4,541,991 297,907 104,624 (920) (15,048) 4,928,553
Cost AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Impairment Disposal AT DECEMBER 31, 2019 Depreciation AT DECEMBER 31, 2018 Depreciation in the year	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454 74,872 (920) (12,675) 3,754,325	701,113 20,741 62,013 (600) 783,267 26,209 17,378 (681) 826,173 (343,614) (24,513)	58,461 - (5) 8,412 - 66,868 - 2,314 - 69,182	24,015 - 2,226 217 (2,225) 24,233 - 821 274 - (1,684) 23,644 (14,718) (2,048)	22,411 - 3,617 2,605 (774) 27,859 - 2,363 765 - 30,987	of use 36,965 - 663 (8) 37,620	139,597 173,240 (161,333) 16,075 - 167,579 255,533 (244,847) 8,357 - - 186,622	4,147,409 176,836 360,484 (142,738) 4,541,991 297,907 104,624 (920) (15,048) 4,928,553 (2,638,173) (217,909)
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AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Impairment Disposal AT DECEMBER 31, 2019 Depreciation AT DECEMBER 31, 2018 Depreciation in the year Exchange variation Disposal	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454 74,872 (920) (12,675) 3,754,325 (2,266,411) (188,911) (206,694) 112,959	701,113	58,461 - (5) 8,412 - (66,868 2,314 (69,182	24,015 - 2,226 217 (2,225) 24,233 - 821 274 - (1,684) 23,644 (14,718) (169) 1,645	22,411 3,617 2,605 (774) 27,859 2,363 765 30,987 (13,430) (2,437) (1,771) 706	of use	139,597 173,240 (161,333) 16,075 - 167,579 255,533 (244,847) 8,357 - 186,622	4,147,409 176,836 360,484 (142,738) 4,541,991 297,907 104,624 (920) (15,048) 4,928,553 (2,638,173) (217,909) (244,027) 115,410
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AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Impairment Disposal AT DECEMBER 31, 2019 Depreciation AT DECEMBER 31, 2018 Depreciation in the year Exchange variation Disposal AT DECEMBER 31, 2018	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454 74,872 (920) (12,675) 3,754,325 (2,266,411) (188,911) (206,694) 112,959 (2,549,057)	701,113	58,461 - (5) 8,412 - (66,868 (2,314 (69,182) - (- (- (- (- (- (- (- (- (- (- (- (- (-	24,015 - 2,226 217 (2,225) 24,233 - 821 274 - (1,684) 23,644 (14,718) (2,048) (169) 1,645 (15,290)	22,411 3,617 2,605 (774) 27,859 - 2,363 765 - 30,987 (13,430) (2,437) (1,771) 706 (16,932)	of use	139,597 173,240 (161,333) 16,075 - 167,579 255,533 (244,847) 8,357 186,622	4,147,409 176,836 360,484 (142,738) 4,541,991 297,907 104,624 (920) (15,048) 4,928,553 (2,638,173) (217,909) (244,027) 115,410 (2,984,699)
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AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Impairment Disposal AT DECEMBER 31, 2019 Depreciation AT DECEMBER 31, 2018 Depreciation in the year Exchange variation Disposal AT DECEMBER 31, 2018 Depreciation in the year Exchange variation Disposal AT DECEMBER 31, 2018 Depreciation in the year Exchange variation Disposal	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454 74,872 (920) (12,675) 3,754,325 (2,266,411) (188,911) (206,694) 112,959 (2,549,057) (208,813) (59,031)	701,113	58,461 - (5) 8,412 - (66,868 - (2,314 - (2,314 - (3,314 -	24,015 - 2,226 217 (2,225) 24,233 - 821 274 - (1,684) (14,718) (2,048) (169) 1,645 (15,290) (1,974) (51)	22,411 3,617 2,605 (774) 27,859 - 2,363 765 - 30,987 (13,430) (2,437) (1,771) 706 (16,932) (2,450) (596)	of use	139,597 173,240 (161,333) 16,075 - 167,579 255,533 (244,847) 8,357 186,622	4,147,409 176,836 360,484 (142,738) 4,541,991 297,907 - 104,624 (920) (15,048) 4,928,553 (217,909) (244,027) 115,410 (2,984,699) (251,580) (70,051)
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AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Impairment Disposal AT DECEMBER 31, 2019 Depreciation AT DECEMBER 31, 2018 Depreciation in the year Exchange variation Disposal AT DECEMBER 31, 2018 Depreciation in the year Exchange variation Disposal AT DECEMBER 31, 2018 Depreciation in the year Exchange variation Disposal AT DECEMBER 31, 2018 Depreciation in the year Exchange variation Disposal AT DECEMBER 31, 2019	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454 74,872 (920) (12,675) 3,754,325 (2,266,411) (188,911) (206,694) 112,959 (2,549,057) (208,813) (59,031) 10,865	701,113	58,461 (5) 8,412 	24,015 - 2,226 217 (2,225) 24,233 - 821 274 - (1,684) 23,644 (14,718) (2,048) (169) 1,645 (15,290) (1,571) (1,521) (1,521) (1,521) (1,521)	22,411 3,617 2,605 (774) 27,859 2,363 765 30,987 (13,430) (2,437) (1,771) 706 (16,932) (2,450) (596)	of use	139,597 173,240 (161,333) 16,075 - 167,579 255,533 (244,847) 8,357 - 186,622	4,147,409 176,836 360,484 (142,738) 4,541,991 297,907 104,624 (920) (15,048) 4,928,553 (217,909) (244,027) 115,410 (2,984,699) (251,580) (70,051) 12,113
AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Disposal AT DECEMBER 31, 2018 Addition Transfer to property, plant and equipment in use Exchange variation Impairment Disposal AT DECEMBER 31, 2019 Depreciation AT DECEMBER 31, 2018 Depreciation in the year Exchange variation Disposal AT DECEMBER 31, 2018 Depreciation in the year Exchange variation Disposal AT DECEMBER 31, 2018 Depreciation in the year Exchange variation Disposal AT DECEMBER 31, 2019 Carrying amount	3,201,812 3,596 134,754 271,162 (139,139) 3,472,185 5,409 215,454 74,872 (920) (12,675) 3,754,325 (2,266,411) (188,911) (206,694) 112,959 (2,549,057) (208,813) (59,031) 10,865 (2,806,036)	701,113 20,741 62,013 (600) 783,267 26,209 17,378 (681) 826,173 (343,614) (24,513) (35,393) 100 (403,420) (24,769) (10,219) 3 (438,405)	58,461 - (5) 8,412 - (66,868 - (2,314 - (3,314 -	24,015	22,411 3,617 2,605 (774) 27,859 - 2,363 765 - 30,987 (13,430) (2,437) (1,771) 706 (16,932) (2,450) (596) 2 (19,976)	of use	139,597 173,240 (161,333) 16,075 - 167,579 255,533 (244,847) 8,357 - 186,622	4,147,409 176,836 360,484 (142,738) 4,541,991 297,907 - 104,624 (920) (15,048) 4,928,553 (2,638,173) (217,909) (244,027) 115,410 (2,984,699) (251,580) (70,051) 12,113 (3,294,217)

The group of construction in progress mainly comprises investments in the support of capacity, environment, safety, projects in order to expansion of machining capacity in Mexico plants and strategic projects development.

b. Impairment of non-financial assets

In 2016 in order to optimizing the manufacturing plant and consequently reducing operating costs, due to the reduction of demand in the domestic market, in the automotive segment, and revision of the future plans of the operation, the Company deactivated part of the industrial park, in Mauá-SP, for an indefinite period. In line with the movements that occurred in 2016, during 2019 the company deactivated part of the finishing area of the same unit.

The impacted plant is part of the unit that generates a blocks and heads, a component of the automotive segment of the Brazilian plant.

To determine the residual value of deferred operating assets, the Company used the fair value model of selling expenses, considering the level 3 hierarchy of fair value, which includes non-observable market information.

The measurement of the adjustment considered:

- Land, buildings and improvements, due to higher realization values per sale than those in use, were not subject to impairment;
- Assets that would be used in other plants, or kept in operation in the object plant, were identified and not computed in the adjustment. Costs for reallocation of these assets were measured and considered;
- Assets that would be "disconnected" and thus remain indefinitely were subject to impairment.
 In these cases, achievement values using as parts in other plants or as raw material (scrap) were estimated.

In December 31, 2016, the model showed that the recoverable value of the correspondent part of the assets from Mauá is lower than its book value. As a result the Company recorded a provision for loss of these assets in the amount of R\$84,760, under other operating expenses, net. With the deactivated occurred during 2019 it was necessary to recognized impairment of R\$920.

c. IFRS 16 – Leases

With the adoption of IFRS 16 - Leases since January 1, 2019, the Parent Company recorded the amount of R\$10,007 and R\$31,449 in a Consolidated numbers as the right of use assets.

	Machinery, facilities			
	and equipment	Buildings	Vehicles	Total
Cost				
Parent company	4,298	1,930	3,779	10,007
Right of use	4,298	1,930	3,779	10,007
Subsidiaries	-	-	21,442	21,442
Right of use	-	-	21,442	21,442
Consolidated	4,298	1,930	25,221	31,449

d. Depreciation

The Company depreciates property, plant and equipment on a straight-line basis, reviewed annually, using the following useful lives:

	Average useful lives
Machinery, facilities and equipment	18 years
Buildings	35 years
Vehicles	5 years
Furniture, fittings and other	14 years

e. Capitalization of interest and financial charges

The Company recognizes interest and financial charges incurred during the period of construction of the qualifying assets as asset formation cost.

