TENARIS S.A.

CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2018, 2017 and 2016

CONSOLIDATED INCOME STATEMENT

(all amounts in thousands of US dollars, unless otherwise stated)		Year ended December 31,				
	Notes	2018	2017	2016		
Continuing operations	-					
Net sales	1	7,658,588	5,288,504	4,293,592		
Cost of sales	2	(5,279,300)	(3,685,057)	(3,165,684)		
Gross profit	_	2,379,288	1,603,447	1,127,908		
Selling, general and administrative expenses	3	(1,509,976)	(1,270,016)	(1,196,929)		
Other operating income	5	15,059	10,516	21,127		
Other operating expenses	5	(12,558)	(9,359)	(11,163)		
Operating income (loss)	-	871,813	334,588	(59,057)		
Finance income	6	39,856	47,605	66,204		
Finance cost	6	(36,942)	(27,072)	(22,329)		
Other financial results	6	34,386	(43,550)	(21,921)		
Income (loss) before equity in earnings of non-consolidated companies and	-					
income tax		909,113	311,571	(37,103)		
Equity in earnings of non-consolidated companies	11	193,994	116,140	71,533		
Income before income tax	-	1,103,107	427,711	34,430		
Income tax	7	(229,207)	17,136	(17,102)		
Income for continuing operations	-	873,900	444,847	17,328		
Discontinued operations						
Result for discontinued operations	27	_	91,542	41,411		
Income for the year	-	873,900	536,389	58,739		
Attributable to:						
Owners of the parent		876,063	544,737	55,298		
Non-controlling interests		(2,163)	(8,348)	3,441		
Ç	-	873,900	536,389	58,739		
Earnings per share attributable to the owners of the parent during the year:	_	1 100 525	1 100 525	1 100 535		
Weighted average number of ordinary shares (thousands) Continuing operations		1,180,537	1,180,537	1,180,537		
Basic and diluted earnings per share (U.S. dollars per share)		0.74	0.38	0.01		
Basic and diluted earnings per ADS (U.S. dollars per ADS) (*)		1.48	0.77	0.02		
Continuing and discontinued operations		10	0.77	0.02		
Basic and diluted earnings per share (U.S. dollars per share)		0.74	0.46	0.05		
Basic and diluted earnings per ADS (U.S. dollars per ADS) (*)		1.48	0.92	0.09		

^(*) Each ADS equals two shares.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(all amounts in thousands of U.S. dollars)	Year ended December 31,					
	2018	2017	2016			
Income for the year	873,900	536,389	58,739			
Items that may be subsequently reclassified to profit or loss:						
Currency translation adjustment	(96,916)	151,762	37,187			
Change in value of cash flow hedges and instruments at fair value	(6,701)	4,502	(7,525)			
Income tax relating to components of other comprehensive income From participation in non consolidated companies:	34	23	(23)			
- Currency translation adjustment (*)	1,848	(9,548)	3,473			
- Changes in the fair value of derivatives held as cash flow hedges and others	(132)	512	421			
Ç	(101,867)	147,251	33,533			
Items that will not be reclassified to profit or loss:						
Remeasurements of post employment benefit obligations	7,963	(8,635)	(230)			
Income tax on items that will not be reclassified	(1,932)	1,338	(1,760)			
Remeasurements of post employment benefit obligations of non-consolidated companies	(3,855)	(376)	(5,475)			
	2,176	(7,673)	(7,465)			
Other comprehensive (loss) income for the year, net of tax	(99,691)	139,578	26,068			
Total comprehensive income for the year	774,209	675,967	84,807			
Attributable to:						
Owners of the parent	776,713	683,531	81,702			
Non-controlling interests	(2,504)	(7,564)	3,105			
	774,209	675,967	84,807			
Total comprehensive income for the year						
attributable to Owners of the parent arises from						
Continuing operations	776,713	591,989	40,291			
Discontinued operations	-	91,542	41,411			
	776,713	683,531	81,702			

^(*) Tenaris recognized its share over the effects on the adoption of IAS 29, "Financial Reporting in Hyperinflationary Economies" by Ternium (\$49.3 million) in other comprehensive income as a currency translation adjustment.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

(all amounts in thousands of U.S. dollars)	Notes	At Decemb	per 31, 2018	At Decemb	per 31, 2017
ASSETS					
Non-current assets					
Property, plant and equipment, net	9	6,063,908		6,229,143	
Intangible assets, net	10	1,465,965		1,660,859	
Investments in non-consolidated companies	11	805,568		640,294	
Other equity investments	30	-		21,572	
Other investments	17	118,155		128,335	
Deferred tax assets	19	181,606		153,532	
Receivables, net	12	151,905	8,787,107	183,329	9,017,064
Current assets					
Inventories, net	13	2,524,341		2,368,304	
Receivables and prepayments, net	14	155,885		135,699	
Current tax assets	15	121,332		132,334	
Trade receivables, net	16	1,737,366		1,214,060	
Derivative financial instruments	23	9,173		8,230	
Other investments	17	487,734		1,192,306	
Cash and cash equivalents	17	428,361	5,464,192	330,221	5,381,154
Total assets			14,251,299		14,398,218
EQUITY					
Capital and reserves attributable to owners of the parent			11,782,882		11,482,185
Non-controlling interests			92,610		98,785
Total equity			11,875,492		11,580,970
LIABILITIES					
Non-current liabilities					
Borrowings	18	29,187		34,645	
Deferred tax liabilities	19	379,039		457,970	
Other liabilities	20 (i)	213,129		217,296	
Provisions	21 (ii)	36,089	657,444	36,438	746,349
Current liabilities					
Borrowings	18	509,820		931,214	
Derivative financial instruments	23	11,978		39,799	
Current tax liabilities	15	250,233		102,405	
Other liabilities	20 (ii)	165,693		157,705	
Provisions	22 (ii)	24,283		32,330	
Customer advances		62,683		56,707	
Trade payables		693,673	1,718,363	750,739	2,070,899
Total liabilities			2,375,807		2,817,248
Total equity and liabilities		·	14,251,299		14,398,218

Contingencies, commitments and restrictions on the distribution of profits are disclosed in Note 24. The accompanying notes are an integral part of these Consolidated Financial Statements.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

(all amounts in thousands of U.S. dollars)

			Attribu	table to owners of th	e parent				
				Currency					
	Share	Legal	Share	Translation	Other	Retained		Non-controlling	
	Capital (1)	Reserves	Premium	Adjustment	Reserves (2)	Earnings (3)	Total	interests	Total
Balance at December 31, 2017	1,180,537	118,054	609,733	(824,423)	(320,569)	10,718,853	11,482,185	98,785	11,580,970
Changes in accounting policies (Section II AP)	-	-	-	-	2,786	5,220	8,006	12	8,018
Balance at December 31, 2017 restated	1,180,537	118,054	609,733	(824,423)	(317,783)	10,724,073	11,490,191	98,797	11,588,988
Income (loss) for the year	_	_	_	_	_	876,063	876,063	(2,163)	873,900
Currency translation adjustment	-	-	-	(96,673)	-	-	(96,673)	(243)	(96,916)
Remeasurements of post employment benefit obligations, net of				(, , ,			, ,	,	, ,
taxes	-	-	-	-	6,135	-	6,135	(104)	6,031
Change in value of instruments at fair value through other									
comprehensive income and cash flow hedges, net of taxes	-	-	-	-	(6,673)	-	(6,673)	6	(6,667)
From other comprehensive income of non-consolidated									
companies		-	-	1,848	(3,987)	-	(2,139)	-	(2,139)
Other comprehensive loss for the year		-	-	(94,825)	(4,525)	-	(99,350)	(341)	(99,691)
Total comprehensive income (loss) for the year	-	_	-	(94,825)	(4,525)	876,063	776,713	(2,504)	774,209
Acquisition and other changes in non-controlling interests	-	-	-	-	(2)	-	(2)	(22)	(24)
Dividends paid in cash		-	-	-	-	(484,020)	(484,020)	(3,661)	(487,681)
Balance at December 31, 2018	1,180,537	118,054	609,733	(919,248)	(322,310)	11,116,116	11,782,882	92,610	11,875,492

⁽¹⁾ The Company has an authorized share capital of a single class of 2.5 billion shares having a nominal value of \$1.00 per share. As of December 31, 2018 there were 1,180,536,830 shares issued. All issued shares are fully paid.

⁽²⁾ Other reserves include mainly the result of transactions with non-controlling interest that do not result in a loss of control, the remeasurement of post-employment benefit obligations, the changes in value of cash flow hedges and in financial instruments measured at fair value through other comprehensive income.

⁽³⁾ The Distributable Reserve and Retained Earnings calculated according to Luxembourg Law are disclosed in Note 24.

Tenaris S.A. Consolidated Financial Statements for the years ended December 31, 2018, 2017 and 2016

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (CONT.)