The amount recorded in the year ended December 31, 2019 totals R\$1,739 (R\$1,967 in 2018).

f. Guarantees

The Company pledged property, plant and equipment items as collateral for borrowing amounting to R\$16,297 (R\$21,999 at the same period prior year), in the Parent Company and Consolidated and R\$5,895 (R\$5,895 at December 31, 2018) as a collateral for tax litigation in the Parent Company and Consolidated.

g. Insured amounts

Property, plant and equipment are insured for fire, electrical damage and explosion. Insurance coverage is determined based on the amounts and the level of risk involved. (Note 28)

14. INTANGIBLE ASSETS

		Internal	
Parent company	Software	projects	Total
AT DECEMBER 31, 2017	54,185	4,092	58,277
Acquisition/costs	1,877	3,143	5,020
Disposal	(61)	-	(61)
Amortization	(8,257)	(137)	(8,394)
AT DECEMBER 31, 2018	47,744	7,098	54,842
Acquisition/costs	2,361	3,633	5,994
Amortization	(8,362)	(364)	(8,726)
AT DECEMBER 31, 2019	41,743	10,367	52,110

Contractual

		Contractaar			
		customer		Internal	
Consolidated	Software	relationships	Goodwill	projects	Total
AT DECEMBER 31, 2017	59,670	191,153	41,226	4,092	296,141
Acquisition/costs	4,924	-	-	3,143	8,067
Disposal	(2,552)	-	-	-	(2,552)
Exchange variation	870	30,148	-	-	31,018
Disposal	(12,265)	(49,066)	-	(137)	(61,468)
Impairment	-	33,631	-	=	33,631
AT DECEMBER 31, 2018	50,647	205,866	41,226	7,098	304,837
Acquisition/costs	5,999	-	-	3,633	9,632
Disposal	(104)	-	-	-	(104)
Exchange variation	244	6,906	-	-	7,150
Amortization	(11,239)	(62,868)	-	(364)	(74,471)
Impairment	-	(45,484)	-	-	(45,484)
AT DECEMBER 31, 2019	45,547	104,420	41,226	10,367	201,560

a. Computer software

It basically consists of a license for an enterprise management system (ERP), acquired in 2013. This ERP was developed in 2013 and 2014 and it was implemented in 2015. The amortization is being carried out, in a linear way, in 10 years.

b. Contractual customer relationships

The contractual relationship arises from the acquisition of Tupy México S.A. de C.V. and Technocast S.A. de C.V. on April 16, 2012 and was calculated based on the minimum estimate of customer portfolio maintenance, taking the sales volumes of periods prior to the acquisition and the market perspectives existing at the time into consideration.

The calculation used the Multi-period Excess Earnings Method (MEEM), which covers ten-year period, equivalent to the minimum term estimated for the maintenance of the commercial relationship with the customers. These intangible assets will be amortized on a straight-line basis.

The aggregate of the customer portfolios that compose the contractual relationship presents, and projects in the long term, volumes and profitability significantly higher than the initial recognition of the asset, which make the profitability of the plants reach the appropriate level.

Considering that the intangible asset was recognized by each portfolio, and according to IFRS is not allowed compensation between them, at the end of 2019, individual analysis was made and the Company identify a reduction in the demand of some customers when compared with the projections of previously year. Because of that, an impairment test was necessary.

The methodology used in order to determine the fair value for the remain period of 2.5 years, was the value in use, considering the MEEM ("Multi-period excess earnings methods") methodology.

The assumptions used by management at December 31, 2019 was the value in use, were as follows:

- Revenues were defined based on projections of demand by customer in the next 2.5 years.
- Operating margins were determined based on historical performance and on expectations arising from investments and operational improvements.
- Discount rate in real terms, before tax effects, of 6.5% p.y., which reflects the Company's specific risks.

At December 31, 2019 the amount of contractual customer relationships recognized was R\$104,933, and the amount of the value in use test was R\$73,095, considering this calculation was necessary an impairment net of tax R\$31,839. (note 23)

In December 31, 2018 the result of the test determined a reversal of impairment recorded in prior years in the amount of R\$33,631. (note 23)

c. Goodwill

Intangible assets represented by the excess of the cost of an acquisition over the net fair value of assets and liabilities of the subsidiaries, Tupy Mexico S.A. de C.V. and Technocast S.A. de C.V., substantially generated by expected synergies.

Goodwill is allocated to the subsidiaries Tupy Mexico S.A., de C.V. and Technocast S.A., de C.V., which are considered as cash-generating units and operate in the automotive segment.

At the moment, there is goodwill impairment, which is recorded by calculation of the cash-generating unit's recoverable amount.

The recoverable amount was determined based on value-in-use calculations. These calculations utilize discounted cash flow projections, post-tax profit and capital expenses based on financial budgets in real terms (i.e., without considering inflation) approved by management and covering a five-year period. Cash flows beyond the five-year period are extrapolated using the cash flows for the 5th year. The key assumptions used for value-in-use calculations at December 31, 2019 are as follows:

- Revenues were defined based on projections of demand by customer in the next five years.
- Management determined the operating margins based on past performance and its expectations of market development.
- Discount rate in real terms of 6.50% p.y., before tax effects, which reflects the Company's specific risks.

Made sensitivity analysis to determine the impact on the change of its main variable, discount rate, considering an increase of 1p.p. and no lower value was found than the accounting cost of the investments, so that the Company did not identify the need for impairment adjustment on the recorded goodwill.

15. LOANS AND FINANCING

Parent company				
	Maturity	Effective rate	dec/19	dec/18
Local currency			23,159	18,333
Sustainability	Jan/2025	5.96% p.a.	13,581	18,333
(a) Leasing from right of use			9,578	-
Foreign currency			1,451,487	1,395,346
(b) Export prepayment - Tupy Overseas	Jul/2024	VC + 6.78% p.a.	1,451,487	1,395,346
Current portion			55,595	49,792
Non-current portion			1,419,051	1,363,887
			1,474,646	1.413.679

^{*}VC = Foreign exchange variation

Consolidated

	Maturity	Effective rate	dec/19	dec/18
Local currency			23,159	18,333
Sustainability	Jan/2025	5.96% p.a.	13,581	18,333
(a) Leasing from right of use			9,578	-
Foreign currency			1,460,822	1,388,590
(c) Senior Unsecured Notes - US\$350.000	Jul/2024	VC + 6.63% p.a.	1,445,782	1,388,590
(a) Leasing from right of use			15,040	-
Current portion			62,920	47,431
Non-current portion			1,421,061	1,359,492
		_	1,483,981	1,406,923

^{*}VC = Foreign exchange variation

In December 31, 2019, the Company is in compliance with the Covenant terms, as presented below.

a. Leasing from right of use

Impacts occurred from the adoption of IFRS 16 as of January 1, 2019. (note 2.6)

The table below shows the segregation of such obligation:

	Parent company	Consolidated
Current portion	2,179	11,960
Non-current portion	7,399	12,658
	9,578	24,618

b. Export prepayment - Tupy Overseas S.A.

The increase of R\$56,141 in the open amount reflects the lost in exchange variation. In January and july of 2019 the Parent Company paid an interest amount of R\$89,241 (R\$84,769 during the year of 2018).

c. Senior Unsecured Notes

In July 2014, the Company completed the issuance of bonds ("Issuance") in the international market, through its subsidiary Tupy Overseas S.A. These bonds are guaranteed by the Parent company and amount to US\$350,000 (R\$776,649), with single amortization in 2024. Interest, at the coupon of 6.625% p.a., are paid on a semiannual basis, in January and July, the payment during 2019 amouting of R\$86,481.

The loss registered by the impact of foreign exchange variations in 2019 amounting, R\$50,851 (R\$199,561 of loss in 2018).

The Issuance includes Covenants, the main financial indicator of which is the net debt/ adjusted EBITDA, and, in December 31, 2019, the Company is in compliance with the Covenant terms. In the case on non-compliance by the Company, they would result in prohibition to: (i) obtaining new borrowings; (ii) distributing dividends in excess of the minimum amount provided by law; (iii) making investments that are not related to the maintenance of production activities; and (iv) repurchasing shares issued by the Company.

Furthermore, the Issuance also includes non-financial Covenants. The main non-financial measure that could cause the early termination of the Issuance is the change in the Company's controlling interest in such a way that it decreases the external risk rating.

d. Fair value of borrowings

The fair value of the Company's borrowings (classified in Level 2 of the fair value hierarchy) is calculated through the discount of future flows of their payments at the curves, interest rates and currencies observable in the financial market. At December 31, 2019, the fair value of borrowings was R\$1,481,359 (R\$1,403,817 at December 31, 2018).

e. Long-term maturities

	Parent com	pany	Consolida	ted
Year	dec/19	dec/18	dec/19	dec/18
2020	705	4,233	705	4,233
2021-2023	17,085	6,839	17,085	6,839
2024	1,401,230	1,352,784	1,403,240	1,348,389
2025	31	31	31	31
	1,419,051	1,363,887	1,421,061	1,359,492

16. SALARIES, SOCIAL SECURITY CHARGES AND PROFIT SHARING

	Parent company		Consolida	ted
	dec/19	dec/18	dec/19	dec/18
Salaries	14,080	15,490	22,382	25,009
Provision for vacation pay and 13th month salary	53,139	47,026	61,797	56,233
Social charges	18,299	16,150	33,724	28,770
Profit sharing	42,722	45,565	49,686	53,094
Private pension plan	955	853	955	853
	129,195	125,084	168,544	163,959

The Company's profit-sharing program applies proportionately according to time in service and is based on financial and operating indicators and individual performance goals. The Company introduced an optional private pension plan for all employees in Brazil. It is a defined contribution plan, for which the amount contributed by the employee, limited to an established percentage on the payroll, is matched with the same amount by the Company.

17. RETIREMENT BENEFIT OBLIGATIONS

The operations in Mexico have defined benefit obligations. The purpose of these plans is to offer employees retirement benefits, in addition to and complementing those provided by other retirement or pension plans, whether public or private. In addition, the Mexican legislation also establishes other defined benefits such as age premium and legal indemnity.

Consolidated		
Obligations recorded in the balance sheet	dec/19	dec/18
Social security plan benefits		
Pension plan	12,834	10,669
Other employee benefits		
Seniority premium	8,132	5,918
Legal indemnity	23,103	16,378
	44.069	32.965

18. PROVISION FOR TAX, CIVIL, SOCIAL SECURITY AND LABOR CONTINGENCIES

The Company and the subsidiaries are a party to ongoing litigation arising in the normal course of its business and for which provisions (in the case of probable losses) were constituted based on estimates made by its legal counsel.

The changes in the provisions for tax, civil, social security and labor contingencies in the year ended December 31, 2019 and the related judicial deposits were as follows:

				Social	Judicial	
	Civil	Tax	Labor	security	deposits	Total
AT DECEMBER 31, 2017	46,827	68,068	52,921	17,002	(34,302)	150,516
Additions	2,606	6,938	2,964	-	(16,034)	(3,526)
Restatements	7,916	(2,085)	35,125	1,315	-	42,271
Payments	-	(12,616)	(26,161)	(399)	-	(39,176)
Deposit Redemption	-	-	-	-	15,314	15,314
AT DECEMBER 31, 2018	57,349	60,305	64,849	17,918	(36,174)	164,247
Additions	-	13,746	560	-	(27,059)	(12,753)
Restatements	5,855	(2,668)	41,128	191	-	44,506
Remuneration	-	-	-	-	(994)	(994)
Payments	(10,255)	(116)	(29,195)	(6,970)	-	(46,536)
Deposit Redemption	-	-	-	-	32,610	32,610
AT DECEMBER 31, 2019	52,949	71,267	77,342	11,139	(31,617)	181,080
Current						40,536
Non-current						140,544
						181.080

				Social	Judicial	
	Civil	Tax	Labor	security	deposits	Total
AT DECEMBER 31, 2017	46,827	68,078	53,053	17,002	(34,302)	150,658
Additions	2,617	6,927	2,964	-	(16,034)	(3,526)
Restatements	7,916	(2,084)	34,993	1,315	-	42,140
Remuneration	-	-	-	-	(1,152)	(1,152)
Payments	-	(12,616)	(26,161)	(399)	-	(39,176)
Deposit Redemption	=	-	-	-	15,314	15,314
AT DECEMBER 31, 2018	57,360	60,305	64,849	17,918	(36,174)	164,258
Additions	-	13,746	560	-	(27,059)	(12,753)
Restatements	7,159	(2,668)	41,128	191	-	45,810
Remuneration	-	-	-	-	(994)	(994)
Payments	(10,266)	(116)	(29,195)	(6,970)	-	(46,547)
Deposit Redemption	-	-	-	-	32,610	32,610
AT DECEMBER 31, 2019	54,253	71,267	77,342	11,139	(31,617)	182,384
Current						40,536
Non-current						141,848

Generally, the Company's provisions for contingencies are long-term provisions. Considering the formalities of the judicial and administrative proceedings in the Brazilian judicial system, there is difficulties in to making accurate estimates about limit of conclusion of those contingencies, and because of this the Company does not disclose the settlement flow of these liabilities.

The aforementioned provisions are adjusted mainly based on the Special System for Settlement and Custody (SELIC) rate and the General Market Price Index (IGPM).

a. Civil

Provisions for civil contingencies at December 31, 2019 amounted to R\$54,253. The residual amount is mainly related to attorney's fees in successful lawsuits.

b. Tax

Provisions related to tax administrative proceedings involving certain credits taken by the Company in the calculation of ICMS, PIS, COFINS, Corporate Income Tax (IRPJ) and social Contribution on Net Income (CSLL) and tax over intercompany operation.

The changes occurred during 2019, in addition to referring to adjusts. Considering also, the modification of the probability of loss of tax contingencies related to federal taxes. According with the position from the judges and payments occurred during 2019.

c. Labor

Lawsuits filed by former employees, by themselves or claimed by the Union of the category, in progress at the Labor Courts, claiming compensation and payroll charges allegedly owed by the Company.

d. Social security

Social security provisions relate to alleged debits resulting from differences between the social security contribution form (GFIP) and the respective payment (GPS). These differences arise from amounts challenged by the Company for which judicial deposits were made.

Contingencies involving possible losses

The contingencies involving a risk of loss deemed "possible", according to the assessment made by Management and the Company's outside legal counsel, are described in the table below.

	Parent com	Parent company		ted
	dec/19	dec/18	dec/19	dec/18
IRPJ and CSLL processes	173,961	164,765	174,333	165,133
PIS, COFINS and IPI credits	135,031	133,682	135,031	133,682
ICMS credits	163,417	137,632	163,417	137,632
Expired tax debts	143,750	144,520	143,750	144,520
Customs	-	59,661	-	59,661
Social security	81,457	80,368	81,457	80,368
Laborlawsuits	71,888	84,429	71,957	84,498
Civil and other	54,054	55,111	54,944	55,331
	823,558	860,168	824,889	860,825

Except when describe in a different way, all the variance between 2019 and 2018 periods are consequence of restatement of the amounts.

a. IRPJ and CSLL

Corporate Income Tax (IRPJ) and Social Contribution on Net Income (CSLL): administrative proceedings of 1994 and 2006 in which the Brazilian Federal Revenue Service challenges, respectively, the calculation of taxable income and the use of estimated IRPJ. The Company submitted a defense stating that the tax calculation was correct.

b. PIS and COFINS credits

Social Integration Program (PIS) and Social Contribution on Revenues (COFINS): Administrative and judicial proceedings in which the Brazilian Federal Revenue Service challenged the Company, in the most of the procedures, as to (i) the use of credits generated in the acquisition of inputs from 2004 to 2011; and (ii) appropriation of backdated tax credits. The Company submitted an administrative and a judicial defenses showing the eligibility for the use of credits in accordance with the applicable tax legislation.

c. ICMS credits

Administrative and legal proceeding filed by the tax authorities of the states of São Paulo and Santa Catarina for the years 2008 to 2019, in which the use of certain ICMS credits by the Mauá and Joinville plants are challenged. In all the cases, the Company has shown the eligibility for the use of credits in accordance with the applicable tax legislation.

d. Expired tax debts

Administrative and judicial tax demands made by the Federal Government related to alleged offsets of debits with IPI premium credit. In its defense, the Company claims that, in administrative and judicial form, the statute of limitation period of said debts has expired, in compliance with case law of higher courts.

e. Customs

Administrative proceeding filed in 2006 in which the Brazilian Federal Revenue Service requires from the Company a fine corresponding to the customs value of merchandise related to import of inputs. The Company was successful in this process and evidenced the merchandise listed in the tax assessment were not even addressed to the Company.

f. Social security

Administrative and legal proceedings filed by the Brazilian Federal Revenue Service for 1998 and 2008 concerning alleged debts related to social security contributions on payroll and owed by service providers (joint responsibility). In all the cases, the Company's defense has shown that the procedures adopted are in full compliance with tax legislation.

The variation, in addition to the effect of the monetary variation, refers to social security debts excluded from tax amnesty by the federal tax authorities.

g. Labor

Lawsuits filed by former employees and a former sales representative in progress at the Labor Courts, claiming compensation and payroll charges allegedly owed by the Company.

The variations were due to increase of new labor claims against the Company, from exchange of loss probability and reflecting the causes status and updates of contingence values.

h. Civil

In general, the civil lawsuits relate to controversies involving former suppliers of the Company's.

19. SHARE CAPITAL, CARRYING VALUE ADJUSTMENTS, RESERVES AND DIVIDENDS

a) Share capital

	dec/19		dec/18	
Share capital breakdown in number of shares	Number	%	Number	%
Controlling stockholders				
BNDES Participações S.A. – BNDESPAR	40,645,370	28.2%	40,645,370	28.2%
Caixa de Previdência dos Funcionários do Banco do Brasil – PREVI	37,314,154	25.9%	37,314,154	25.9%
Officers	86,274	0.1%	85,744	0.1%
Treasury stock	-	0.0%	13,527	0.0%
Non-controlling interests				
Other stockholders	66,131,702	45.8%	66,118,705	45.8%
Total outstanding shares	144,177,500	100.0%	144,177,500	100.0%

Authorized capital is limited to R\$ 1,200,000, represented by registered book-entry common shares with no par value.

The Company, its stockholders, management and members of the Statutory Audit Board are committed to resolve, through arbitration at the Market Arbitration Chamber, any dispute that may arise between them, relating to or originating, especially, from the application, validity, efficacy, interpretation, violation, and their effects, of the provisions of Brazilian Corporation Law, of the Company's bylaws, the regulations issued by the National Monetary Council, the Brazilian Central Bank and the Brazilian Securities Commission, as well as other regulations applicable to the functioning of capital markets in general, besides those comprised in the Regulations of the New Market, the Market Arbitration Chamber, the Sanctions Regulation and the Contract for Participation in the New Market.

b) Treasury stock

Common shares acquired to deliver to beneficiaries which exercise the option of the Stock Option Plan. This operation was carried out in accordance with rules approved by the Board of Directors at a meeting held on September 27, 2017. On this date it was defined that the repurchase program would be effective until December 28, 2018 and would be for the acquisition of up to 233,000 common shares.

	Value (R\$ thousand)	Quantity	Share value (R\$)
AT DECEMBER 31, 2017	-	-	
Shares repurchase (i)	1,809	89,898	20.12
Shares used ofr stock option plan (ii)	(1,517)	(76,371)	19.86
AT DECEMBER 31, 2018	292	13,527	21.56
Shares used ofr stock option plan (ii)	(292)	(13,527)	21.56
AT DECEMBER 31, 2019	-	-	-

- (i) Corresponds to repurchases made in the period in order to deliver common shares to Long-Term Incentive Plan (ILP) beneficiaries. The repurchases were made in accordance with rules approved by the Board of Directors, whose lowest and highest prices were R\$18.85 and R\$21.58, respectively.
- (ii) Shares used in the granting exercise provided for in the "Program for granting stock options".

As of December 31, 2018, the market value of treasury shares was R\$292.

c) Stock option plan

The Company has two stock option plans. The long term incentive plan mainly purpose are (i) to ensure the competitiveness of the levels of total remuneration practiced; (ii) to support the alignment of the beneficiaries' interests with those of the Company's shareholders, (ii) to motivate and recognize the participants, (iii) to increase the levels of commitment of the

executives with the generation of sustainable results; and (iv) reinforcing the retention power of the Company's main leaders.

2014 a 2018 plan:

On November 24, 2014, the Annual General Meeting approved the stock option plan to the Company's statutory board members and the current Chairman of the Board of Directors (Beneficiaries), as Long-Term Incentive Plan (ILP).

The options are granted to the Beneficiaries at a purchase or exercise price equivalent to the average price quotations at Stock Exchanges (weighted by the volume) of the last 30 days prior to the option-granting date.

The Beneficiaries will be able to exercise their options three years after the granting date (vesting period). The stock options (i) will be exercised on a progressive basis, that is: 33% in the third year, 33% in the fourth year and 34% in the fifth year, and (ii) must be exercised in up to eight months after acquisition of each exercise right or by no later than December 31 (or the previous business day, in case December 31 falls on a non-business day), in the year when the right was acquired, whichever comes first (Exercise Term). In case of restrictions regarding the trading of the Company's shares during the Exercise Term, the final date of the Exercise Term will be postponed for the same number of days of the restriction.

All beneficiaries have been exercised their options during the period of exercise. In order to meet the exercise of the options, the Company has opened a share repurchase program to settle such obligation.