(all amounts in thousands of U.S. dollars)	S. dollars) Attributable to owners of the parent								
			Non-						
	Share	Legal	Share	Translation	Other	Retained		controlling	
	Capital (1)	Reserves	Premium	Adjustment	Reserves (2)	Earnings	Total	interests	Total
Balance at December 31, 2016	1,180,537	118,054	609,733	(965,955)	(313,088)	10,658,136	11,287,417	125,655	11,413,072
Income (loss) for the year	-	_	_	_	_	544,737	544,737	(8,348)	536,389
Currency translation adjustment	-	-	-	151,080	-	-	151,080	682	151,762
Remeasurements of post employment benefit obligations, net									
of taxes	-	-	-	-	(7,423)	-	(7,423)	126	(7,297)
Change in value of available for sale financial instruments and									
cash flow hedges net of tax	-	-	-	-	4,549	-	4,549	(24)	4,525
From other comprehensive income of non-consolidated				(0.540)	126		(0.412)		(0.412)
companies			-	(9,548) 141.532	(2,738)	-	(9,412) 138,794	784	(9,412) 139,578
Other comprehensive income (loss) for the year Total comprehensive income (loss) for the year		-	-	141,532	(2,738)	544,737	683,531	(7,564)	675,967
Acquisition and other changes in non-controlling interests	_	_	_	141,532	(4,743)	544,/5/	(4,743)	4,694	675,967 (49)
Dividends paid in cash	-	_	_	_	(4,743)	(484,020)	(484,020)	(24,000)	(508,020)
Balance at December 31, 2017	1,180,537	118,054	609,733	(824,423)	(320,569)	10,718,853	11,482,185	98,785	11,580,970
2 manee at 2 ccc mae: 0 1, 2 v 1 /	1,100,007	110,001	005,.00	(02.1,120)	(020,005)	10,710,000	11,102,100	,,,,,,,	11,000,510
					0.7				
			Attributa	able to owners o	of the parent				
			Attributa	able to owners o	of the parent			Non-	
	Share	Legal	Share		Other	Retained		Non- controlling	
	Share Capital (1)	Legal Reserves		Currency	1	Retained Earnings	Total		Total
Balance at December 31, 2015			Share	Currency Translation	Other		Total 11,713,344	controlling	Total 11,866,056
Balance at December 31, 2015 Income for the year	Capital (1)	Reserves	Share Premium	Currency Translation Adjustment	Other Reserves (2)	Earnings		controlling interests	
,	Capital (1)	Reserves	Share Premium	Currency Translation Adjustment	Other Reserves (2)	Earnings 11,110,469	11,713,344	controlling interests 152,712	11,866,056
Income for the year	Capital (1)	Reserves	Share Premium	Currency Translation Adjustment (1,006,767)	Other Reserves (2) (298,682)	Earnings 11,110,469	11,713,344 55,298	controlling interests 152,712 3,441	11,866,056 58,739
Income for the year Currency translation adjustment Remeasurements of post employment benefit obligations, net of taxes	Capital (1)	Reserves	Share Premium	Currency Translation Adjustment (1,006,767)	Other Reserves (2)	Earnings 11,110,469	11,713,344 55,298	controlling interests 152,712 3,441	11,866,056 58,739
Income for the year Currency translation adjustment Remeasurements of post employment benefit obligations, net of taxes Change in value of available for sale financial instruments	Capital (1)	Reserves	Share Premium	Currency Translation Adjustment (1,006,767)	Other Reserves (2) (298,682) - - (1,781)	Earnings 11,110,469	11,713,344 55,298 37,339 (1,781)	controlling interests 152,712 3,441 (152) (209)	11,866,056 58,739 37,187 (1,990)
Income for the year Currency translation adjustment Remeasurements of post employment benefit obligations, net of taxes Change in value of available for sale financial instruments and cash flow hedges net of tax	Capital (1)	Reserves	Share Premium	Currency Translation Adjustment (1,006,767)	Other Reserves (2) (298,682)	Earnings 11,110,469	11,713,344 55,298 37,339	controlling interests 152,712 3,441 (152)	11,866,056 58,739 37,187
Income for the year Currency translation adjustment Remeasurements of post employment benefit obligations, net of taxes Change in value of available for sale financial instruments and cash flow hedges net of tax From other comprehensive income of non-consolidated	Capital (1)	Reserves	Share Premium	Currency Translation Adjustment (1,006,767)	Other Reserves (2) (298,682) - - (1,781) (7,573)	Earnings 11,110,469 55,298	11,713,344 55,298 37,339 (1,781) (7,573)	controlling interests 152,712 3,441 (152) (209)	11,866,056 58,739 37,187 (1,990) (7,548)
Income for the year Currency translation adjustment Remeasurements of post employment benefit obligations, net of taxes Change in value of available for sale financial instruments and cash flow hedges net of tax From other comprehensive income of non-consolidated companies	Capital (1)	Reserves	Share Premium	Currency Translation Adjustment (1,006,767)	Other Reserves (2) (298,682) - - (1,781) (7,573) (5,054)	Earnings 11,110,469 55,298	11,713,344 55,298 37,339 (1,781) (7,573) (1,581)	controlling interests 152,712 3,441 (152) (209) 25	11,866,056 58,739 37,187 (1,990) (7,548) (1,581)
Income for the year Currency translation adjustment Remeasurements of post employment benefit obligations, net of taxes Change in value of available for sale financial instruments and cash flow hedges net of tax From other comprehensive income of non-consolidated companies Other comprehensive income (loss) for the year	Capital (1)	Reserves	Share Premium	Currency Translation Adjustment (1,006,767) - 37,339 - - - 3,473 40,812	Other Reserves (2) (298,682) - - (1,781) (7,573) (5,054) (14,408)	Earnings 11,110,469 55,298	11,713,344 55,298 37,339 (1,781) (7,573) (1,581) 26,404	controlling interests 152,712 3,441 (152) (209) 25 (336)	11,866,056 58,739 37,187 (1,990) (7,548) (1,581) 26,068
Income for the year Currency translation adjustment Remeasurements of post employment benefit obligations, net of taxes Change in value of available for sale financial instruments and cash flow hedges net of tax From other comprehensive income of non-consolidated companies Other comprehensive income (loss) for the year Total comprehensive income (loss) for the year	Capital (1)	Reserves	Share Premium	Currency Translation Adjustment (1,006,767)	Other Reserves (2) (298,682) - (1,781) (7,573) (5,054) (14,408) (14,408)	Earnings 11,110,469 55,298	11,713,344 55,298 37,339 (1,781) (7,573) (1,581) 26,404 81,702	controlling interests 152,712 3,441 (152) (209) 25 (336) 3,105	11,866,056 58,739 37,187 (1,990) (7,548) (1,581) 26,068 84,807
Income for the year Currency translation adjustment Remeasurements of post employment benefit obligations, net of taxes Change in value of available for sale financial instruments and cash flow hedges net of tax From other comprehensive income of non-consolidated companies Other comprehensive income (loss) for the year Total comprehensive income (loss) for the year Acquisition and other changes in non-controlling interests	Capital (1)	Reserves	Share Premium	Currency Translation Adjustment (1,006,767) - 37,339 - - - 3,473 40,812	Other Reserves (2) (298,682) - - (1,781) (7,573) (5,054) (14,408)	Earnings 11,110,469 55,298	11,713,344 55,298 37,339 (1,781) (7,573) (1,581) 26,404 81,702 2	controlling interests 152,712 3,441 (152) (209) 25 (336) 3,105 (1,073)	11,866,056 58,739 37,187 (1,990) (7,548) (1,581) 26,068 84,807 (1,071)
Income for the year Currency translation adjustment Remeasurements of post employment benefit obligations, net of taxes Change in value of available for sale financial instruments and cash flow hedges net of tax From other comprehensive income of non-consolidated companies Other comprehensive income (loss) for the year Total comprehensive income (loss) for the year	Capital (1)	Reserves	Share Premium	Currency Translation Adjustment (1,006,767) - 37,339 - - 3,473 40,812 40,812	Other Reserves (2) (298,682) - (1,781) (7,573) (5,054) (14,408) (14,408)	Earnings 11,110,469 55,298 55,298 (507,631)	11,713,344 55,298 37,339 (1,781) (7,573) (1,581) 26,404 81,702	controlling interests 152,712 3,441 (152) (209) 25 (336) 3,105	11,866,056 58,739 37,187 (1,990) (7,548) (1,581) 26,068 84,807

⁽¹⁾ The Company has an authorized share capital of a single class of 2.5 billion shares having a nominal value of \$1.00 per share. As of December 31, 2017 and 2016 there were 1,180,536,830 shares issued. All issued shares are fully paid.

⁽²⁾ Other reserves include mainly the result of transactions with non-controlling interest that do not result in a loss of control, the remeasurement of post-employment benefit obligations and the changes in value of cash flow hedges and in available for sale financial instruments.

(all amounts in thousands of U.S. dollars)		Year e	nded Decem	ber 31,
	Notes	2018	2017	2016
Cash flows from operating activities				
Income for the year		873,900	536,389	58,739
Adjustments for:				
Depreciation and amortization	9 & 10	664,357	608,640	662,412
Income tax accruals less payments	26(ii)	58,494	(193,989)	(128,079)
Equity in earnings of non-consolidated companies	11	(193,994)	(116,140)	(71,533)
Interest accruals less payments, net	26(iii)	6,151	11,550	(2,567)
Changes in provisions		(8,396)	(17,245)	15,597
Income from the sale of Conduit business	27	- (-2-2-)	(89,694)	-
Changes in working capital	26(i)	(737,952)	(853,184)	330,964
Derivatives, currency translation adjustment and others		(51,758)	91,648	(1,968)
Net cash provided by (used in) operating activities		610,802	(22,025)	863,565
Cash flows from investing activities				
Capital expenditures	9 & 10	(349,473)	(558,236)	(786,873)
Changes in advance to suppliers of property, plant and) & 10	(31),173)	(330,230)	(700,073)
equipment		4,851	7,077	50,989
Proceeds from disposal of Conduit business	27	-	327,631	-
Investment in non-consolidated companies	11	-	-	(17,108)
Acquisition of subsidiaries	25	_	(10,418)	-
Investment in companies under cost method		-	(3,681)	-
Loan to non-consolidated companies	11 c	(14,740)	(10,956)	(116,616)
Repayment of loan by non-consolidated companies	11 c	9,370	3,900	74,222
Proceeds from disposal of property, plant and equipment and				
intangible assets		6,010	5,443	23,609
Dividends received from non-consolidated companies	11	25,722	22,971	20,674
Changes in investments in securities		717,368	565,387	652,755
Net cash provided by (used in) investing activities		399,108	349,118	(98,348)
Cash flaws from financing activities				
Cash flows from financing activities Dividends paid	8	(484,020)	(484,020)	(507,631)
Dividends paid to non-controlling interest in subsidiaries	O	(3,498)	(24,000)	(29,089)
Changes in non-controlling interests		(24)	(49)	(1,071)
Proceeds from borrowings		1,019,302	1,196,781	1,180,727
Repayments of borrowings		(1,432,202)	(1,090,129)	(1,295,560)
Net cash used in financing activities		(900,442)	(401,417)	(652,624)
ğ				
Increase (decrease) in cash and cash equivalents		109,468	(74,324)	112,593
Movement in cash and cash equivalents				
At the beginning of the year		330,090	398,580	286,198
Effect of exchange rate changes		(12,841)	5,834	(211)
Increase (decrease) in cash and cash equivalents		109,468	(74,324)	112,593
At December 31,	26(iv)	426,717	330,090	398,580
		A 1	t December 3	81.
Cash and cash equivalents		2018	2017	2016
Cash and bank deposits		428,361	330,221	399,900
Bank overdrafts	18	(1,644)	(131)	(1,320)
		426,717	330,090	398,580
		.20,717	220,070	270,000

I	GENERAL INFORMATION	IV	OTHER NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
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I. GENERAL INFORMATION

Tenaris S.A. (the "Company") was established as a public limited liability company (*societé anonyme*) under the laws of the Grand-Duchy of Luxembourg on December 17, 2001. The Company holds, either directly or indirectly, controlling interests in various subsidiaries in the steel pipe manufacturing and distribution businesses. References in these Consolidated Financial Statements to "Tenaris" refer to the Company and its consolidated subsidiaries. A list of the principal Company's subsidiaries is included in Note 29 to these Consolidated Financial Statements.

The Company's shares trade on the Buenos Aires Stock Exchange, the Italian Stock Exchange and the Mexican Stock Exchange; the Company's American Depositary Securities ("ADS") trade on the New York Stock Exchange.

These Consolidated Financial Statements were approved for issuance by the Company's Board of Directors on February 20, 2019.

II. ACCOUNTING POLICIES

The principal accounting policies applied in the preparation of these Consolidated Financial Statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

A Basis of presentation

The Consolidated Financial Statements of Tenaris have been prepared in accordance with International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board ("IASB") and in accordance with IFRS as adopted by the European Union, under the historical cost convention, as modified by the revaluation of certain financial assets and liabilities (including derivative instruments) and plan assets at fair value. The Consolidated Financial Statements are, unless otherwise noted, presented in thousands of U.S. dollars ("\$").

Whenever necessary, certain comparative amounts have been reclassified to conform to changes in presentation in the current year.

Following the sale of the steel electric conduit business in North America, known as Republic Conduit, in January 2017, the results of the mentioned business are presented as discontinued operations in accordance with IFRS 5, "Non-current Assets Held for Sale and Discontinued Operations". Consequently, all comparative amounts related to discontinued operations within each line item of the Consolidated Income Statement are reclassified into discontinued operations. The Consolidated Statement of Cash Flows includes the cash flows for continuing and discontinued operations, cash flows from discontinued operations and earnings per share are disclosed separately in Note 27, as well as additional information detailing net assets of disposal group classified as held for sale and discontinued operations.

The preparation of Consolidated Financial Statements in conformity with IFRS requires management to make certain accounting estimates and assumptions that might affect among others, the reported amounts of assets, liabilities, contingent assets and liabilities, revenues and expenses. Actual results may differ from these estimates.

(1) Accounting pronouncements applicable as from January 1, 2018 and relevant for Tenaris

IFRS 9, "Financial instruments"

Tenaris has adopted IFRS 9, "Financial instruments" from 1 January 2018 which resulted in changes in accounting policies and adjustments to the amounts recognized in the financial statements. In accordance with the transition provisions in IFRS 9, Tenaris has adopted the new rules using the retrospective approach, meaning that the cumulative impact of the adoption was recognized in the opening retained earnings and other reserves of the current period as of January 1, 2018 and that comparatives were not restated.

The new impairment model requires recognition of impairment provisions based on expected credit losses rather than on incurred credit losses. The impact of this change was a decrease of \$6.4 million in the *allowance for doubtful accounts*.

A Basis of presentation (Cont.)

(1) Accounting pronouncements applicable as from January 1, 2018 and relevant for Tenaris (Cont.)

IFRS 9, "Financial instruments" (Cont.)

The measurement category and the carrying amount of financial assets and liabilities in accordance with IAS 39 and IFRS 9 at January 1, 2018 are compared as follows:

Financial Assets	FVPL	Held to maturity	Amortized cost (loans & receivables 2017)	FVOCI (Available for sale 2017)
Closing balance December 31, 2017 - IAS 39	1,163,808	344,336	1,541,724	21,572
Reclassified bonds and other fixed income from HTM to FVOCI	-	(344,336)	-	344,336
Reclassified fixed income from FVPL to amortized cost	(550,646)	-	550,646	-
Reclassified bonds and other fixed income from FVPL to FVOCI	(153,702)	-	-	153,702
Opening balance January 1, 2018 - IFRS 9	459,460	_	2,092,370	519,610
Financial Liabilities				
Closing balance December 31, 2017 - IAS 39	39,799		1,716,598	
Opening balance January 1, 2018	39,799	•	1,716,598	

	Effect on other reserves	Effect on retained earnings
Opening balance January 1, 2018 - IAS 39	(320,569)	10,718,853
Reclassify investments from HTM to FVOCI	3,126	-
Reclassify investments from FVPL to FVOCI	(352)	352
Opening balance January 1, 2018 - IFRS 9	(317,795)	10,719,205

IFRS 15, "Revenue from contracts with customers"

The Company has adopted IFRS 15, "Revenue from contracts with customers" from January 1 2018, which resulted in changes in accounting policies and adjustments to the amounts recognized in the financial statements. The policy sets out the requirements in accounting for revenue arising from contracts with customers and is based on the principle that revenue is recognized when control of a good or service is transferred to the customer. In accordance with the transition provisions in IFRS 15, the group has adopted the new rules using the modified retrospective approach, meaning that the cumulative impact of the adoption was recognized in retained earnings as of January 1, 2018 and that comparatives were not restated.

The impact of the adoption as of January 1, 2018 on the aggregate of revenues, cost of sales and selling expenses was a decrease of \$0.7 million net.

(2) New and amended standards not vet adopted and relevant for Tenaris

IFRS 16, "Leases"

In January 2016, the IASB issued IFRS 16, "Leases". The new standard will result in almost all leases recognized on the balance sheet (except for short term and low value leases), as the distinction between operating and finance leases is removed. IFRS 16 must be applied on annual periods beginning on or after January 1, 2019.

The Company has assessed the effects of applying the new standard and the main area affected will be the accounting for operating leasing.

The Company expects to recognize right-of-use assets and lease liabilities of approximately \$260 million on January 1, 2019.

The Company intends to adopt this standard using the simplified transition approach and will not restate comparative amounts for the year prior to first adoption.

Other accounting pronouncements that became effective during 2018 have no material effect on the Company's financial condition or results of operations.

B Group accounting

(1) Subsidiaries and transactions with non-controlling interests

Subsidiaries are all entities over which Tenaris has control. Tenaris controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is exercised by the Company and are no longer consolidated from the date control ceases.

The acquisition method of accounting is used to account for the acquisition of subsidiaries by Tenaris. The cost of an acquisition is measured as the fair value of the assets transferred, equity instruments issued and liabilities incurred or assumed at the date of exchange. Acquisition-related costs are expensed as incurred. Identifiable assets acquired, liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. Any non-controlling interest in the acquiree is measured either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets. The excess of the aggregate of the consideration transferred and the amount of any non-controlling interest in the acquiree over the fair value of the identifiable net assets acquired is recorded as goodwill. If this is less than the fair value of the net assets of the subsidiary acquired, the difference is recognized directly in the Consolidated Income Statement.

Contingent consideration is classified either as equity or as a financial liability. Amounts classified as a financial liability are subsequently remeasured to fair value with changes in fair value recognized in profit or loss.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date. Any gains or losses arising from such remeasurement are recognized in profit or loss.

Transactions with non-controlling interests that do not result in a loss of control are accounted as transactions with equity owners of the Company. For purchases from non-controlling interests, the difference between any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

When the Company ceases to have control or significant influence, any retained interest in the entity is remeasured to its fair value, with the change in carrying amount recognized in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognized in other comprehensive income in respect of that entity are accounted for as if the group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in other comprehensive income are reclassified to profit or loss.

Material intercompany transactions, balances and unrealized gains (losses) on transactions between Tenaris subsidiaries have been eliminated in consolidation. However, since the functional currency of some subsidiaries is its respective local currency, some financial gains (losses) arising from intercompany transactions are generated. These are included in the Consolidated Income Statement under *Other financial results*.

(2) Non-consolidated companies

Non-consolidated companies are all entities in which Tenaris has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Investments in non-consolidated companies (associated and joint ventures) are accounted for by the equity method of accounting and are initially recognized at cost. The Company's investment in non-consolidated companies includes goodwill identified in acquisition, net of any accumulated impairment loss.

Under the equity method of accounting, the investments are initially recognized at cost and adjusted thereafter to recognize Tenaris's share of the post-acquisition profits or losses of the investee in profit or loss, and Tenaris's share of movements in other comprehensive income of the investee in other comprehensive income. Dividends received or receivable from associates and joint ventures are recognized as a reduction in the carrying amount of the investment.

If material, unrealized results on transactions between Tenaris and its non-consolidated companies are eliminated to the extent of Tenaris's interest in the non-consolidated companies. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment indicator of the asset transferred. Financial statements of non-consolidated companies have been adjusted where necessary to ensure consistency with IFRS.

The Company's pro-rata share of earnings in non-consolidated companies is recorded in the Consolidated Income Statement under *Equity in earnings (losses) of non-consolidated companies*. The Company's pro-rata share of changes in other reserves is recognized in the Consolidated Statement of Changes in Equity under *Other Reserves*.

B Group accounting (Cont.)

(2) Non-consolidated companies (Cont.)

Ternium

At December 31, 2018, Tenaris holds 11.46% of Ternium S.A ("Ternium")'s common stock. The following factors and circumstances evidence that Tenaris has significant influence (as defined by IAS 28, "Investments in associates companies and Joint Ventures") over Ternium, and as a result the Company's investment in Ternium has been accounted for under the equity method:

- Both the Company and Ternium are under the indirect common control of San Faustin S.A.;
- Four out of eight members of Ternium's Board of Directors (including Ternium's Chairman) are also members of the Company's Board of Directors;
- Under the shareholders' agreement by and between the Company and Techint Holdings S.à r.l, a wholly owned subsidiary of San Faustin S.A. and Ternium's main shareholder, dated January 9, 2006, Techint Holdings S.à.r.l, is required to take actions within its power to cause (a) one of the members of Ternium's Board of Directors to be nominated by the Company and (b) any director nominated by the Company to be only removed from Ternium's Board of Directors pursuant to previous written instructions of the Company.

Usiminas

At December 31, 2018, Tenaris holds through its Brazilian subsidiary Confab Industrial S.A. ("Confab"), 5.2% of the shares with voting rights and 3.07% of Usinas Siderúrgicas de Minas Gerais S.A. ("Usiminas") total share capital.

The acquisition of Usiminas shares was part of a larger transaction performed on January 16, 2012, pursuant to which Ternium, certain of its subsidiaries and Confab joined Usiminas' existing control group through the acquisition of ordinary shares representing 27.7% of Usiminas' total voting capital and 13.8% of Usiminas' total share capital. A shareholders' agreement governed the rights and obligations of the several control group members.

In April and May 2016 Tenaris's subsidiary Confab subscribed, in the aggregate, to 1.3 million preferred shares (BRL1.28 per share) for a total amount of BRL1.6 million (approximately \$0.5 million) and 11.5 million ordinary shares (BRL5.00 per share) for a total amount of BRL57.5 million (approximately \$16.6 million). The preferred and ordinary shares were issued on June 3, 2016 and July 19, 2016, respectively. Consequently as of December 31, 2018 Tenaris owns 36.5 million ordinary shares and 1.3 million preferred shares of Usiminas.

In 2014, a conflict arose between the T/T Group (comprising Confab and Ternium's subsidiaries Ternium Investments, Ternium Argentina and Prosid Investments) and Nippon Steel & Sumitomo Metal Corporation ("NSSMC") with respect to the governance of Usiminas.

On February 8, 2018, Ternium Investments resolved the dispute with NSSMC, and on April 10, 2018, the T/T Group entities (including Confab), NSSMC and Previdência Usiminas entered into a new shareholders' agreement for Usiminas, amending and restating the previously existing shareholders agreement (the "New SHA"). Usiminas' control group now holds, in the aggregate, 483.6 million ordinary shares bound to the New SHA, representing approximately 68.6% of Usiminas' voting capital, with the T/T Group holding approximately 47.1% of the total shares held by the control group (39.5% corresponding to the Ternium entities and the other 7.6% corresponding to Confab); NSSMC holding approximately 45.9% of the total shares held by the control group; and Previdência Usiminas holding the remaining 7% of the total shares held by the control group.

The New SHA reflects the agreed-upon corporate governance rules for Usiminas, including, among others, an alternation mechanism for the nomination of each of the chief executive officer and the Chairman of the board of directors, as well as a mechanism for the nomination of other members of Usiminas' executive board. The New SHA also incorporates an exit mechanism consisting of a buy-and-sell procedure, exercisable at any time during the term of the New SHA after the fourth-and-a-half-year anniversary from the May 2018 election of Usiminas' executive board. Such exit mechanism shall apply with respect to shares held by NSSMC and the T/T Group, and would allow either Ternium or NSSMC to purchase all or a majority of the Usiminas shares held by the other shareholder.

B Group accounting (Cont.)

(2) Non-consolidated companies (Cont.)

Usiminas (Cont.)

In connection with the execution of the New SHA, Confab and the Ternium entities amended and restated their separate shareholders' agreement governing their respective rights and obligations as members of the T/T Group to include provisions relating to the exit mechanism and generally to conform such separate shareholders' agreement to the other provisions of the New SHA. The rights of Confab and Ternium and its subsidiaries within the Ternium - Tenaris Group are governed under such amended and restated separate shareholders agreement. Those circumstances evidence that Tenaris has significant influence over Usiminas, and consequently, accounted it for under the equity method (as defined by IAS 28).

Techgen

Techgen S.A. de C.V. ("Techgen") is a Mexican joint venture company owned 48% by Ternium, 30% by Tecpetrol International S.A. and 22% by Tenaris. Techgen operates a natural gas-fired combined electric power plant in the Pesquería area of the State of Nuevo Leon, México. Tenaris, Ternium and Tecpetrol International S.A. are parties to a shareholders' agreement relating to the governance of Techgen, In addition, the Company, Ternium and Tecpetrol International S.A. are under the indirect common control of San Faustin S.A. Those circumstances evidence that Tenaris has significant influence over Techgen, and consequently, accounted it for under the equity method (as defined by IAS 28).

Tenaris carries its investment in Ternium, Usiminas and Techgen under the equity method, with no additional goodwill or intangible assets recognized. Tenaris reviews investments in non-consolidated companies for impairment whenever events or changes in circumstances indicate that the asset's carrying amount may not be recoverable, such as a significant or prolonged decline in fair value below the carrying value. At December 31, 2018, 2017 and 2016, no impairment provisions were recorded on Tenaris's investment in Ternium and Usiminas. See Note 11.

C Segment information

The Company is organized in one major business segment, Tubes, which is also the reportable operating segment.

The Tubes segment includes the production and sale of both seamless and welded steel tubular products and related services mainly for the oil and gas industry, particularly oil country tubular goods (OCTG) used in drilling operations, and for other industrial applications with production processes that consist in the transformation of steel into tubular products. Business activities included in this segment are mainly dependent on the oil and gas industry worldwide, as this industry is a major consumer of steel pipe products, particularly OCTG used in drilling activities. Demand for steel pipe products from the oil and gas industry has historically been volatile and depends primarily upon the number of oil and natural gas wells being drilled, completed and reworked, and the depth and drilling conditions of these wells. Sales are generally made to end users, with exports being done through a centrally managed global distribution network and domestic sales are made through local subsidiaries. Corporate general and administrative expenses have been allocated to the Tubes segment.

Others includes all other business activities and operating segments that are not required to be separately reported, including the production and selling of sucker rods, industrial equipment, coiled tubing, utility conduits for buildings, energy and raw materials that exceed internal requirements.

Tenaris's Chief Operating Decision Maker (CEO) holds monthly meetings with senior management, in which operating and financial performance information is reviewed, including financial information that differs from IFRS principally as follows:

- The use of direct cost methodology to calculate the inventories, while under IFRS it is at full cost, including absorption of production overheads and depreciations;
- The use of costs based on previously internally defined cost estimates, while, under IFRS, costs are calculated
 at historical cost;
- Other timing differences, if any.

Tenaris presents its geographical information in five areas: North America, South America, Europe, Middle East and Africa and Asia Pacific. For purposes of reporting geographical information, net sales are allocated to geographical areas based on the customer's location; allocation of assets, capital expenditures and associated depreciations and amortizations are based on the geographical location of the assets.

D Foreign currency translation

(1) Functional and presentation currency

IAS 21 (revised), "The effects of changes in foreign exchange rates" defines the functional currency as the currency of the primary economic environment in which an entity operates.

The functional and presentation currency of the Company is the U.S. dollar. The U.S. dollar is the currency that best reflects the economic substance of the underlying events and circumstances relevant to Tenaris's global operations.

Except for the Brazilian and Italian subsidiaries whose functional currencies are their local currencies, Tenaris determined that the functional currency of its other subsidiaries is the U.S. dollar, based on the following principal considerations:

- Sales are mainly negotiated, denominated and settled in U.S. dollars. If priced in a currency other than the U.S. dollar, the sales price may consider exposure to fluctuation in the exchange rate versus the U.S. dollar;
- Prices of their critical raw materials and inputs are priced and settled in U.S. dollars;
- Transaction and operational environment and the cash flow of these operations have the U.S. dollar as reference currency;
- Significant level of integration of the local operations within Tenaris's international global distribution network:
- Net financial assets and liabilities are mainly received and maintained in U.S. dollars;
- The exchange rate of certain legal currencies has long-been affected by recurring and severe economic crises.

(2) Transactions in currencies other than the functional currency

Transactions in currencies other than the functional currency are translated into the functional currency using the exchange rates prevailing at the date of the transactions or valuation where items are re-measured.

At the end of each reporting period: (i) monetary items denominated in currencies other than the functional currency are translated using the closing rates; (ii) non-monetary items that are measured in terms of historical cost in a currency other than the functional currency are translated using the exchange rates prevailing at the date of the transactions; and (iii) non-monetary items that are measured at fair value in a currency other than the functional currency are translated using the exchange rates prevailing at the date when the fair value was determined.