		!	Shares quantities		
	Granted option	Exercised options	Canceled Options(*)	Share option in market	Share option to exercise
(a) Granted in 04/11/2014	738,668	(693,637)	(45,031)	-	-
(b) Granted in 04/11/2014	123,327	(123,327)	-	-	-
(a) Granted in 04/11/2015	788,060	(550,649)	-	237,411	-
(a) Granted in 04/11/2016	737,416	(275,378)	-	462,038	-
AT DECEMBER 31, 2019	2,387,471	(1,642,991)	(45,031)	699,449	-

^(*) The canceled options refers to granted options to beneficiaries resigned

- (a) Annual program.
- (b) Additional program.

2019 a 2022 plan:

In April 2019, the General Meeting approved the stock option plan at the level of the president, vice-president or director of the Company (Beneficiaries), provided that certain performance and permanence conditions, such as Long Term Incentives (ILP), are met.

The number of units granted will be the result between the gross amount in Real converted by the average of quotations on the Stock Exchange (weighted by volume) for the month of March prior to the concession.

The number of units to be effectively converted into Shares held by the beneficiary at the end of the grace period (3 years) will depend on two performance criteria:

Absolute: 50% of the units, based on the Company's real TSR, that is, incremental to the IPCA;

Relative: 50% of the units, is based on the Company's TSR compared to a group of selected companies.

The Beneficiaries will be entitled to the shares granted to them, after 3 years from the granting date (Vesting), observing the fulfillment of the above criteria.

	Shares quantities				
	Granted option	Exercised options	Canceled Options(*)	Share option in market	Share option to exercise
(a) Granted in 04/11/2019	288,029	-	-	288,029	-
AT DECEMBER 31, 2019	288,029	-	-	288,029 -	

d) Carrying value adjustments

The remaining balance of the "Carrying value adjustment" account refers to the effects arising from translating the balance of subsidiaries operating with a functional currency other than the currency in which these financial statements are presented, as disclosed in Note 2.3 and the impacts reported in note 12, with the result of the net investment hedge. (note 31 b)

Includes the balance of asset revaluations made in 1990 for the Land and buildings accounts and, in 2005, for the Machinery and equipment account, with residual balance at December 31, 2019 amounting to R\$10,279 (R\$10,712 in 2018) and R\$22,850 (R\$31,106 in 2018), respectively, which were included as an integral part of the costs of the assets. Realization against the Retained earnings account is proportional to the corresponding assets' depreciation, when applicable.

e) Revenue reserves

Legal reserve

The reserve is recorded at the rate of 5% of the net income for each year, in compliance with Article 193 of Law 6,404/76, up to the limit of 20% of the capital.

Investment reserve

This reserve is recorded in an amount not less than 5% of annual profit, up to the limit of 50% of capital. The balance, together with the other revenue reserves, except for those relating to contingencies, tax incentives and unrealized profits, cannot exceed the amount of capital.

Investment re	serve				
	Constitution	Distribution	Capital increase	Balance	Expansion (*)
2007	46,963	-	-	46,963	-
2008	131,295	-	-	178,258	79,864
2009	98,886	-	-	277,144	65,776
2010	97,440	-	-	374,584	61,080
2011	125,014	-	-	499,598	135,133
2012	48,220	-	(138,656)	409,162	109,035
2013	71,646	-	-	480,808	93,427
2014	73,887	-	-	554,695	84,364
2015	118,151	-	-	672,846	42,931
2016	(169,375)	(100,358)	-	403,113	20,046
2017	156,651	(200,000)	-	359,764	36,052
2018	268,948	(162,500)	-	466,212	43,200
2019	275,455	(125,000)	-	616,667	130,083
	·		·	616,667	900,991

 $(*) \ Refer to \ strategic \ investment \ in \ property, \ plant \ and \ equipment \ for \ expansion \ of \ the \ production \ capacity.$

f) Allocation of profits

Stockholders are entitled to receive a minimum dividend of 25% of the net income for the year, according Company's by-laws, adjusted in accordance with the provisions of Article 202 of Law 6,406/76.

In 2019, R\$275,455 was allocated to the investments reserve account (R\$268,948 in 2018), incorporating the base used for the distribution of dividends from 2019.

The distributions made in 2019 and 2018 were supported by profit reserves of the subgroup of investment reserves, and were allocated to the minimum dividend in accordance with the Company's by-laws in the form of art. 202 of Law 6404/76. The values distributed are greater than the mandatory minimum dividend.

The amounts of dividends and interest on capital distributed to shareholders during 2019 and 2018, or liabilities constituted at the end of each year, were approved by the Company's Board of Directors at meetings as described below

The following tables present the form used (Interest on Equity - JCP or Dividends), the dates of the Board of Directors' deliberations, the dates of payments, the gross and net values of IRRF and the values per share.

Dividend calculation table for the 2019 and 2018 dividends:

Dividends of 2019

Approved

	dec/19	dec/18
Dividend calculation basis		
Investment reserve	466,212	359,764
Net income for the year	278,932	271,721
Equity valuation adjustment	8,689	9,649
Reverse of the share option	1,781	1,164
Transfer to the legal reserve (5%)	(13,947)	(13,586)
	741,667	628,712
Proposal for allocation (*)		
Interet on capital, gross	100,000	103,377
Dividends	25,000	59,123
	125,000	162,500
		Ordinary
Unit amount per share		
Interet on capital, gross	0.86699	1.12708
	0.86699	1.12708

The approvals and the payments of dividend occurred in 2019 and 2018 as follow:

Form

Approved	1 01111	0.000	PC.		. ayınıcını
date		amount	share	amount	date
03.14.2019	Interes on capital	100,000	0.69359	90,233	03.28.2019
05.14.2019	Dividends	25,000	0.17340	25,000	06.18.2019
		125,000	0.86699	115,233	
Dividends of	2018				
Approved	Form	Gross	per	Net	Payment
date		amount	share	amount	date
03.13.2018	Interes on capital	37,500	0.26010	34,275	05.25.2018
03.13.2018	Interes on capital	37,500	0.26010	34,154	08.24.2018
03.13.2018	Interes on capital	28,377	0.19682	25,586	11.26.2018
03.13.2018	Dividends	9,123	0.06328	9,123	11.26.2018
11.07.2018	Dividends	12,500	0.08670	12,500	11.26.2018
03.14.2019	Dividends	37,500	0.26010	37,500	03.28.2019
•	·	162,500	1.12708	153,138	

Gross

Pavment

20. REVENUES

The reconciliation between gross and net revenues for the year is as follows:

	2019	2018	2019	2018
Gross revenue	3,118,907	2,833,104	5,544,622	5,169,866
Returns and rebates	(38,835)	(33,419)	(125,171)	(110,192)
Revenue net of returns and rebates	3,080,072	2,799,685	5,419,451	5,059,674
Sales taxes	(255,866)	(231,458)	(255,866)	(231,458)
Net revenue	2,824,206	2,568,227	5,163,585	4,828,216
Net revenue				
Domestic market	932,396	832,714	932,396	832,714
Foreign market	1,891,810	1,735,513	4,231,189	3,995,502
	2,824,206	2,568,227	5,163,585	4,828,216

Since June 2018, with the reduction of the rate of Reintegra, from 2% to 0.10% over the amount of revenues from exports. During January to June of 2018 the Company recognize the amounting of R\$12,679.

21. COSTS AND EXPENSES BY NATURE

The breakdown of costs and expenses by nature, reconciled with costs and expenses by function presented in the statement of income for the year, is as follows:

	Parent company		Consolidated	
	2019	2018	2019	2018
Raw and processing materials	(1,208,896)	(1,132,049)	(2,358,982)	(2,285,661)
Maintenance and consumption materials	(190,237)	(173,533)	(434,411)	(384,441)
Salaries, payroll taxes and profit sharing	(622,232)	(567,425)	(1,078,461)	(929,703)
Social benefits	(82,190)	(90,878)	(83,614)	(92,167)
Electricity	(132,868)	(115,451)	(246,470)	(220,804)
Freight and commission on sales	(81,861)	(80,266)	(155,976)	(135,028)
Management fees	(10,167)	(10,785)	(10,167)	(10,785)
Other costs	(24,083)	(30,685)	(95,360)	(92,562)
	(2,352,534)	(2,201,072)	(4,463,441)	(4,151,151)
Depreciation	(139,924)	(137,915)	(262,364)	(229,583)
Costs and expenses total	(2,492,458)	(2,338,987)	(4,725,805)	(4,380,734)
Cost of products sold	(2,231,237)	(2,093,923)	(4,328,633)	(4,032,290)
Selling expenses	(114,622)	(112,267)	(208,698)	(185,599)
Administrative expenses	(136,432)	(122,012)	(178,307)	(152,060)
Management fees	(10,167)	(10,785)	(10,167)	(10,785)
Costs and expenses total	(2,492,458)	(2,338,987)	(4,725,805)	(4,380,734)

Since September 2018, the Company is adopting the procedure established in Law 13,670/18, which provides for the reoneration of payroll. The approximate impact in during January to august of 2018 related to this adoption is R\$45,863.

22. FINANCE RESULT

	Parent company		Consolidated		
Finance results	2019	2018	2019	2018	
Financial liabilities at amortized cost	(95,775)	(97,946)	(93,883)	(95,991)	
Borrowing	(95,610)	(97,659)	(93,718)	(95,704)	
Notes payable and other financial liabilities	(165)	(287)	(165)	(287)	
Financial assets at fair value through profit or loss	-	(813)	-	(813)	
IPI - premium credit (note 8)	-	(813)	-	(813)	
Other finance costs	(20,160)	(13,098)	(26,296)	(17,517)	
Finance costs	(115,935)	(111,857)	(120,179)	(114,321)	
Financial assets at fair value through profit or loss	54,285	45,277	54,285	45,277	
Credits - Eletrobrás	53,645	44,930	53,645	44,930	
Investments in equity instruments	640	347	640	347	
Amortized cost	12,947	19,849	12,947	19,849	
Cash and cash equivalents	12,947	19,849	12,947	19,849	
Tax credits and other finance income	18,575	20,324	22,854	24,515	
Finance income	85,807	85,450	90,086	89,641	
Derivative financial instruments					
Foreign exchange variations	6,778	13,925	(12,411)	12,576	
Derivative financial instruments	17,712	(5,462)	24,483	(511)	
Foreign exchange variations, net	24,490	8,463	12,072	12,065	
Finance results	(5,638)	(17,944)	(18,021)	(12,615)	

23. OTHER OPERATING INCOME (EXPENSES)

	Parent company		Consolid	ated
	2019	2018	2019	2018
Impairment ICMS SC tax (note 7)	45,567	(45,567)	45,567	(45,567)
Exclusion of ICMS from the PIS and COFINS calculation base	36,827	-	36,827	-
Recognition of Reintegra	27,952	8,582	27,952	8,582
Disposals of property, plant and equipment	(2,336)	(894)	(2,858)	(6,976)
Constitution and restatement of provision	(58,812)	(54,779)	(60,116)	(54,648)
Atualization of amounts receivable Eletrobrás (note 10)	-	128,736	-	128,736
Adjust of amounts receivable Eletrobrás (note 10)	-	(104,862)	-	(104,862)
Recognition of extemporaneous credits PIS / COFINS (note 7)	-	50,245	-	50,245
Impairment 1988/1990 IPI premium credit (note 7)	-	(30,126)	-	(30,126)
Result on the sale of unusable and other assets	(15,533)	(20,011)	(18,470)	(6,820)
	33,665	(68,676)	28,902	(61,436)
Depreciation of non-operating assets	(816)	(725)	(819)	(728)
Amortization of intangible assets	-	-	(62,868)	(49,066)
Total other operating expenses, net	32,849	(69,401)	(34,785)	(111,230)
Fixed assets impairment	(920)	-	(920)	-
Intangible asset impairment (note 15)	-	-	(45,484)	33,631
Total impairment adjustments	(920)	-	(46,404)	33,631

24. INCOME TAX AND SOCIAL CONTRIBUTION IN THE RESULTS

	Parent company		Consolidated	
	2019	2018	2019	2018
Net income (loss) before tax effects	362,870	296,716	338,570	357,268
Statutory tax rate	34%	34%	34%	34%
Expenses at statutory rate	(123,376)	(100,883)	(115,114)	(121,471)
Tax effect of permanent (additions) exclusions:				
Interests on capital	34,000	35,148	34,000	35,148
Reintegra – benefit	-	-	(2,139)	(2,563)
Additional income tax (Services Companies – Mexico)	10,142	4,665	10,142	4,665
Share of results of subsidiaries	(277)	(247)	(277)	(247)
Finance income from monetary assets	-	-	7,766	2,496
Additional income tax (Subsidiaries)	-	-	(1,819)	1,345
Effect of correction of fixed assets	-	-	(13,882)	(14,493)
Depreciation of non-operating assets	1,643	52,639	-	-
Other permanent (additions) exclusions	-	(12,511)	-	-
Effects of different rates in subsidiaries	(6,070)	(3,806)	6,467	3,249
Tax effects recorded in the statement of income before exchange effects	(83,938)	(24,995)	(74,856)	(91,871)
	/		/	
Effective rate of income tax before exchange effects	23%	8%	22%	26%
Effect of functional currency on tax base (a)	-	-	15,218	6,324
Tax effects recorded in the statement of income	(83,938)	(24,995)	(59,638)	(85,547)
Effective rate of income tax	23%	8%	18%	24%

a) Effect of the functional currency on tax base

The tax bases of the assets and liabilities of the companies located in Mexico, where the functional currency is the U.S. dollar, are maintained at their historical amounts, in Mexican pesos. Because the changes in the foreign exchange rates impact the tax bases, the foreign exchange effects are recognized as "Deferred tax income and/or expenses".

b) Composition of the tax effects recorded in the statement of income:

	Parent co	mpany	Consolidated	
	2019	2018	2019	2018
Tax effects recorded in the statement of income				
Current income tax and social contribution	(34,291)	(13,768)	(91,916)	(85,420)
Deferred income tax and social contribution	(49,647)	(11,227)	32,278	(127)
	(83,938)	(24,995)	(59,638)	(85,547)

25. EARNINGS PER SHARE

a) Basic:

Basic earnings per share is calculated by dividing profit or loss attributable to ordinary equity holders by the weighted average number of ordinary shares outstanding during the period.

	2019	2018
Profit attributable to the stockholders of the Company	278,932	271,721
Outstanding shares	144,177,500	144,177,500
Basic earnings per share - R\$	1.93464	1.88463

b) Diluted:

Diluted earnings per share is measured by the weighted average number of ordinary shares outstanding, with the addition of the weighted average number of ordinary shares that would be issued on conversion of all the dilutive potential ordinary shares. The Company issue a potential convertible stock option plan.

The number of ordinary shares that would be issued is determined from fair value, based on market price.

	2019	2018
Profit attributable to the stockholders of the Company	278,932	271,721
Outstanding shares	144,607,278	144,622,019
Diluted earnings per share - R\$	1.92889	1.87884

26. SEGMENT REPORTING

The Company discloses information by operating segment based on the information reported to management and utilized in decision-making, in order to allocate funds to the segments and to assess their performance, as described below:

<u>Transportation, infrastructure & agriculture</u> - manufacture, to order, of cast and machined products, with significant technological content, such as powertrain (blocks and cylinder heads), brake, transmission, steering, axle and suspension components for global manufacturers of engines, passenger vehicles, commercial vehicles (trucks, buses, etc.), construction machines, tractors, agricultural machines and power generators.

<u>Hydraulics</u> - manufacture of flexible iron connections for the construction industry and cast-iron shapes for general use

The following is the information on each reported segment:

a) Reconciliation of revenues, costs and expenses and profit (loss)

Tranportation, infrastructure							
Consolidated	& agriculture		Hydraulics		Total		
	2019	2018	2019	2018	2019	2018	
Net revenue (Note 17)	4,922,909	4,596,221	240,676	231,995	5,163,585	4,828,216	
Costs and expenses, except depreciation (Note 18)	(4,248,771)	(3,935,951)	(214,670)	(215,200)	(4,463,441)	(4,151,151)	
Other operating expenses, net, except amortization of							
intangible assets and depreciation (Note 20)	27,540	(58,303)	1,362	(3,133)	28,902	(61,436)	
Depreciation and amortization	(318,058)	(271,150)	(7,993)	(8,227)	(326,051)	(279,377)	
Impairment (note 14)	(46,404)	33,631	-	-	(46,404)	33,631	
Profit before finance results	337,216	364,448	19,375	5,435	356,591	369,883	
Finance results (Note 19)					(18,021)	(12,615)	
Profit before taxation					338,570	357,268	
Income tax and social contribution (Note 21)					(59,638)	(85,547)	
Profit for the period					278,932	271,721	

b) Reconciliation of costs and expenses by segment

Tranportation, infrastructure							
Consolidated	& agriculture		Hydrau	lics	Total		
	2019	2018	2019	2018	2019	2018	
Raw and processing materials	(2,258,035)	(2,184,200)	(100,947)	(101,461)	(2,358,982)	(2,285,661)	
Maintenance and consumption materials	(421,384)	(370,385)	(13,027)	(14,056)	(434,411)	(384,441)	
Salaries and payroll taxes	(1,017,062)	(871,007)	(61,399)	(58,696)	(1,078,461)	(929,703)	
Social benefits	(81,705)	(90,196)	(1,909)	(1,971)	(83,614)	(92,167)	
Electricity	(230,935)	(204,456)	(15,535)	(16,348)	(246,470)	(220,804)	
Depreciation	(254,371)	(221,356)	(7,993)	(8,227)	(262,364)	(229,583)	
Freight and commissions on sales	(138,892)	(117,961)	(17,084)	(17,067)	(155,976)	(135,028)	
Management fees	(9,304)	(9,881)	(863)	(904)	(10,167)	(10,785)	
Other costs	(91,453)	(87,865)	(3,907)	(4,697)	(95,360)	(92,562)	
	(4,503,142)	(4,157,307)	(222,663)	(223,427)	(4,725,805)	(4,380,734)	

c) Reconciliation of assets and liabilities

Tranportation, infrastructure						
Consolidated	& agricul	lture	Hydrauli	cs	Tota	
ASSETS	dec/19	dec/18	dec/19	dec/18	dec/19	dec/18
Trade account receivables (Note 4)	632,258	649,134	40,098	39,361	672,356	688,495
Inventories (Note 5)	593,900	463,688	60,207	59,935	654,107	523,623
Tooling	141,128	162,445	-	-	141,128	162,445
Notes and other receivables	54,108	49,371	5,004	2,754	59,112	52,125
Property, plant and equipment (Note 13)	1,578,106	1,499,084	56,230	58,208	1,634,336	1,557,292
Intangible assets (Note 14)	201,560	304,837	-	-	201,560	304,837
Other assets not allocated	-	-	-	-	1,761,568	1,619,374
Total assets	3,201,060	3,128,559	161,539	160,258	5,124,167	4,908,191

Tranportation, infrastructure						
Consolidated	& agricul	ture	Hydrauli	cs	Total	l
LIABILITIES	dec/19	dec/18	dec/19	dec/18	dec/19	dec/18
Trade accounts payables	602,126	591,463	25,439	29,829	627,565	621,292
Income taxes payable	52,469	29,703	792	309	53,261	30,012
Salaries, social security charges and profit sharing (Note 16)	158,208	153,952	10,336	10,007	168,544	163,959
Advances from customers	119,230	146,685	2,457	13,039	121,687	159,724
Notes and other payables	42,043	71,013	3,586	6,513	45,629	77,526
Deferred tax on intangible assets (Note 8)	31,326	61,760	-	-	31,326	61,760
Income and social contribution tax	6,162	8,992	-	-	6,162	8,992
Other liabilities not allocated	-	-	-	-	1,682,590	1,584,963
Equity (Note 19)	-	-	-	-	2,387,403	2,199,963
Total liabilities and equity	1,011,564	1,063,568	42,610	59,697	5,124,167	4,908,191

Segment specific assets and liabilities are allocated directly to each segment, and criteria relating to applicability and origin are used for common assets and liabilities. The Company does not allocate cash and cash equivalents, recoverable and deferred taxes, judicial and other deposits, and investments in companies to the reporting segments, as they are not directly related to the operations. For the same reason, borrowing, dividends, provisions, deferred taxes and other long-term liabilities are also not allocated to the segments.

d) Major customers accounting for over 10% of the Company's total revenues

The Company has a diversified portfolio of local and foreign customers. The transportation, infrastructure & agriculture segment has customers that individually account for more than 10% of consolidated revenues, as follows:

Consolidated				
Revenue	2019	%	2018	%
Tranportation, infrastructure & agriculture	4,922,909	95.3	4,596,221	95.2
Customer A	1,095,656	21.2	934,656	19.4
Customer B	876,698	17.0	776,276	16.1
Other customers	2,950,555	57.1	2,885,289	59.8
Hydraulics	240,676	4.7	231,995	4.8
Total Revenue	5,163,585	100	4,828,216	100

The sales in the Hydraulics segment are diversified.

e) Information on the countries from which the Company derives revenue

The revenue derived from customers in Brazil and from customers in each foreign country, and their respective shares in the Company's total revenue for the year, are as follow:

Consolidated				
	2019	%	2018	%
North America	3,286,896	63.6	3,078,749	63.7
United States	1,710,383	33.1	1,569,619	32.5
Mexico	1,540,210	29.8	1,460,137	30.2
Canada	36,303	0.7	48,993	1.0
South and Central Americas	967,239	18.8	866,779	17.9
Brazil - head office	932,396	18.1	832,714	17.2
Other countries	34,843	0.7	34,065	0.7
Europe	620,022	12.0	599,790	12.4
United Kingdom	310,938	6.0	273,919	5.7
Hungary	94,111	1.8	77,120	1.6
Italy	52,267	1.0	61,111	1.3
Netherlands	64,571	1.3	50,659	1.0
Sweden	47,921	0.9	44,287	0.9
Germany	18,167	0.4	20,052	0.4
Other countries	32,047	0.6	72,642	1.5
Asia, Africa and Oceania	289,428	5.6	282,898	6.0
South Africa	89,386	1.7	103,593	2.1
Thailand	62,507	1.2	66,876	1.4
Japan	76,858	1.5	58,169	1.2
China	43,986	0.9	34,138	0.7
Other countries	16,691	0.3	20,122	0.6
Total	5,163,585	100.0	4,828,216	100.0

f) Non-Current Assets

Noncurrent assets in this case correspond to investments in equity instruments, investment properties, property, plant and equipment and intangible assets and their participation in the Company's noncurrent assets for the year are as follows:

Non-Circulant Assets	2019	2018
Brazil - head office	913.146	1.048.466
Mexico	938.299	828.266
Other countries(*)	275	63
Total	1.851.720	1.876.795

(*) United States and Germany

27. NON-CASH TRANSACTIONS

The Company carried out investment transactions that did not affect cash and which, therefore, were not recorded in the statement of cash flows. These transactions totals R\$17,705 at December 31, 2019 (R\$22,576 at December 31, 2018).

28. INSURANCE COVERAGE

The Company contracts insurance taking into account the nature and level of risks involved, according to the guidance of its insurance advisors, and at amounts considered adequate by management.

The sufficiency of insurance coverage is the responsibility of the Company's Management, which considers it adequate to cover eventual claims.

The covered risks include the following items and corresponding amounts:

	dec/19	dec/18
Buildings	495,274	476,681
Machinery and equipment, furniture and fittings	3,312,640	2,983,952
Inventories	308,439	339,423
Loss of profit	1,026,409	822,441
General civil liability	185,921	181,244
Civil liability - management	64,031	63,875

29. COMMITTMENTS

The Company has commitments for the acquisition of long-lived assets, that is, expenditure contracted at the reporting date but not yet incurred, in the consolidated amount of R\$37,236 (R\$50,173 at December 31, 2018), which will be settled with its own resources.

30. FINANCIAL INSTRUMENTS

		Parent company		Consolidated	
	Note	dec/19	dec/18	dec/19	dec/18
Loans and receivables		874,845	724,466	1,613,759	1,495,524
Cash and cash equivalents	3	362,600	328,350	840,030	713,733
Trade account receivables(*)	4	422,012	329,043	672,356	688,495
Notes and other financial assets		90,233	67,073	101,373	93,296
Effect on the Income Statement		12,940	19,808	13,280	20,473
Financial assets at fair value through profit or loss		157,213	179,544	166,361	190,089
Credits - Eletrobrás		152,149	170,974	152,149	170,974
Investments in equity instruments		2,429	1,789	9,461	8,303
Derivative financial instruments	31	2,635	6,781	4,751	10,812
Effect on the Income Statement		74,228	56,089	80,842	63,509
Financial liabilities at amortized cost		1,792,701	1,865,734	2,160,657	2,148,158
Trade accounts payables		276,374	260,607	627,565	621,292
Loans and financing	15	1,474,646	1,413,679	1,483,981	1,406,923
Dividends and interest on capital		191	37,624	191	37,624
Notes payable and other financial liabilities		41,490	153,824	48,920	82,319
Effect on the Income Statement		(95,775)	(97,946)	(93,883)	(95,991)

^(*) Includes the provision for impaired receivables

31. DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGE OF NET INVESTMENT ABROAD

a) Derivative financial instruments

In order to minimize the impact of exchange rate on cash flow and financial results, the Company contracts derivative financial instruments. The financial instrument used by the Company are (i) ZCC zero-cost collar, which consists of purchasing a "PUT" option and the sale of a "CALL" option. Those operations have the same notional value, same counterparty, same maturity and there is no net premium, (ii) sale off NDF non deliverable forward, which consists of the future sale of currency at a predefined rate and, (iii) purchasing the sale option "PUT". The fair value of this instrument is determined by observable market pricing model (through market information providers) and widely used by market participants to measure similar instruments.

i. Parent company

On January 31, 2019, regarding of exchange rate projections against the Company's budget and political / economic scenario, the parent company settled in advance all of its derivative instruments in the zero-cost collar modality, in the amount of US\$128,400, which had average exercise price: PUT of R\$3.8077 and CALL of R\$4.3450, obtaining in the early

settlement received net adjustments of R\$20,466. Beginning in February 2019, the parent company began to recompose the derivatives portfolio to levels closer to the exchange projections of the Focus Market Report for the year 2019.

On December 31, 2019, financial instruments totaled the amount of US\$82,000 in zero-cost collar operations, consisting of: purchase of PUT with average exercise price of R\$3.9134 and sales of CALL with average price average of R\$4.6010, maturing up to November 16, 2020.

During 2019, the Company recognized in financial results as net gain of R\$17,712, of which R\$21,858 was received from settlement of contracts in the period and a loss of R\$4,146 due to the mark-to-market of these instruments.

ii. Subsidiaries

At December 31, 2019, the Subsidiaries derivative financial instruments amouting US\$30,000. The financial instruments in operations of zero-cost collar which were made purchasing the sale option "PUT" with an average weighted price of exercise of MXN19.1683 and sales "CALL" with an average weighted price of exercise of MXN21.7334, due December 11, 2020.

On December 31, 2019, the Mexican subsidiaries recognized in their finance results as net profit the amount of R\$6,711. Considering, gain of R\$8,552 from the settlement of contracts in the period (obtaining in the early settlement received net adjustments of R\$7,089 in March 20, 2019 amounting of US\$81,000, which had average exercise price: PUT of MXN19.3451 and CALL of MXN22.6584); loss R\$1,755 due to the mark to market of these instruments and loss in the amount of R\$26 from the exchange variation.

The financial derivative instruments net position is presented as follow:

	Parent con	Parent company		Consolidated	
	dec/19	dec/18	dec/19	dec/18	
Current liabilities					
Financial derivative instruments	-	-	-	(160)	
Financial derivative instruments	-	-	-	(160)	
Current assets					
Financial derivative instruments	2,635	6,781	4,751	10,812	
Financial derivative instruments	2,635	6,781	4,751	10,812	
Financial derivative instruments, net	2,635	6,781	4,751	10,652	

In the period ended December 31, 2019, net income of R\$24,483 was recognized in the Consolidated financial result, with R\$30,410 from the settlement of contracts in the period, loss of R\$5,901 for the mark-to-market of these instruments and loss of R\$26 for the exchange variation.

b) Hedges of net investments abroad

With the objective of mitigating the effects of foreign exchange volatility on the results, the Company started adopting the hedge of net investment abroad (net investment hedge) on January 10, 2014.

On July 22, 2014, the Company designated the export prepayment contract - Tupy Overseas S.A. (Note 15), amounting to US\$349,000, equivalent to R\$772,302, as a hedging instrument for the investments in subsidiaries in Mexico.

At December 31, 2019, the Company has export prepayment contracts amounting to US\$349,000, equivalent to R\$1,406,714, designated as hedging instruments for the investments in subsidiaries in Mexico, Tupy México Saltillo, S.A. de C.V. and Technocast, S.A. de C.V., whose functional currency is the U.S. dollar and whose net assets amount to US\$378,557, equivalent to R\$1,525,850, representing a 92.2% effectiveness.

In the year ended December 31, 2019, the Company recognized a gross loss of R\$54,408 in "Carrying value adjustments", in equity. This loss results from the foreign currency translation of the export prepayment contracts designated as hedging instruments.

32. FINANCIAL RISK MANAGEMENT

The Company has a financial management policy and internal procedures monitored by Risk and internal controlling area, which determines practices to identify, monitoring and controlling the exposure to financial risk.

32.1 Credit risk

Credit risk arises from cash and cash equivalents, derivative financial instruments and financial investments, as well from credit exposure to customers, including outstanding trade receivables.

The Company sets exposure limits for each customer to limit the credit risk on trade receivables and risks are managed according to specific credit rating criteria, which include an analysis of customers in based on their payment ability, indebtedness level, market behavior and history with the Company. Furthermore, the Company carries out quantitative and qualitative analyses of its portfolio of trade receivables in order to determine the provision for expecting losses on receivables. As at December 31, 2019, estimated losses on trade receivables amounted to R\$1,389 (R\$1,941 as at December 31, 2018), representing 0.2% of the consolidated balance of outstanding receivables at that date (0.3% as at December 31, 2018).

The Company does not hold any credit guarantee to cover credit risks related to its financial assets.

Credit quality of financial assets

The credit quality of financial assets is assessed by reference to external credit ratings (if available) or based on historical information about counterparty default rates:

	Parent com	Parent company		ted
	dec/19	dec/18	dec/19	dec/18
Counterparties with external credit ratings*				
Cash and cash equivalents	362,600	328,350	840,030	713,733
AAA	15,447	41,217	97,105	50,233
AA+ / AA / AA-	319,380	243,938	487,023	445,010
A+ / A / A-	27,773	43,195	255,902	218,400
Outros	-	-	-	90
Derivative financial	2,635	6,781	4,751	10,812
AA+ / AA / AA-	2,635	6,781	4,751	10,812
Credits - Eletrobrás	152,149	170,974	152,149	170,974
AA	152,149	170,974	152,149	170,974
Counterparties without external credit rating				
Trade receivables	422,012	329,043	672,356	688,495
Low risk	400,680	319,585	638,795	672,140
Moderate risk	21,204	9,160	22,393	16,057
High risk	128	298	11,168	298

^(*) The Company considers, for the classification of risk, the lowest rating between the rating agencies.