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 currencies other than the functional currency are recorded as gains and losses from foreign exchange and included in *Other financial results* in the Consolidated Income Statement, except when deferred in equity as qualifying cash flow hedges and qualifying net investment hedges.

(3) Translation of financial information in currencies other than the functional currency

Results of operations for subsidiaries whose functional currencies are not the U.S. dollar are translated into U.S. dollars at the average exchange rates for each quarter of the year. Financial statement positions are translated at the year-end exchange rates. Translation differences are recognized in a separate component of equity as currency translation adjustments. In the case of a sale or other disposal of any of such subsidiaries, any accumulated translation difference would be recognized in income as a gain or loss from the sale.

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

E Property, plant and equipment

Property, plant and equipment are recognized at historical acquisition or construction cost less accumulated depreciation and impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items. Property, plant and equipment acquired through acquisitions accounted for as business combinations have been valued initially at the fair market value of the assets acquired.

Major overhaul and rebuilding expenditures are capitalized as property, plant and equipment only when it is probable that future economic benefits associated with the item will flow to the Company and the investment enhances the condition of assets beyond its original condition. The carrying amount of the replaced part is derecognized. Maintenance expenses on manufacturing properties are recorded as cost of products sold in the year in which they are incurred.

Cost may also include transfers from equity of any gains or losses on qualifying cash flow hedges of foreign currency purchases of property, plant and equipment.

Borrowing costs that are attributable to the acquisition or construction of certain capital assets are capitalized as part of the cost of the asset, in accordance with IAS 23(R), "Borrowing Costs". Assets for which borrowing costs are capitalized are those that require a substantial period of time to prepare for their intended use.

Depreciation method is reviewed at each year end. Depreciation is calculated using the straight-line method to depreciate the cost of each asset to its residual value over its estimated useful life, as follows:

Land No Depreciation
Buildings and improvements 30-50 years
Plant and production equipment 10-40 years
Vehicles, furniture and fixtures, and other equipment 4-10 years

The assets' residual values and useful lives of significant plant and production equipment are reviewed and adjusted, if appropriate, at each year-end date. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Management's re-estimation of assets useful lives, performed in accordance with IAS 16, "Property, Plant and Equipment", did not materially affect depreciation expenses for 2018, 2017 and 2016.

Tenaris depreciates each significant part of an item of property, plant and equipment for its different production facilities that (i) can be properly identified as an independent component with a cost that is significant in relation to the total cost of the item, and (ii) has a useful operating life that is different from another significant part of that same item of property, plant and equipment.

Gains and losses on disposals are determined by comparing the proceeds with the carrying amount of assets and are recognized under *Other operating income* or *Other operating expenses* in the Consolidated Income Statement.

F Intangible assets

(1) Goodwill

Goodwill represents the excess of the acquisition cost over the fair value of Tenaris's share of net identifiable assets acquired as part of business combinations determined mainly by independent valuations. Goodwill is tested at least annually for impairment and carried at cost less accumulated impairment losses. Impairment losses on goodwill are not reversed. Goodwill is included in the Consolidated Statement of Financial Position under *Intangible assets, net.*

For the purpose of impairment testing, goodwill is allocated to a subsidiary or group of subsidiaries that are expected to benefit from the business combination which generated the goodwill being tested.

F Intangible assets (Cont.)

(2) Information systems projects

Costs associated with maintaining computer software programs are generally recognized as an expense as incurred. However, costs directly related to the development, acquisition and implementation of information systems are recognized as intangible assets if it is probable that they have economic benefits exceeding one year and comply with the recognition criteria of IAS 38, "Intangible Assets".

Information systems projects recognized as assets are amortized using the straight-line method over their useful lives, generally not exceeding a period of 3 years. Amortization charges are mainly classified as *Selling, general and administrative expenses* in the Consolidated Income Statement.

Management's re-estimation of assets useful lives, performed in accordance with IAS 38, did not materially affect amortization expenses for 2018, 2017 and 2016.

(3) Licenses, patents, trademarks and proprietary technology

Licenses, patents, trademarks, and proprietary technology acquired in a business combination are initially recognized at fair value at the acquisition date. Licenses, patents, proprietary technology and those trademarks that have a finite useful life are carried at cost less accumulated amortization. Amortization is calculated using the straight-line method to allocate the cost over their estimated useful lives, and does not exceed a period of 10 years. Amortization charges are mainly classified as *Selling, general and administrative expenses* in the Consolidated Income Statement.

The balance of acquired trademarks that have indefinite useful lives according to external appraisal amounts to \$86.7 million at December 31, 2018 and 2017, and are included in Hydril CGU. Main factors considered in the determination of the indefinite useful lives include the years that they have been in service and their recognition among customers in the industry.

Management's re-estimation of assets useful lives, performed in accordance with IAS 38, did not materially affect amortization expenses for 2018, 2017 and 2016.

(4) Research and development

Research expenditures as well as development costs that do not fulfill the criteria for capitalization are recorded as *Cost of sales* in the Consolidated Income Statement as incurred. Research and development expenditures included in *Cost of sales* for the years 2018, 2017 and 2016 totaled \$63.4 million, \$63.7 million and \$68.6 million, respectively.

(5) Customer relationships

In accordance with IFRS 3, "Business Combinations" and IAS 38, Tenaris has recognized the value of customer relationships separately from goodwill attributable to the acquisition of Maverick and Hydril groups.

Customer relationships acquired in a business combination are recognized at fair value at the acquisition date, have a finite useful life and are carried at cost less accumulated amortization. Amortization is calculated using the straight line method over the initial expected useful life of approximately 14 years for Maverick and 10 years for Hydril.

Maverick's Tubes business, has experienced a significant change in its customers portfolio. While initially Maverick was selling OCTG products mostly to distributors, today it is selling mostly through Rig Direct® to end users. By the end of 2018, Maverick supplied the majority of its customers of OCTG products with Rig Direct® services. Additionally, line pipe products while still being sold largely to distributors due to the different nature of this market, are now focused on large pipeline projects through a completely different set of distributors. Based on these circumstances, the Company has reviewed the useful life of Maverick's Tubes customer relationships and decided to reduce the remaining useful life from 2 years to zero, consequently a higher amortization charge of approximately \$109 million was recorded in the Consolidated Income Statement under *Selling, general and administrative expenses* for the year ended December 31, 2018.

As of December 31, 2018 the residual value of Maverick's coiled tubing customer relationships amounts to \$19.9 million and the residual useful life is 2 years, while Hydril's customer relationships is fully amortized.

G Impairment of non-financial assets

Long-lived assets including identifiable intangible assets are reviewed for impairment at the lowest level for which there are separately identifiable cash flows (cash generating units, or CGU). Most of the Company's principal subsidiaries that constitute a CGU have a single main production facility and, accordingly, each of such subsidiary represents the lowest level of asset aggregation that generates largely independent cash inflows.

Assets that are subject to amortization are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Intangible assets with indefinite useful lives, including goodwill, are subject to at least an annual impairment test.

In assessing whether there is any indication that a CGU may be impaired, external and internal sources of information are analyzed. Material facts and circumstances specifically considered in the analysis usually include the discount rate used in Tenaris's cash flow projections and the business condition in terms of competitive and economic factors, such as the cost of raw materials, oil and gas prices, capital expenditure programs for Tenaris's customers and the evolution of the rig count.

An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher between the asset's value in use and fair value less costs of disposal. Any impairment loss is allocated to reduce the carrying amount of the assets of the CGU in the following order:

- (a) first, to reduce the carrying amount of any goodwill allocated to the CGU; and
- (b) then, to the other assets of the unit (group of units) pro-rata on the basis of the carrying amount of each asset in the unit (group of units), considering not to reduce the carrying amount of the asset below the highest of its fair value less cost of disposal, its value in use or zero.

The value in use of each CGU is determined on the basis of the present value of net future cash flows which would be generated by such CGU. Tenaris uses cash flow projections for a five year period with a terminal value calculated based on perpetuity and appropriate discount rates.

For purposes of calculating the fair value less costs of disposal, Tenaris uses the estimated value of future cash flows that a market participant could generate from the corresponding CGU.

Management judgment is required to estimate discounted future cash flows. Actual cash flows and values could vary significantly from the forecasted future cash flows and related values derived using discounting techniques.

Non-financial assets other than goodwill that suffered an impairment are reviewed for possible reversal at each reporting date.

Tenaris regularly conducts assessments of the carrying values of its assets. The value-in-use was used to determine the recoverable value. Value-in-use is calculated by discounting the estimated cash flows over a five-year period based on forecasts approved by management. For the subsequent years beyond the five-year period, a terminal value is calculated based on perpetuity considering a nominal growth rate of 2%.

Tenaris's main source of revenue is the sale of products and services to the oil and gas industry and the level of such sales is sensitive to international oil and gas prices and their impact on drilling activities.

For purposes of assessing key assumptions, Tenaris uses external sources of information and management judgment based on past experience.

The main key assumptions used in estimating the value in use are discount rate, growth rate and competitive and economic factors applied to determine Tenaris's cash flow projections, such as oil and gas prices, average number of active oil and gas drilling rigs (rig count), capital expenditure programs for Tenaris's customers, and raw material costs.

Management has determined the value of each of the key assumptions as follows:

- Discount rate: based on the applicable weighted average cost of capital (WACC), which is considered to be a good indicator of capital cost, taking into account the industry, country and size of the business. For each CGU where assets are allocated, a specific WACC was determined taking into account the industry, country and size of the business. In 2018, the main discount rates used were in a range between 8.7% and 11.7%.

G Impairment of non-financial assets (Cont.)

- Growth rate: considers the long-term average growth rate for the oil and gas industry, the inflation impact on prices and costs, the higher demand to offset depletion of existing fields and the Company's expected market penetration.
- Oil and gas prices and customer's capital expenditures: based on industry analysts' reports and management's expectations of market development respectively.
- Rig count: based on information published by Baker Hughes and management's expectations.
- Raw material costs: based on industry analysts' reports and management's expectations.

The main factors that could result in additional impairment charges in future periods would be an increase in the discount rate or a decrease in growth rate used in the Company's cash flow projections, a deterioration of the business, competitive and economic factors, such as a decrease in oil and gas prices, and the evolution of the rig count.

As of December 31, 2018, for all CGUs, a reasonably possible change in key assumptions would not cause the carrying amount to exceed recoverable amount.

No impairment charge was recorded in 2018, 2017 and 2016.

H Other investments

Other investments consist primarily of investments in financial instruments and time deposits with a maturity of more than three months at the date of purchase.

Certain non-derivative financial assets that the Company held not for trading have been categorized as financial assets "at fair value through other comprehensive income" (FVTOCI). They are carried at fair value and interest income from these financial assets is included in finance income using the effective interest rate method. Unrealized gains or losses are recorded as a fair value adjustment in the Consolidated Statement of Comprehensive Income and transferred to the Consolidated Income Statement when the financial asset is sold. Exchange gains and losses and impairments related to the financial assets are immediately recognized in the Consolidated Income Statement. FVTOCI instruments with maturities greater than 12 months after the balance sheet date are included in non-current assets.

Other investments in financial instruments and time deposits are categorized as financial assets "at fair value through profit or loss" because such investments are held for trading and their performance is evaluated on a fair value basis. The results of these investments are recognized in *Financial Results* in the Consolidated Income Statement.

Purchases and sales of financial investments are recognized as of their settlement date.

The fair values of quoted investments are generally based on current bid prices. If the market for a financial investment is not active or the securities are not listed, Tenaris estimates the fair value by using standard valuation techniques (see Section III Financial Risk Management).

I Inventories

Inventories are stated at the lower between cost and net realizable value. The cost of finished goods and goods in process is comprised of raw materials, direct labor, utilities, freights and other direct costs and related production overhead costs, and it excludes borrowing costs. The allocation of fixed production costs is based on the normal level of production capacity. Supplies and raw material cost is mainly based on the FIFO method while goods in progress and finished goods cost are mainly based on specific historical production costs for each production order. Tenaris estimates net realizable value of inventories by grouping, where applicable, similar or related items. Net realizable value is the estimated selling price in the ordinary course of business, less any estimated costs of completion and selling expenses. Goods in transit as of year-end are valued based on the supplier's invoice cost.

Tenaris establishes an allowance for obsolete or slow-moving inventories related to finished goods, goods in process, supplies and spare parts. For slow moving or obsolete finished products, an allowance is established based on management's analysis of product aging. An allowance for obsolete and slow-moving inventory of supplies and spare parts is established based on management's analysis of such items to be used as intended and the consideration of potential obsolescence due to technological changes, aging and consumption patterns.