The risk assessment of trade receivables is as follows:

Other financial assets

Total

- Low risk automotive segment customers, except those customers with a history of losses.
- Moderate risk hydraulics segment customers, except those who already have a history of losses.

92,662

1,032,058

68,862

904.010

110,834

1,780,120

101,599

1,685,613

High risk - customers with provisioned balances and historical losses.

The other financial assets held by the Company are considered of high quality and do not present indications of losses.

32.2 Liquidity risk

Liquidity risk is the risk that the Company will have difficulty complying with its obligations associated with financial liabilities that are to be settled in cash or other financial assets. The Company's approach to managing this risk is the maintenance of a minimum cash.

The Company is a counterparty to some financial agreements, which require the maintenance of financial ratios, or compliance with other specific clauses. The main operation, the Senior Unsecured Notes issued in 2014 require the Company to meet the Financial Debt / EBITDA financial index, if not complied with, may impose restrictions, which are detailed in note 15.

Conform is determined in the financial management policy, which aims at ensuring that the Company has sufficient liquidity to settle its obligations without incurring losses or affecting its operations. This minimum cash amount corresponds to the projection of two-month of payments to trade accounts, salaries and social security, deducted 50% discount, plus the balance of the short-term borrowing, net of derivative instruments. Moreover, the Company manages its investment portfolio using criteria for maximum concentration in financial institutions, in addition to global and local ratings.

The contractual maturities of financial liabilities are as follow:

Consolidated	Contractual cash flow					
	6 months or	6 to 12				
FINANCIAL LIABILITIES	less	months	1 to 2 years	2 to 5 years	Over 5 years	Total flow
Borrowings	49,466	49,397	97,814	1,696,222	37	1,892,936
Trade payables and notes and other payables	673,194	-	-	-	-	673,194
Dividends payable	191	-	-	-	-	191
	722,851	49,397	97,814	1,696,222	37	2,566,321

The Company does not expect that the cash outflows, included in its maturity analyses, will occur significantly sooner or at amounts which are significantly different. Furthermore, the Company generates sufficient cash to cover future payment obligations.

32.3 Market risk

The Brazilian Federal Government's economic policies can have important effects on Brazilian companies, including on Tupy, as well as market conditions and the prices of securities of Brazilian companies. Considering the nature of the Company's business and operations, the main market risk factors to which it is exposed are related to: Exchange Rate, Interest Rate, Inflation in the main inputs, Credit Risk and Liquidity Risk. The objective of market risk management is to maintain exposure to market risks within acceptable levels, while optimizing returns.

Interest rate risk

This risk refers to the Company's financial investments and borrowing. The financial instruments with floating rates expose the Company to cash flow variation risk, whereas the financial instruments with fixed rates expose the Company to fair value risk. The Company uses derivative financial instruments, as follow:

Consolidated			
	Note	dec/19	dec/18
Floating-rate instruments		333,052	282,751
Financial assets		333,052	282,751
Fixed-rate instruments		(977,003)	(978,396)
Financial assets		506,978	428,527
Financial liabilities	15	(1,483,981)	(1,406,923)

Sensitivity analysis of variations in floating interest rates

The Company has financial investments exposed to the CDI (Interbank Deposit Certificate) rate variation. The fluctuations in interest rates may affect the Company's future results. Presented below are the impacts that would have been generated by changes in interest rates to which the Company is exposed.

Interest rate risk							Consolidated
			Scenarios - Normative Instruction 475				
Floating rate instruments	Risk	Disclosed	Probable	+25%	+50%	-25%	-50%
In Brazilian reais							
Investments	Interest rate (CDI - % p.a.)	4.40	4.40	5.50	6.60	3.30	2.20
Financial assets		333,052	333,052	333,052	333,052	333,052	333,052
Potential impact		=	-	3,509	7,018	(3,547)	(7,169)

Currency risk

The Company is exposed to currency risk on sales, purchases and borrowings denominated in currencies other than the Company's functional currency, the Brazilian Real. Transactions carried out in foreign currency are mainly denominated is U.S. dollar.

In addition, considering the importance of the Company's operations in Mexico, the devaluation of the Mexican Peso has an impact on the income tax. Since the functional currency of the subsidiaries in Mexico is the U.S. Dollars (US\$). Net exchange variation from monetary assets and liabilities has significant impact on the basis for calculating this tax. Whose effect in fiscal year 2019 was R\$15,218 (R\$6,324 in 2018) in the amount of tax.

The Company manages its exposure to foreign exchange rates through a combination of debts, financial investments, accounts receivable and export revenues in foreign currency, hedges of the net investments abroad. The Company's exposure to foreign currency risk, considering the subsidiaries that use the Real (R\$) as their functional currency, is as follows:

Parent company			
Net exposure impacting profit	Note	dec/19	dec/18
Assets		379,003	273,729
Cash and cash equivalents abroad	3	27,999	43,405
Customers in the foreign market	4	351,004	230,324
Liabilities		(92,871)	(188,722)
Borrowings in foreign currency	15	(1,451,487)	(1,395,346)
Hedge of net investment abroad	31	1,406,714	1,352,305
Other amounts		(48,098)	(145,681)
Net exposure impacting profit			
In thousands of R\$		286,132	85,007
In thousands of US\$		70,988	21,938

The exposure of subsidiaries that use a functional currency U.S. Dollars (US\$, is demonstrated bellow:

Subsidiaries		
Net exposure impacting profit	dec/19	dec/18
Assets	107,983	62,127
Cash and cash equivalents abroad	15,669	8,450
Customers in the foreign market	23,391	4,744
Tax return	68,923	48,933
Liabilities	(253,169)	(214,506)
Trade accounts payables	(93,397)	(85,319)
Otheramounts	(159,772)	(129,187)
Net exposure impacting profit		
In thousands of R\$	(145,186)	(152,379)
In thousands of MXN	(680,347)	(772,713)

Sensitivity analysis of foreign exchange exposure

This analysis is based on the foreign exchange rate fluctuation, pursuant to CVM Normative Instruction 475, in which the risk variables are evaluated with a 25% and 50% fluctuation compared to the probable scenario estimated by the Company. This analysis assumes that all other variables, especially the interest rates, will remain constant.

Consolidated Scenarios - Normative Instruction 4						475
	Disclosed	Probable	+25%	+50%	-25%	-50%
U.S. Dollar rate	4.0307	4.0000	5.00	6.00	3.00	2.00
Asset position	379,003	376,116	470,145	564,174	282,087	188,058
Liability position	(92,871)	(92,163)	(115,204)	(138,245)	(69,123)	(46,082)
Net exposure (R\$ thousand)	286,132	283,953	354,941	425,929	212,964	141,976
Net exposure (US\$ thousand)	70,988	70,988	70,988	70,988	70,988	70,988
Potential impact (R\$ thousand)	-	(2,179)	68,809	139,797	(73,168)	(144,156)

Price risk

This risk relates to the possibility of fluctuations in the market prices of the inputs used in the manufacturing process, especially scrap, pig iron, metal alloys, coke and electricity. These price fluctuations could have an impact on the Company's costs. The Company monitors these prices, in order to pass on to customers any changes in its input prices.

32.4 Operating risk

This risk arises from all of the Company's operations and can cause direct or indirect losses associated with a variety of factors, such as processes, personnel, technology, infrastructure and external factors.

The Company's objective is to manage the operating risk to avoid losses and damages to its reputation, and to seek cost efficiencies.

The primary responsibility for developing and implementing operating risk controls lies with a centralized area of internal controls reporting to senior management.

32.5 Capital management

The Company's objectives when managing capital are to safeguard its ability to continue as a going concern in order to provide returns for its stockholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, management can make (or can propose to the stockholders, when their approval is required) adjustments to the amount of dividends paid to stockholders, return capital to stockholders, issue new shares or sell assets to reduce, for example, debt.

The Company's management monitors the relationship between the Company's own capital (equity) and third-party capital that the Company utilizes to finance its operations. To mitigate liquidity risks and optimize the average cost of capital, the Company monitors its compliance with financial ratios required under borrowing agreements.

The relationship between own capital versus third-party capital, at the end of each year, was as follows:

Consolidated			
	Note	dec/19	dec/18
Own capital		2,387,403	2,199,963
Equity	19	2,387,403	2,199,963
Third party capital		1,896,734	1,994,495
Total current and non-current liabilities		2,736,764	2,708,228
Cash and cash equivalents	3	(840,030)	(713,733)
Own capital versus third-party capital ratio		1.26	1.10

32.6 Fair value

The carrying values of cash and cash equivalents and trade receivables and payables, less impairment provisions in the case of trade receivables, are assumed to approximate their fair values.

All financial instruments classified as financial assets and financial liabilities at fair value through profit or loss (Note 31) and the fair value of the borrowing disclosed in Note 16 are calculated by discounting the future contractual cash flow at the current market interest rate that is available to the Company for similar financial instruments.

The valuations technique used by the Company are classified at Level 2 of the fair value hierarchy. The fair value of financial instruments that are not traded in an active market (Level 2) is determined using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely to the minimum extent possible on Company-specific estimates.

33. SUBSEQUENT EVENT

On January 22, 2020, the Company opened a share repurchase with the exclusive comply to buy the long-term incentive plan approved on November 24, 2014. The limit of shares to be purchased under this program is up to 235.000 shares and the program will be the date of December 30, 2020. In accordance with the limit defined in article 8 of CVM Instruction 567/15.

* * *



uilding a better INDEPENDENT AUDITOR'S REPORT

(A free translation of the original in Portuguese)

To Shareholders, Board of Directors and Officers of **Tupy S.A.** Joinville - SC

Opinion

We have audited the individual and consolidated financial statements of Tupy S.A. (the "Company"), identified as Company and Consolidated, respectively, which comprise the statement of financial position as at December 31, 2019, and the statement of profit or loss, of comprehensive income (loss), of changes in equity and of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the individual and consolidated financial position of Tupy S.A. as at December 31, 2019, and its individual and consolidated financial performance and cash flows for the year then ended, in accordance with the accounting practices adopted in Brazil and with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB).