J Trade and other receivables

Trade and other receivables are recognized initially at fair value that corresponds to the amount of consideration that is unconditional unless they contain significant financing components. The Company holds trade receivables with the objective to collect the contractual cash flows and therefore measures them subsequently at amortized cost using the effective interest method. Due to the short-term nature, their carrying amount is considered to be the same as their fair value.

Tenaris applies the IFRS 9 simplified approach to measure expected credit losses, which uses a lifetime expected loss allowance for all trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The expected loss rates are based on the payment profiles of sales over a period of three years and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables.

K Cash and cash equivalents

Cash and cash equivalents are comprised of cash at banks, liquidity funds and short-term investments with a maturity of less than three months at the date of purchase which are readily convertible to known amounts of cash. Assets recorded in cash and cash equivalents are carried at fair market value or at historical cost which approximates fair market value

In the Consolidated Statement of Financial Position, bank overdrafts are included in *Borrowings* in current liabilities.

For the purposes of the Consolidated Statement of Cash Flows, cash and cash equivalents includes overdrafts.

L Equity

(1) Equity components

The Consolidated Statement of Changes in Equity includes:

- The value of share capital, legal reserve, share premium and other distributable reserves calculated in accordance with Luxembourg law;
- The currency translation adjustment, other reserves, retained earnings and non-controlling interest calculated in accordance with IFRS.

(2) Share capital

The Company has an authorized share capital of a single class of 2.5 billion shares having a nominal value of \$1.00 per share. Total ordinary shares issued and outstanding as of December 31, 2018, 2017 and 2016 are 1,180,536,830 with a par value of \$1.00 per share with one vote each. All issued shares are fully paid.

(3) Dividends distribution by the Company to shareholders

Dividends distributions are recorded in the Company's financial statements when Company's shareholders have the right to receive the payment, or when interim dividends are approved by the Board of Directors in accordance with the by-laws of the Company.

Dividends may be paid by the Company to the extent that it has distributable retained earnings, calculated in accordance with Luxembourg law (see Note 24 (iii)).

M Borrowings

Borrowings are recognized initially at fair value net of transaction costs incurred and subsequently measured at amortized cost. Any difference between the proceeds (net of transaction costs) and the redemption amount is recognized in profit or loss over the period of the borrowings using the effective interest method.

N Current and Deferred income tax

The income tax expense or credit for the period is the tax payable on the current period's taxable income based on the applicable income tax rate for each jurisdiction adjusted by changes in deferred tax assets and liabilities attributable to temporary differences and to unused tax losses. Tax is recognized in the Consolidated Income Statement, except for tax items recognized in the Consolidated Statement of Other Comprehensive Income.

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the reporting date in the countries where the Company's subsidiaries operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions when appropriate.

Deferred income tax is recognized applying the liability method on temporary differences arising between the tax basis of assets and liabilities and their carrying amounts in the financial statements. The principal temporary differences arise from fair value adjustments of assets acquired in business combinations, the effect of currency translation on depreciable fixed assets and inventories, depreciation on property, plant and equipment, valuation of inventories and provisions for pension plans. Deferred tax assets are also recognized for net operating loss carry-forwards. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the time period when the asset is realized or the liability is settled, based on tax laws that have been enacted or substantively enacted at the reporting date.

Deferred tax assets are recognized to the extent that it is probable that future taxable income will be available against which the temporary differences can be utilized. At the end of each reporting period, Tenaris reassesses unrecognized deferred tax assets. Tenaris recognizes a previously unrecognized deferred tax asset to the extent that it has become probable that future taxable income will allow the deferred tax asset to be recovered.

Deferred tax liabilities and assets are not recognized for temporary differences between the carrying amount and tax basis of investments in foreign operations where the company is able to control the timing of the reversal of the temporary differences and it is probable that the differences will not reverse in the foreseeable future.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset where the entity has a legally enforceable right to offset and intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously.

Deferred tax assets and liabilities are re-measured if tax rates change. These amounts are charged or credited to the Consolidated Income Statement or to the item *other comprehensive income for the year* in the Consolidated Statement of Comprehensive Income, depending on the account to which the original amount was charged or credited.

O Employee benefits

(1) Short-term obligations

Liabilities for wages and salaries are recognized in respect of employees' services up to the end of the reporting period and are measured at the amounts expected to be paid when the liabilities are settled. The liabilities are presented as current employee benefit obligations in the balance sheet.

(2) Post employment benefits

The Company has defined benefit and defined contribution plans. A defined benefit plan is a pension plan that defines an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age, years of service and compensation.

The liability recognized in the statement of financial position in respect of defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets, if any. The defined benefit obligation is calculated annually (at year end) 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 interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating to the terms of the related pension obligation.

O Employee benefits (Cont.)

(2) Post employment benefits (Cont.)

Remeasurement 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 Income Statement.

For defined benefit plans, net interest income/expense is calculated based on the surplus or deficit derived by the difference between the defined benefit obligations less fair value of plan assets. For defined contribution plans, the Company pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. The Company has no further payment obligations once the contributions have been paid. The contributions are recognized as employee benefit expenses 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.

Tenaris sponsors funded and unfunded defined benefit pension plans in certain subsidiaries. The most significant

- An unfunded defined benefit employee retirement plan for certain senior officers. The plan is designed to provide certain benefits to those officers (additional to those contemplated under applicable labor laws) in case of termination of the employment relationship due to certain specified events, including retirement. This unfunded plan provides defined benefits based on years of service and final average salary. As of December 31, 2018 the outstanding liability for this plan amounts to \$41.2 million.
- Employees' service rescission indemnity: the cost of this obligation is charged to the Consolidated Income Statement over the expected service lives of employees. This provision is primarily related to the liability accrued for employees at Tenaris's Italian subsidiary. As from January 1, 2007 as a consequence of a change in an Italian law, employees were entitled to make contributions to external funds, thus, Tenaris's Italian subsidiary pays every year the required contribution to the funds with no further obligation. As a result, the plan changed from a defined benefit plan to a defined contribution plan effective from that date, but only limited to the contributions of 2007 onwards. As of December 31, 2018 the outstanding liability for this plan amounts to \$17.3 million.
- Funded retirement benefit plans held in Canada for salary and hourly employees hired prior a certain date based on years of service and, in the case of salaried employees, final average salary. Plan assets consist primarily of investments in equities and money market funds. Both plans were replaced for defined contribution plans. Effective June 2016 the salary plan was frozen for the purposes of credited service as well as determination of final average pay. As of December 31, 2018 the outstanding liability for this plan amounts to \$8.2 million.
- Funded retirement benefit plan held in the US for the benefit of some employees hired prior a certain date, frozen for the purposes of credited service as well as determination of final average pay for the retirement benefit calculation. Plan assets consist primarily of investments in equities and money market funds. Additionally, an unfunded postretirement health and life plan is present that offers limited medical and life insurance benefits to the retirees, hired before a certain date. As of December 31, 2018 the outstanding liability for these plans amounts to \$13.7 million.

(3) Other long term benefits

During 2007, Tenaris launched an employee retention and long term incentive program (the "Program") applicable to certain senior officers and employees of the Company, who will be granted a number of Units throughout the duration of the Program. The value of each of these Units is based on Tenaris's shareholders' equity (excluding non-controlling interest). Also, the beneficiaries of the Program are entitled to receive cash amounts based on (i) the amount of dividend payments made by Tenaris to its shareholders, and (ii) the number of Units held by each beneficiary to the Program. Until 2017 units were vest ratably over a period of four years and will be mandatorily redeemed by the Company ten years after grant date, with the option of an early redemption at seven years after the grant date. From 2018 units were vest ratably over the same period and will be mandatorily redeemed by the Company seven years after grant date. As the cash payment of the benefit is tied to the book value of the shares, and not to their market value, Tenaris valued this long-term incentive program as a long term benefit plan as classified in IAS 19, "Employee Benefits".

As of December 31, 2018 and 2017, the outstanding liability corresponding to the Program amounts to \$91.2 million and \$79.2 million, respectively. The total value of the units granted (vested and unvested) to date under the program, considering the number of units and the book value per share as of December 31, 2018 and 2017, is \$106 million and \$94.8 million, respectively.

O Employee benefits (Cont.)

(4) Termination benefits

Termination benefits are payable when employment is terminated by Tenaris before the normal retirement date, or when an employee accepts voluntary redundancy in exchange for these benefits. Tenaris recognizes termination benefits at the earlier of the following dates: (a) when it can no longer withdraw the offer of those benefits; and (b) when the costs for a restructuring that is within the scope of IAS 37 and involves the payment of terminations benefits. In the case of an offer made to encourage voluntary redundancy, the termination benefits are measured based on the number of employees expected to accept the offer.

(5) Other compensation obligations

Employee entitlements to annual leave and long-service leave are accrued as earned.

Compensation to employees in the event of dismissal is charged to income in the year in which it becomes payable.

P Provisions

Tenaris is subject to various claims, lawsuits and other legal proceedings, including customer claims, in which a third party is seeking payment for alleged damages, reimbursement for losses or indemnity. Tenaris's potential liability with respect to such claims, lawsuits and other legal proceedings cannot be estimated with certainty. Management periodically reviews the status of each significant matter and assesses potential financial exposure. If, as a result of past events, a potential loss from a claim or proceeding is considered probable and the amount can be reliably estimated, a provision is recorded. Accruals for loss contingencies reflect a reasonable estimate of the losses to be incurred based on information available to management as of the date of preparation of the financial statements, and take into consideration Tenaris's litigation and settlement strategies. These estimates are primarily constructed with the assistance of legal counsel. As the scope of liabilities become better defined, there may be changes in the estimates of future costs which could have a material adverse effect on its results of operations, financial condition and cash flows.

If Tenaris expects to be reimbursed for an accrued expense, as would be the case for an expense or loss covered under an insurance contract, and reimbursement is considered virtually certain, the expected reimbursement is recognized as a receivable.

This note should be read in conjunction with Note 24.

Q Trade and other payables

Trade and other payables are recognized initially at fair value, generally the nominal invoice amount and subsequently measured at amortized cost. They are presented as current liabilities unless payment is not due within twelve months after the reporting period. Due to the short-term nature their carrying amounts are considered to be the same as their fair value.

R Revenue recognition

Revenue comprises the fair value of the consideration received or receivable for the sale of goods and services in the ordinary course of Tenaris's activities. The revenue recognized by the Company is measured at the transaction price of the consideration received or receivable to which the Company is entitled to, reduced by estimated returns and other customer credits, such as discounts and volume rebates, based on the expected value to be realized and after eliminating sales within the group.

Revenue is recognized at a point in time or over time from sales when control has been transferred and there is no unfulfilled performance obligation that could affect the acceptance of the product by the customer. Delivery occurs when the products have been shipped to the specific location, the risks of obsolescence and loss have been transferred and either the customer has accepted the product in accordance with the sales contract, the acceptance provisions have lapsed or the Company has objective evidence that all criteria for acceptance have been satisfied, including all performance obligations. For bill and hold transactions revenue is recognized only to the extent that (a) the reason for the bill and hold arrangement must be substantive (for example, the customer has requested the arrangement); (b) the products have been specifically identified and are ready for delivery; (c) the Company cannot have the ability to use the product or to direct it to another customer; (d) the usual payment terms apply.

In addition, some contracts include a right of return. Therefore, a provision and a right to the returned goods are recognized for the products expected to be returned. Accumulated experience is used to estimate such returns.

R Revenue recognition (Cont.)

Where the contracts include multiple performance obligations, the transaction price is allocated to each performance obligation based on the stand-alone selling prices. Where these are not directly observable, they are estimated based on the expected cost plus margin.

Other revenues earned by Tenaris are recognized on the following basis:

- Interest income: on the effective yield basis.
- Dividend income from investments in other companies: when Tenaris's right to receive payment is established.
- Construction contracts revenues is recognized in accordance with the stage of the project completion.

The Company does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Company does not adjust any of the transaction prices for the time value of money.

S Cost of sales and other selling expenses

Cost of sales and other selling expenses are recognized in the Consolidated Income Statement on the accrual basis of accounting.

Commissions, freights and other selling expenses, including shipping and handling costs, are recorded in *Selling*, general and administrative expenses in the Consolidated Income Statement.

T Earnings per share

Earnings per share are calculated by dividing the income attributable to owners of the parent by the daily weighted average number of common shares outstanding during the year.

There are no dilutive potential ordinary shares.

U Financial instruments

Non derivative financial instruments comprise investments in financial debt instruments and equity, time deposits, trade and other receivables, cash and cash equivalents, borrowings and trade and other payables.

Since January 1, 2018 the Company classifies its financial instruments according to the following measurement categories:

Amortized Cost: Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest. Interest income from these financial assets is included in finance income using the effective interest rate method.

Exchange gains and losses and impairments related to the financial assets are immediately recognized in the Consolidated Income Statement.

Fair value through other comprehensive income ("FVOCI"): Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest. Interest income from these financial assets is included in finance income using the effective interest rate method. Unrealized gains or losses are recorded as a fair value adjustment in the Consolidated Statement of Comprehensive Income and transferred to the Consolidated Income Statement when the financial asset is sold.

Fair value through profit and loss ("FVPL"): Assets that do not meet the criteria for amortized cost or FVOCI. Changes in fair value of financial instruments at FVPL are immediately recognized in the Consolidated Income Statement.

The classification depends on the Company's business model for managing the financial assets and contractual terms of the cash flows.

Financial assets and liabilities are recognized and derecognized on their settlement date.

Accounting for derivative financial instruments and hedging activities is included within the Section III, Financial Risk Management.

U Financial instruments (Cont.)

Until December 2017, Tenaris's non derivative financial instruments were classified according to the following categories:

- Financial instruments at fair value through profit and loss: comprised mainly Other Investments current, investments in certain financial debt instruments and time deposits held for trading expiring in less than ninety days from the measurement date (included within cash and cash equivalents).
- Loans and receivables: comprised cash and cash equivalents, trade receivables and other receivables and were
 measured at amortized cost using the effective interest rate method less any impairment.
- Available for sale assets: comprised the Company's interest in the Venezuelan Companies.
- Held to maturity: comprised financial assets that the Company had both the ability and the intention to hold to maturity. They were measured at amortized cost using the effective interest method.
- Other financial liabilities: comprise borrowings, trade and other payables and were measured at amortized cost using the effective interest rate method.

The classification depended on the nature and purpose that the Company set to the financial instrument.

Financial assets and liabilities were recognized and derecognized on their settlement date.

Financial assets were initially measured at fair value, net of transaction costs, except for those financial assets classified as financial assets at fair value through profit or loss.

Financial liabilities, including borrowings, were initially measured at fair value, net of transaction costs and subsequently measured at amortized cost using the effective interest method, with interest expense recognized on an effective yield basis.

V Non-current assets held for sale and discontinued operations

Non-current assets (or disposal groups) are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use and a sale is considered highly probable. They are measured at the lower of their carrying amount and fair value less costs to sell, except for assets such as deferred tax assets, assets arising from employee benefits and financial assets that are carried at fair value.

An impairment loss is recognized for any initial or subsequent write-down of the asset (or disposal group) to fair value less costs to sell. A gain is recognized for any subsequent increase in fair value less costs to sell of an asset (or disposal group), but not in excess of any cumulative impairment loss previously recognized.

Non-current assets (including those that are part of a disposal group) are not depreciated or amortized while they are classified as held for sale. Interest and other expenses attributable to the liabilities of a disposal group classified as held for sale continue to be recognized.

Non-current assets classified as held for sale and the assets of a disposal group classified as held for sale are presented separately from the other assets in the balance sheet. The liabilities of a disposal group classified as held for sale are presented separately from other liabilities in the balance sheet.

A discontinued operation is a component of the entity that has been disposed of or is classified as held for sale and that represents a separate line of business or geographical area of operations, is part of a single coordinated plan to dispose of such a line of business or area of operations, or is a subsidiary acquired exclusively with a view to resale. The results of discontinued operations are presented separately in the Consolidated Income Statement. See Note 27.

III. FINANCIAL RISK MANAGEMENT

The multinational nature of Tenaris's operations and customer base exposes the Company to a variety of risks, mainly related to market risks (including the effects of changes in foreign currency exchange rates and interest rates), credit risk and capital market risk. In order to manage the volatility related to these exposures, management evaluates exposures on a consolidated basis, taking advantage of exposure netting. The Company or its subsidiaries may then enter into various derivative transactions in order to prevent potential adverse impacts on Tenaris's financial performance. Such derivative transactions are executed in accordance with internal policies and hedging practices.

A. Financial Risk Factors

(i) Capital Risk Management

Tenaris seeks to maintain a low debt to total equity ratio considering the industry and the markets where it operates. The year-end ratio of debt to total equity (where "debt" comprises financial borrowings and "total equity" is the sum of financial borrowings and equity) is 0.04 as of December 31, 2018 and 0.08 as of December 31, 2017. The Company does not have to comply with regulatory capital adequacy requirements.

(ii) Foreign exchange risk

Tenaris manufactures and sells its products in a number of countries throughout the world and consequently is exposed to foreign exchange rate risk. Since the Company's functional currency is the U.S. dollar the purpose of Tenaris's foreign currency hedging program is mainly to reduce the risk caused by changes in the exchange rates of other currencies against the U.S. dollar.

Tenaris's exposure to currency fluctuations is reviewed on a periodic consolidated basis. A number of derivative transactions are performed in order to achieve an efficient coverage in the absence of operative or natural hedges. Almost all of these transactions are forward exchange rates contracts (see Note 23 Derivative financial instruments).

Tenaris does not enter into derivative financial instruments for trading or other speculative purposes, other than non-material investments in structured products.

In the case of subsidiaries with functional currencies other than the U.S. dollar, the results of hedging activities, reported in accordance with IFRS, may not reflect entirely the management's assessment of its foreign exchange risk hedging program. Intercompany balances between Tenaris's subsidiaries may generate financial gains (losses) to the extent that functional currencies differ.

The value of Tenaris's financial assets and liabilities is subject to changes arising from the variation of foreign currency exchange rates. The following table provides a breakdown of Tenaris's main financial assets and liabilities (including foreign exchange derivative contracts) which impact the Company's profit and loss as of December 31, 2018 and 2017:

All amounts Long / (Short) in thousands of U.S. dollars	As of December 31,				
Currency Exposure / Functional currency	2018	2017			
Argentine Peso / U.S. Dollar	(186,867)	(64,482)			
Euro / U.S. Dollar	(175,419)	(365,926)			

The main relevant exposures correspond to:

Argentine Peso / U.S. dollar

As of December 31, 2018 and 2017 consisting primarily of Argentine Peso-denominated financial, trade, social and fiscal payables at certain Argentine subsidiaries whose functional currency is the U.S. dollar. A change of 1% in the ARS/USD exchange rate would have generated a pre-tax gain / loss of \$1.9 million and \$0.6 million as of December 31, 2018 and 2017 respectively.

■ Euro / U.S. dollar

As of December 31, 2018 and 2017, consisting primarily of Euro-denominated intercompany liabilities at certain subsidiaries whose functional currency is the U.S. dollar. A change of 1% in the EUR/USD exchange rate would have generated a pre-tax gain / loss of \$1.3 million and \$3.7 million as of December 31, 2018 and 2017, respectively, which would have been to a large extent offset by changes in currency translation adjustment included in Tenaris's net equity position.

A. Financial Risk Factors (Cont.)

(ii) Foreign exchange risk (Cont.)

Considering the balances held as of December 31, 2018 on financial assets and liabilities exposed to foreign exchange rate fluctuations, Tenaris estimates that the impact of a simultaneous 1% appreciation / depreciation movement in the levels of foreign currencies exchange rates relative to the U.S. dollar, would be a pre-tax gain / loss of \$3.6 million (including a loss / gain of \$2.3 million due to foreign exchange derivative contracts), which would be partially offset by changes to Tenaris's net equity position of \$1.9 million. For balances held as of December 31, 2017, a simultaneous 1% favorable / unfavorable movement in the foreign currencies exchange rates relative to the U.S. dollar, would have generated a pre-tax gain / loss of \$5.3 million (including a loss / gain of \$6.7 million due to foreign exchange derivative contracts), which would have been partially offset by changes to Tenaris's net equity position of \$3.4 million.

The Company entered into foreign exchange derivative contracts to mitigate the exposure to fluctuations in exchange rates.

(iii) Interest rate risk

Tenaris is subject to interest rate risk on its investment portfolio and its debt. The Company uses a mix of variable and fixed rate debt in combination with its investment portfolio strategy. The Company may choose to enter into interest rate swaps to mitigate the exposure to changes in the interest rates.

The following table summarizes the proportions of variable-rate and fixed-rate debt as of each year end.

	As of December 31,					
	2018		2017			
	Amount in thousands	%	Amount in thousands	%		
	of U.S. dollars		of U.S. dollars			
Fixed rate (*)	520,471	97%	946,215	98%		
Variable rate	18,536	3%	19,644	2%		
Total	539,007		965,859			

(*) Out of the \$520 million fixed rate borrowings \$493 million are short-term.

The Company estimates that, if market interest rates applicable to Tenaris's borrowings had been 100 basis points higher, then the additional pre-tax loss would have been \$8.2 million in 2018 and \$8.0 million in 2017.

(iv) Credit risk

Credit risk arises from cash and cash equivalents, deposits with banks and financial institutions, as well as credit exposures to customers, including outstanding receivables and committed transactions. The Company also actively monitors the creditworthiness of its treasury, derivative and insurance counterparties in order to minimize its credit risk.

There is no significant concentration of credit risk from customers. No single customer comprised more than 10% of Tenaris's net sales in 2018, 2017 and 2016.

Tenaris's credit policies related to sales of products and services are designed to identify customers with acceptable credit history and to allow Tenaris to require the use of credit insurance, letters of credit and other instruments designed to minimize credit risks whenever deemed necessary. Tenaris maintains allowances for impairment for potential credit losses (See Section II J).

As of December 31, 2018 and 2017 trade receivables amount to \$1,737.4 million and \$1,214.1 million respectively. Trade receivables have guarantees under credit insurance of \$181.7 million and \$190.7 million, letter of credit and other bank guarantees of \$62.3 million and \$42.2 million, and other guarantees of \$42.2 million and \$14.1 million as of December 31, 2018 and 2017 respectively.

As of December 31, 2018 and 2017 past due trade receivables amounted to \$368.4 million and \$230.9 million, respectively. The amount of past due trade receivables up to 15 days amounted to \$139 million and \$50 million respectively. Consequently the past due trade receivables over 15 days amounted to \$229.4 million and \$180.9 million. As of December 31, 2018 and 2017, guaranteed trade receivables amounted to \$31.5 million and \$27.3 million while \$66.5 million and \$78.4 million are included in the allowance for doubtful accounts. Both the allowance for doubtful accounts and the existing guarantees are sufficient to cover doubtful trade receivables.

A. Financial Risk Factors (Cont.)

(v) Counterparty risk

Tenaris has investment guidelines with specific parameters to limit issuer risk on marketable securities. Counterparties for derivatives and cash transactions are limited to high credit quality financial institutions, normally investment grade.

Approximately 83% of Tenaris's liquid financial assets correspond to Investment Grade-rated instruments as of December 31, 2018, in comparison with approximately 71% as of December 31, 2017.

(vi) Liquidity risk

Tenaris financing strategy aims to maintain adequate financial resources and access to additional liquidity. During 2018, Tenaris has counted on cash flows from operations as well as additional bank financing to fund its transactions.

Management maintains sufficient cash and marketable securities to finance normal operations and believes that Tenaris also has appropriate access to market for short-term working capital needs.

Liquid financial assets as a whole (comprising cash and cash equivalents and other investments) were 7% of total assets at the end of 2018 compared to 11% at the end of 2017.

Tenaris has a conservative approach to the management of its liquidity, which consists of i) cash and cash equivalents (cash in banks, liquidity funds and investments with a maturity of less than three months at the date of purchase), and ii) Other Investments (fixed income securities, time deposits, and fund investments).

Tenaris holds primarily investments in money market funds and variable or fixed-rate securities from investment grade issuers. As of December 31, 2018 and 2017, Tenaris does not have direct exposure to financial instruments issued by European sovereign counterparties.

Tenaris holds its investments primarily in U.S. dollars. As of December 31, 2018 and 2017, U.S. dollar denominated liquid assets represented approximately 95% and 93% of total liquid financial assets respectively.

(vii) Commodity price risk

In the ordinary course of its operations, Tenaris purchases commodities and raw materials that are subject to price volatility caused by supply conditions, political and economic variables and other factors. As a consequence, Tenaris is exposed to risk resulting from fluctuations in the prices of these commodities and raw materials. Tenaris fixes the prices of such raw materials and commodities for short-term periods, typically not in excess of one year, in general Tenaris does not hedge this risk.

B. Category of financial instruments and classification within the fair value hierarchy

As mentioned in note II.A, the Company classifies its financial instruments in the following measurement categories: amortized cost, fair value through other comprehensive income ("FVOCI") and fair value through profit and loss ("FVPL"). For financial instruments that are measured in the statement of financial position at fair value, IFRS 13, "Fair value measurement" requires a disclosure of fair value measurements by level according to the following fair value measurement hierarchy:

Level 1 - Quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 - Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices).

Level 3 - Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

B. Category of financial instruments and classification within the fair value hierarchy (Cont.)

The following tables present the financial instruments by category and levels as of December 31, 2018 and 2017.