Basis for opinion

We conducted our audit in accordance with the Brazilian and International Standards on Auditing. Our responsibilities under those standards are further described in the "Auditor's responsibilities for the audit of the individual and consolidated financial statements" section of our report. We are independent of the Company and its subsidiaries in accordance with the relevant ethical principles set forth in the Code of Professional Ethics for Accountants, the professional standards issued by Brazil's National Association of State Boards of Accountancy (CFC) and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we obtained is sufficient and appropriate to provide a basis for our audit opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the individual and consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide an individual opinion on these matters. For each matter below, our description of how our audit addressed the matter, including any commentary on the findings or outcome of our procedures, is provided in that context.



We have fulfilled the responsibilities described in the "Auditor's responsibilities for the audit of the individual and consolidated financial statements" section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatements of the financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying financial statements.

Revenue recognition

The Company recognizes sales revenue to domestic and international customers under a variety of terms and conditions, whose delivery of the product does not necessarily occur on the same date as the invoice issue. Measurement of the revenue amount to be recognized, including determining the appropriate time for recognizing this revenue, from the determination of when the customer obtains the control over the product for each sale transaction, implies a certain level of judgment by management. The revenues earned by the Company and its recognition criteria in P&L are disclosed in Notes 2.5(k) and 20 to the individual and consolidated financial statements.

This matter was considered significant for our audit, due to the magnitude of the amounts involved and the risk of recognition of revenue in the incorrect accounting period, especially in relation to the monthly accounting closing period (cut-off period), considering the judgment applied in determining the moment in which the customer obtains the control over the product.

How our audit addressed this matter

Our procedures included, among others, the recalculation of estimates for reversal of sales invoiced in the cut-off period whose control over the products was not fully transferred to customers, analysis of non-routine entries, reading and understanding of contractual terms with customers and inspection of documentation for a sample of sales recorded over the year with respect to the actual financial realization.

Based on the results of the audit procedures performed on revenue recognition for the year, which is consistent with management's assessment, we consider that the criteria and assumptions adopted by management for recording revenues, as well as the respective disclosures in Notes 2.5(k) and 20, are appropriate, in the context of the individual and consolidated financial statements taken as a whole.

Provision for tax, social security, civil and labor contingencies

The Company is involved in various legal and administrative proceedings related to tax, civil and labor matters, as disclosed in Note 18. For those proceedings whose likelihood of loss was assessed as probable, the Company recorded a provision for tax, social security, civil and labor contingencies amounting to R\$212,697 thousand and R\$214,001 thousand in the individual and consolidated financial statements, respectively, at December 31, 2019.



This area is significant for our audit process due to the potential risk related to certain demands, as well as the fact that the assessment of these proceedings includes significant judgment by management, supported by its legal advisors, mainly regarding the classification of these proceedings as a contingent liability or as a provision.

How our audit addressed this matter

Our procedures included, among others, obtaining and analyzing confirmation letters from the Company's external and internal legal advisors, in order to compare their assessments on outstanding proceedings with the positions considered by management. We involved tax subject matter experts, when necessary, to assist us in interpreting and assessing risks of the most subjective proceedings and hold meetings with management and its experts to discuss the evolution of the significant ongoing lawsuits.

Based on the results of the audit procedures performed, which are consistent with management's assessment, we consider that the criteria and assumptions adopted by management, as well as the respective disclosures in Note 18, are appropriate, in the context of the individual and consolidated financial statements taken as a whole.

Credits from Eletrobrás

A compulsory loan was granted to Eletrobrás aiming at financing the expansion and improvement of the energy sector. This burden was charged to industrial consumers with monthly consumption equal to or higher than 2 thousand kilowatts and paid through bills (electricity bills) issued by energy distributors. From 1977, the annual amount withheld related to these compulsory contributions became a consumers' credit always from January 1 of the year following that of the billed energy.

In this context, as disclosed in Note 10, in 2003 the Company was successful (final and unappealable decision) in the lawsuit filed against Eletrobrás, which ensured Tupy's right to receive the difference of the monetary restatement of the electric energy compulsory loan, at which time the credit started to be accounted for. As part of the litigation, a claim relating to the remaining portion of applicable interest and monetary restatement remained without trial at that time and was not accounted for, since a final and unappealable decision on that matter had not yet been handed down.

As described in Note 10, on October 1, 2018, a final and unappealable decision on this remaining portion relating to interest and monetary restatement was handed down by the Federal Supreme Court of Brazil (STF). At that moment, the decision validated the calculation criteria of the restatements and interest that served as the basis for the garnishment occurred in 2016, on which no further appeals seeking to change referred to calculation criteria can be lodged. Based on this decision, management together with its lawyers and other Governance bodies, concludes that the entire claim was qualified as virtually certain, leaving only the payment of the amount due after validation of the final and unappealable valuation criteria, which may be in cash or in shares issued by Eletrobras. Accordingly, in 2019 procedural events occurred as described in note 10, for which the Company received through bank deposit on December 18, 2019, in the amount of R\$63,049 thousand, already net of the deductions applicable to the discussion, for amount considered uncontroversial between the parties.



How our audit addressed this matter

Our procedures included, among others, the review of the procedural history supported by the legal experts to review and interpret the procedural stage, allowing us to evaluate the adequacy of information and conclusions reached by management. Our procedures also included the involvement of internal subject matter experts in financial instruments to assist us in reviewing the calculation of the identified embedded derivative as well as the review by the audit team of the consistency of the assumptions for restatement of the calculations used to determine and record the amount receivable from Eletrobrás to determine the best realization estimate.

Based on the results of the audit procedures performed, which are consistent with management's assessment, we consider that the criteria and assumptions adopted by management, as well as the respective disclosures in Notes 2.4(e) and 10, are appropriate, in the context of the individual and consolidated financial statements taken as a whole.

Other matters

Statements of value added

The individual and consolidated Statements of Value Added (SVA) for the year ended December 31, 2019, prepared under the responsibility of Company management and presented as supplementary information for purposes of IFRS, were submitted to the same audit procedures conducted together with the audit of the Company's financial statements. For the purposes of forming our opinion, we evaluated whether these statements are reconciled with the financial statements and accounting records, as applicable, and whether their form and content are in accordance with the criteria provided for in Accounting Pronouncement NBC TG 09 - Statement of Value Added. In our opinion, these statements of value added were prepared fairly, in all material respects, in accordance with the criteria provided for in Accounting Pronouncement CPC 09 and are consistent with the overall individual and consolidated financial statements.

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

Company management is responsible for such other information, which comprise the Management Report.

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

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

If, based on the work we have performed, we conclude that there is a material misstatement of the Management Report, we are required to report that fact. We have nothing to report on this matter.



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

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

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

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

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

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

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

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



- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's and its subsidiaries' ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the individual and consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company and its subsidiaries to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the individual and consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

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

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

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

Curitiba, March 03, 2020.

ERNST & YOUNG Auditores Independentes S.S CRC 2SP 015.199/O-6

Alexandre Rubio
Accountant CRC 1SP223361/O-2

OPINION OF THE FISCAL COUNCIL

The Fiscal Council of TUPY S.A., in the course of its legal and statutory activities, has analyzed the Company's management report and the financial statements for the year ended December 31, 2019, which comprise the balance sheet and the statements of income, comprehensive income, changes in equity, cash flow and value added for the year then ended, in addition to the notes and management's proposals related to the allocation of Net Income. Subsequently, we have also analyzed documents and substantially all of the information and clarifications provided by the external auditors and the Company's management during the year.

Therefore, based on these analyses, on the opinion of the Audit and Risk Committee and on the independent auditor's report issued by Ernst & Young Auditores Independentes S.S. on March 03, 2020, with an unqualified opinion, the Fiscal Council unanimously states that the documents mentioned above as well as management proposals are adequate to be submitted to the Annual General Meeting of Shareholders.

São Paulo, March 03, 2020.

João Augusto Monteiro

Victor Paulo Camargo Gonçalves

Kurt Janos Toth

OPINION OF THE AUDIT AND RISKS COMMITTEE

The Audit and Risks Committee of Tupy S.A., a Board of Directors' non-statutory body, is responsible for supporting the Board of Directors, ensuring for the quality and integrity on the financial statements, in compliance with the legal and regulatory requirements in terms of the procedures and independence for external and internal audit activities, and also for the effectiveness of the risk management and internal control systems of the Company.

During the year of 2019 the committee had twenty-five meetings, of which thirteen were ordinary and twelve extraordinary meetings, with the assistance of the external and internal audit and also with the president and directors.

Assessed the scope and consequent independent auditor annual plan; examining internal control audit plan, considering improving of systems and risks controlling, and the legal and regulatory aspects of external audit review of quarterly information, the annual exam from financial statements, and the respective allocation of income and the technical study for maintaining the deferred tax asset.

In addition, the committee monitors the maintenance of provisions and contingent assets and liabilities, the internal hotline effectiveness, and monitoring the progress of action plans based on the external and internal audit recommendations.

Based on the activities carried out in the period and considering that all relevant issues were mentioned by the Board of Directors, as well as on the analyses of the Management Report, together with the parent company and consolidated financial statements at December 31, 2019 and the accompanying notes issued on March 03, 2020 by Ernst & Young Auditores Independentes S.S., without reservations, consider the financial statements can be evaluated by the Board of Directors, for further deliberation of the Shareholders' meeting.

São Paulo, March 03, 2020

João Verner Juenemann

Coordinator

Ivan Luiz Modesto Schara

Jaime Luiz Kalsing

Maria Carmen Westerlund Montera

MANAGEMENT



BOARD OF DIRECTORS

President

Gueitiro Matsuo Genso

Vice-president

Ricardo Doria Durazzo

Members

Claudia Silva Araujo de Azeredo Santos Gabriel Stoliar Jaime Luiz Kalsing José Gustavo de Souza Costa José Rubens de La Rosa Paula Regina Goto Ricardo Antonio Weiss

BOARD OF OFFICERS

CEO

Fernando Cestari de Rizzo

Vice-presidents

Fabio Pena Rios Ricardo Sendim Fioramonte Thiago Fontoura Struminski (DRI)

Accountant

Pedro Henrique Eyng CRC-SC 16.161 – CPF 537.813.259-20