	Commine	Meas	At Fair Value				
December 31, 2018	Carrying amount	Amortized Cost	FVOCI	FVPL	Level 1	Level 2	Level 3
Assets							
Cash and cash equivalents	428,361	268,163	-	160,198	160,198	-	-
Other investments	487,734	300,410	166,094	21,230	168,165	19,159	-
Fixed income (time-deposit, zero coupon bonds, commercial papers)	300,410	300,410	-	-	-	-	-
Certificates of deposits	198,912	198,912	-	-	-	-	-
Commercial papers	9,932	9,932	-	-	-	-	-
Other notes	91,566	91,566	-	-	-	-	-
Bonds and other fixed income	187,324	-	166,094	21,230	168,165	19,159	-
U.S. government securities	1,077	-	1,077	-	1,077	-	-
Non - U.S. government securities	24,912	-	24,912	-	24,912	-	-
Corporates securities	142,176	-	140,105	2,071	142,176	-	-
Structured notes	19,159	-	-	19,159	-	19,159	-
Derivative financial instruments	9,173	-	-	9,173	-	9,173	-
Other Investments Non-current	118,155	-	113,830	4,326	113,830	-	4,326
Bonds and other fixed income	113,830	-	113,830	-	113,830	-	-
Other investments	4,326	-	-	4,326	-	-	4,326
Trade receivables	1,737,366	1,737,366	-	-	-	-	-
Receivables C and NC (*)	307,790	139,474	48,711	-	-	52	48,659
Other receivables	188,185	139,474	48,711	-	-	52	48,659
Other receivables (non-financial)	119,605	-	-	-	-	-	-
Total		2,445,413	328,635	194,927	442,193	28,384	52,985
Liabilities							
Borrowings C and NC	539,007	539,007	-	-	-	-	-
Trade payables	693,673	693,673	-	-	-	-	-
Derivative financial instruments	11,978	-	-	11,978	-	11,978	
Total	•	1,232,680	-	11,978	-	11,978	-

^(*) Includes balances related to interest in our Venezuelan companies, see Note 30.

		Measurement Categories				At Fair Value		
December 31, 2017	Carrying Amount	Loans & Receivables	Held to Maturity	Available for sale	Fair value through profit and loss	Level 1	Level 2	Level 3
Assets								
Cash and cash equivalents	330,221	150,948	-	-	179,273	179,273	-	-
Cash at banks	150,948	150,948	-	-	-	-	-	-
Liquidity funds	66,033	-	-	-	66,033	66,033	-	-
Short – term investments	113,240	-	-	-	113,240	113,240	-	-
Other investments	1,192,306	-	220,838	-	971,468	459,476	511,992	-
Fixed income (time-deposit, zero coupon bonds,								
commercial papers)	437,406	-	-	-	437,406	9,943	427,463	-
Certificates of deposits	297,788	-	-	-	297,788	-	297,788	
Commercial papers	9,943	-	-	-	9,943	9,943	-	-
Other notes	129,675	-	-	-	129,675	-	129,675	-
Bonds and other fixed income	754,800	-	220,838	-	533,962	449,533	84,429	-
U.S. government securities	130,477	-	-	-	130,477	130,477	-	-
Non - U.S. government securities	161,063	-	36,283	-	124,780	124,780	-	-
Corporates securities	378,831	-	184,555	-	194,276	194,276	-	-
Structured notes	68,044	-		-	68,044	-	68,044	-
Mortgage and asset-backed securities	16,385	-	-	-	16,385	-	16,385	-
Others	100	-	-	-	100	-	100	-
Other Investments Non- current	128,335	-	123,498	-	4,837	_	-	4,837
Bonds and other fixed income	123,498	-	123,498	-	-	-	-	-
Other investments	4,837	-	-	-	4,837	-	-	4,837
Trade receivables	1,214,060	1,214,060	-	-	-	-	-	-
Receivables C and NC	327,258	176,716	-	-	8,230	-	8,230	-
Foreign exchange derivatives contracts	8,230	-	-	-	8,230	-	8,230	-
Other receivables	176,716	176,716	-	-	-	-	-	-
Other receivables (non-financial)	142,312	-	-	-	-	-	-	-
Available for sale assets	21,572	-	-	21,572	-	-	-	21,572
Total		1,541,724	344,336	21,572	1,163,808	638,749	520,222	26,409
Liabilities								
Borrowings C and NC	965,859	965,859	_	_	_	_	_	-
Trade payables	750,739	750,739	_	_	-	_	_	_
Other liabilities	197,504	-	_	-	39,799	_	39,799	_
Foreign exchange derivatives contracts	39,799	-	-	-	39,799	_	39,799	_
Other liabilities (non-financial)	157,705	-	-	-		_	-	_
Total		1,716,598	-	-	39,799	-	39,799	

There were no transfers between levels during the year.

The fair value of financial instruments traded in active markets is based on quoted market prices at the reporting date. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by Tenaris is the current bid price. These instruments are included in Level 1 and comprise primarily corporate and sovereign debt securities.

B. Category of financial instruments and classification within the fair value hierarchy (Cont.)

The fair value of financial instruments that are not traded in an active market (such as certain debt securities, certificates of deposits with original maturity of more than three months, forward and interest rate derivative instruments) is determined by using valuation techniques which maximize the use of observable market data when available and rely as little as possible on entity specific estimates. If all significant inputs required to value an instrument are observable, the instrument is included in Level 2. Tenaris values its assets and liabilities included in this level using bid prices, interest rate curves, broker quotations, current exchange rates, forward rates and implied volatilities obtained from market contributors as of the valuation date.

If one or more of the significant inputs are not based on observable market data, the instruments are included in Level 3. Tenaris values its assets and liabilities in this level using observable market inputs and management assumptions which reflect the Company's best estimate on how market participants would price the asset or liability at measurement date. Main balances included in this level correspond to the Company interest in Venezuelan companies (see Note 30).

The following table presents the changes in Level 3 assets and liabilities:

	Year ended December 51,			
	2018	2017		
	Assets / Lia	bilities		
At the beginning of the year	26,409	23,242		
Addition / (Decrease)	26,768	3,117		
Currency translation adjustment and others	(192)	50		
At the end of the year	52,985	26,409		

C. Fair value estimation

Financial assets or liabilities classified at fair value through profit or loss are measured under the framework established by the IASB accounting guidance for fair value measurements and disclosures.

The fair values of quoted investments are generally based on current bid prices. If the market for a financial asset is not active or no market is available, fair values are established using standard valuation techniques.

The fair value of all outstanding derivatives is determined using specific pricing models that include inputs that are observable in the market or can be derived from or corroborated by observable data. The fair value of forward foreign exchange contracts is calculated as the net present value of the estimated future cash flows in each currency, based on observable yield curves, converted into U.S. dollars at the spot rate of the valuation date.

Borrowings are comprised primarily of fixed rate debt and variable rate debt with a short term portion where interest has already been fixed. They are classified under other financial liabilities and measured at their amortized cost. Tenaris estimates that the fair value of its main financial liabilities is approximately 99.3% of its carrying amount including interests accrued in 2018 as compared with 99.4% in 2017. Fair values were calculated using standard valuation techniques for floating rate instruments and comparable market rates for discounting flows.

The carrying amount of investments valuated at amortized cost approximates its fair value.

D. Accounting for derivative financial instruments and hedging activities

Derivative financial instruments are initially recognized in the statement of financial position at fair value through profit and loss on each date a derivative contract is entered into and are subsequently remeasured at fair value. Specific tools are used for calculation of each instrument's fair value and these tools are tested for consistency on a monthly basis. Market rates are used for all pricing operations. These include exchange rates, deposit rates and other discount rates matching the nature of each underlying risk.

As a general rule, Tenaris recognizes the full amount related to the change in fair value of derivative financial instruments in *Financial Results* in the Consolidated Income Statement.

D. Accounting for derivative financial instruments and hedging activities (Cont.)

Tenaris designates certain derivatives as hedges of particular risks associated with recognized assets or liabilities or highly probable forecast transactions. These transactions (mainly currency forward contracts on highly probable forecast transactions) are classified as cash flow hedges. The effective portion of the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in equity. Amounts accumulated in equity are then recognized in the income statement in the same period as the offsetting losses and gains on the hedged item. The gain or loss relating to the ineffective portion is recognized immediately in the income statement. The fair value of Tenaris's derivative financial instruments (assets or liabilities) continues to be reflected in the statement of financial position. The full fair value of a hedging derivative is classified as a current or non-current asset or liability according to its expiry date.

For transactions designated and qualifying for hedge accounting, Tenaris documents at the inception of the transaction the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedge transactions. Tenaris also documents its assessment on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in the fair value or cash flow of hedged items. At December 31, 2018 and 2017, the effective portion of designated cash flow hedges which is included in *Other Reserves* in equity amounts to \$0.9 million and \$0.2 million debit respectively (see Note 23 Derivative financial instruments).

The fair values of various derivative instruments used for hedging purposes and the movements of the hedging reserve included within *Other Reserves* in equity are disclosed in Note 23.

IV. OTHER NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(In the notes all amounts are shown in thousands of U.S. dollars, unless otherwise stated)

1 Segment information

As mentioned in section II. AP – C, the Segment Information is disclosed as follows:

Reportable operating segments

(All amounts in millions of U.S. dollars)

Year ended December 31, 2018	Tubes	Other	Continuing operations	Discontinued operations
IFRS - Net Sales	7,233	426	7,659	-
Management view - operating income	702	81	783	-
Difference in cost of sales	112	7	119	-
Direct cost and others	127	6	133	-
Absorption	(15)	1	(14)	-
Differences in depreciation and amortization	(34)	0	(34)	-
Differences in selling, general and administrative expenses	(2)	6	4	-
Differences in other operating income (expenses), net	-	-	-	-
IFRS - operating income	777	95	872	-
Financial income (expense), net			37	-
Income before equity in earnings of non-consolidated companies				
and income tax			909	-
Equity in earnings of non-consolidated companies			194	-
Income before income tax			1,103	-
Capital expenditures	346	3	349	-
Depreciation and amortization	645	19	664	-

Year ended December 31, 2017	Tubes	Other	Continuing operations	Discontinued operations
IFRS - Net Sales	4,966	323	5,289	12
Management view - operating income	115	48	163	3
Difference in cost of sales	164	1	165	(1)
Direct cost and others	115	-	115	(1)
Absorption	49	1	50	-
Differences in depreciation and amortization	(3)	-	(3)	-
Differences in selling, general and administrative expenses	14	(6)	8	-
Differences in other operating income (expenses), net	2	-	2	-
IFRS - operating income	292	43	335	2
Financial income (expense), net			(23)	-
Income before equity in earnings of non-consolidated companies and				
income tax			312	2
Equity in earnings of non-consolidated companies			116	-
Income before income tax			428	2
Capital expenditures	550	8	558	-
Depreciation and amortization	594	15	609	_

Year Ended December 31, 2016	Tubes	Other	Continuing operations	Discontinued operations
IFRS - Net Sales	4,015	278	4,294	235
Management view - operating income	19	19	38	62
Difference in cost of sales	(108)	(8)	(116)	4
Direct cost and others	(114)	(8)	(122)	4
Absorption	6	-	6	-
Differences in depreciation and amortization	28	-	28	-
Differences in selling, general and administrative expenses	(5)	1	(4)	-
Differences in other operating income (expenses), net	(5)	-	(5)	-
IFRS - operating (loss) income	(71)	12	(59)	66
Financial income (expense), net			22	-
(Loss) income before equity in earnings of non-consolidated				
companies and income tax			(37)	66
Equity in earnings of non-consolidated companies			71	-
Income before income tax			34	66
Capital expenditures	752	33	785	2
Depreciation and amortization	643	14	657	5

Transactions between segments, which were eliminated in consolidation, are mainly related to sales of scrap, energy, surplus raw materials and others from the Other segment to the Tubes segment for \$52, \$53 and \$47 million in 2018, 2017 and 2016, respectively.

In addition to the amounts reconciled above, the main differences in net income arise from the impact of functional currencies on financial result, deferred income taxes as well as the result of investment in non-consolidated companies and changes on the valuation of inventories according to cost estimation internally defined.

1 Segment information (Cont.)

Geographical information

(all amounts in thousands of U.S. dollars)	North America	South America	Europe	Middle East & Africa	Asia Pacific	Unallocated (*)	Total continuing operations	Total discontinued operations
Year ended December 31, 2018								
Net sales	3,611,509	1,462,044	724,733	1,559,988	300,314	-	7,658,588	-
Total assets	7,971,311	2,489,522	1,913,589	588,746	482,563	805,568	14,251,299	-
Trade receivables	791,190	280,801	215,202	383,358	66,815	-	1,737,366	-
Property, plant and equipment, net	3,859,060	1,133,113	848,178	94,040	129,517	-	6,063,908	-
Capital expenditures	196,220	68,603	77,467	2,047	5,136	-	349,473	-
Depreciation and amortization	441,705	108,558	82,769	10,389	20,936	-	664,357	-
Year ended December 31, 2017								
Net sales	2,451,357	1,142,142	545,777	937,439	211,789	-	5,288,504	11,899
Total assets	7,925,520	2,975,599	2,002,658	391,029	441,546	661,866	14,398,218	-
Trade receivables	582,204	234,877	214,944	135,524	46,511	-	1,214,060	-
Property, plant and equipment, net	3,914,229	1,190,145	878,788	102,481	143,500	-	6,229,143	-
Capital expenditures	430,142	58,949	57,285	7,562	4,153	-	558,091	145
Depreciation and amortization	354,091	126,273	93,900	12,094	22,282	-	608,640	-
Year ended December 31, 2016								
Net sales	1,320,297	1,210,527	565,173	1,055,994	141,601	-	4,293,592	234,911
Total assets	7,467,842	2,803,848	1,925,784	593,649	482,132	578,603	13,851,858	151,417
Trade receivables	229,390	204,746	161,291	308,919	50,339	-	954,685	33,620
Property, plant and equipment, net	3,652,032	1,237,391	847,318	106,941	158,257	-	6,001,939	41,470
Capital expenditures	646,545	59,780	35,270	24,166	19,201	-	784,962	1,911
Depreciation and amortization	381,811	128,458	113,875	11,053	21,912	-	657,109	5,303

There are no revenues from external customers attributable to the Company's country of incorporation (Luxembourg). For geographical information purposes, "North America" comprises Canada, Mexico and the USA (33%); "South America" comprises principally Argentina (13%), Brazil and Colombia; "Europe" comprises principally Italy and Romania; "Middle East and Africa" comprises principally Egypt, Kazakhstan, Nigeria and Saudi Arabia and; "Asia Pacific" comprises principally China, Japan, Indonesia and Thailand.

(*) For 2018 includes Investments in non-consolidated companies, for 2017 and 2016 includes Investments in non-consolidated companies and Other equity investments for \$21.6 million (see Note 11 and 30).

Revenue is mainly recognized at a point in time to direct customers, when control has been transferred and there is no unfulfilled performance obligation that could affect the acceptance of the product by the customer. Tenaris's revenues related to governmental institutions represents aproximately 14% and 16% in 2018 and 2017 respectively. At December 2018, 2017 and 2016, the Company recognized contract liabilities related to customer advances in the amount of \$62.7, 56.7 and 39.7 million, respectively. These amounts related to years 2017 and 2016 were reclassified to revenues during the subsequent year. In these periods, no significant adjustment in revenues were performed related to performance obligations previously satisfied.

2 Cost of sales

	Year ended December 31,				
(all amounts in thousands of U.S. dollars)	2018	2017	2016		
Inventories at the beginning of the year	2,368,304	1,563,889	1,843,467		
Plus: Charges of the year					
Raw materials, energy, consumables and other	3,400,396	2,794,503	1,528,532		
Services and fees	275,130	244,035	199,210		
Labor cost	855,040	778,408	658,975		
Depreciation of property, plant and equipment	432,497	383,490	376,965		
Amortization of intangible assets	8,220	18,621	27,244		
Maintenance expenses	185,782	183,370	122,553		
Allowance for obsolescence	25,457	(12,917)	32,765		
Taxes	133,308	18,542	16,693		
Other	119,507	88,823	89,575		
	5,435,337	4,496,875	3,052,512		
Less: Inventories at the end of the year (*)	(2,524,341)	(2,368,304)	(1,593,708)		
From discontinued operations	-	(7,403)	(136,587)		
-	5,279,300	3,685,057	3,165,684		

^(*) Inventories as of December 31, 2016 include \$ 29.8 million related to discontinued operations.

	Year ended December 31,		
(all amounts in thousands of U.S. dollars)	2018	2017	2016
Services and fees	128,090	132,301	123,653
Labor cost	470,928	443,338	441,355
Depreciation of property, plant and equipment	16,968	17,979	16,965
Amortization of intangible assets	206,672	188,550	241,238
Commissions, freight and other selling expenses	491,555	339,759	243,401
Provisions for contingencies	23,498	17,664	30,841
Allowances for doubtful accounts	1,751	(5,421)	(12,573)
Taxes	71,110	56,826	67,724
Other	99,404	81,061	76,563
	1,509,976	1,272,057	1,229,167
From discontinued operations	-	(2,041)	(32,238)
	1,509,976	1,270,016	1,196,929

4 Labor costs (included in Cost of sales and in Selling, general and administrative expenses)

	Year en	ded December	r 31,
(all amounts in thousands of U.S. dollars)	2018	2017	2016
Wages, salaries and social security costs	1,250,783	1,144,341	988,794
Severance indemnities	25,225	34,497	73,741
Defined contribution plans	13,217	12,401	10,758
Pension benefits - defined benefit plans	15,390	15,066	10,563
Employee retention and long term incentive program	21,353	15,441	16,474
	1,325,968	1,221,746	1,100,330
From discontinued operations	-	(853)	(28,306)
	1,325,968	1,220,893	1,072,024

The following table shows the geographical distribution of the employees:

Country	2018	2017	2016
Mexico	5,728	5,139	4,968
Argentina	5,569	5,221	4,755
USA	2,410	1,953	1,636
Italy	2,173	2,088	1,979
Romania	1,877	1,870	1,631
Brazil	1,374	1,382	1,166
Colombia	1,106	1,003	750
Canada	1,034	919	473
Indonesia	554	506	509
Japan	399	410	458
Other	1,248	1,114	1,074
	23,472	21,605	19,399
From discontinued operations	-	-	(323)
	23,472	21,605	19,076

Other operating income and expenses

	Year en	ded Decembe	er 31,
(all amounts in thousands of U.S. dollars)	2018	2017	2016
Other operating income			
Net income from other sales	3,604	4,395	16,275
Net rents	4,909	4,325	4,852
Other	6,546	1,796	<u> </u>
	15,059	10,516	21,127
Other operating expenses			
Contributions to welfare projects and non-profits organizations	11,379	9,158	9,534
Loss on fixed assets and material supplies disposed / scrapped	-	118	57
Allowance for doubtful receivables	1,179	84	432
Other	_	-	1,388
	12,558	9,360	11,411
From discontinued operations		(1)	(248)
	12,558	9,359	11,163

6 Financial results

(all amounts in thousands of U.S. dollars)	Year en	ded Decemb	er 31,
	2018	2017	2016
Interest Income	42,244	51,525	60,405
Net result on changes in FV of financial assets at FVTPL	(2,388)	(3,920)	5,799
Finance income (*)	39,856	47,605	66,204
Finance cost	(36,942)	(27,072)	(22,329)
Net foreign exchange transactions results (**)	28,845	(48,955)	(2,146)
Foreign exchange derivatives contracts results (***)	6,576	(8,996)	(31,310)
Other	(1,035)	14,392	11,447
Other financial results	34,386	(43,559)	(22,009)
Net financial results	37,300	(23,026)	21,866
From discontinued operations	-	9	88
•	37,300	(23,017)	21,954

^(*) In 2018 includes \$3.6 million of interest related to instruments carried at FVTPL.

^(**) In 2018 includes the result from the Argentine peso depreciation against the U.S. dollar on Peso denominated financial, trade, social and fiscal payables and receivables at Argentine subsidiaries with functional currency U.S. dollar, together with the positive impact from Euro depreciation against the U.S. dollar on Euro denominated intercompany liabilities in subsidiaries with functional currency U.S. Dollar, largely offset by an increase in currency translation adjustment reserve from our Italian subsidiary.

In 2017 includes the negative impact from Euro appreciation against the U.S. dollar on Euro denominated intercompany liabilities in subsidiaries with functional currency U.S. Dollar, largely offset by an increase in currency translation adjustment reserve from our Italian subsidiary.

^(***) In 2016 includes the negative impact from Brazilian Real appreciation against the U.S. dollar on hedging instruments and of Cash and cash equivalent and other investments denominated in U.S. dollar in subsidiaries with functional currency Brazilian Real, partially offset by an increase in currency translation adjustment reserve from the Brazilian subsidiaries.

Income tax

/ Income tax	Year ended December 31,				
(all amounts in thousands of U.S. dollars)	2018	2017	2016		
Current tax	343,104	184,016	174,410		
Deferred tax	(113,897)	(100,432)	(132,969)		
	229,207	83,584	41,441		
From discontinued operations	-	(100,720)	(24,339)		
	229,207	(17,136)	17,102		

The tax on Tenaris's income before tax differs from the theoretical amount that would arise using the tax rate in each country as follows:

	Year ended December 31,		
(all amounts in thousands of U.S. dollars)	2018	2017	2016
Income before income tax	1,103,107	427,711	34,430
Tax calculated at the tax rate in each country	207,422	6,456	(91,628)
Non taxable income / Non deductible expenses, net	(57,591)	40,298	51,062
Changes in the tax rates	1,824	(62,968)	4,720
Effect of currency translation on tax base (*)	77,552	(922)	105,758
Accrual / Utilization of previously unrecognized tax losses		-	(52,810)
Tax charge	229,207	(17,136)	17,102

(*)Tenaris applies the liability method to recognize deferred income tax on temporary differences between the tax bases of assets and their carrying amounts in the financial statements. By application of this method, Tenaris recognizes gains and losses on deferred income tax due to the effect of the change in the value on the tax basis in subsidiaries (mainly Argentina and Mexico), which have a functional currency different than their local currency. These gains and losses are required by IFRS even though the revalued / devalued tax bases of the relevant assets will not result in any deduction / obligation for tax purposes in future periods

Non Taxable income/ Non deductible expenses, net, includes a net tax charge of approximately \$59 million booked in the last quarter of 2018 related to impact resulting from the special tax revaluation regime of fixed assets in Argentina (option granted by Law to Argentinian Tax payers).

Changes in the tax rates, in 2017 it includes mainly the effect of the changes in tax rate in Argentine and US subsidiaries for approximately \$46 million and \$15.2 million respectively.

Accrual/ Utilization of previously unrecognized tax losses, includes a deferred tax income of approximately \$45 million booked in the last quarter of 2016 related to capital losses. The amount was carried forward in line with US Regulation in force and offset in 2017 capital gains.

8 Dividends distribution

On October 31, 2018, the Company's Board of Directors approved the payment of an interim dividend of \$0.13 per share (\$0.26 per ADS), or approximately \$153 million, paid on November 21, 2018, with an ex-dividend date of November 19, 2018.

On May 2, 2018, the Company's Shareholders approved an annual dividend in the amount of \$0.41 per share (\$0.82 per ADS). The amount approved included the interim dividend previously paid in November 22, 2017 in the amount of \$0.13 per share (\$0.26 per ADS). The balance, amounting to \$0.28 per share (\$0.56 per ADS), was paid on May 23, 2018. In the aggregate, the interim dividend paid in November 2017 and the balance paid in May 2018 amounted to approximately \$484.0 million.

On May 3, 2017, the Company's Shareholders approved an annual dividend in the amount of \$0.41 per share (\$0.82 per ADS). The amount approved included the interim dividend previously paid in November 23, 2016 in the amount of \$0.13 per share (\$0.26 per ADS). The balance, amounting to \$0.28 per share (\$0.56 per ADS), was paid on May 24, 2017. In the aggregate, the interim dividend paid in November 2016 and the balance paid in May 2017 amounted to approximately \$484.0 million

On May 4, 2016 the Company's Shareholders approved an annual dividend in the amount of \$0.45 per share (\$0.90 per ADS). The amount approved included the interim dividend previously paid in November 25, 2015 in the amount of \$0.15 per share (\$0.30 per ADS). The balance, amounting to \$0.30 per share (\$0.60 per ADS), was paid on May 25, 2016. In the aggregate, the interim dividend paid in November 2015 and the balance paid in May 2016 amounted to approximately \$531.2 million.

Property, plant and equipment, net

	Land and civil	Industrial buildings, plant and production	Vehicles, furniture	Work in	Spare parts	
Year ended December 31, 2018	buildings	equipment	and fixtures	progress	equipment	Total
Cost						
Values at the beginning of the year	712,061	11,954,585	370,542	167,079	42,413	13,246,680
Translation differences	(5,628)	(117,977)	(5,458)	(2,269)	(424)	(131,756)
Additions	723	681	1,245	294,163	20,756	317,568
Disposals / Consumptions	(221)	(21,836)	(10,269)	(42)	(3,541)	(35,909)
Transfers / Reclassifications	25,643	306,116	21,200	(331,553)	3,993	25,399
Values at the end of the year	732,578	12,121,569	377,260	127,378	63,197	13,421,982
Depreciation						
Accumulated at the beginning of the year	101,197	6,612,871	303,469	-	-	7,017,537
Translation differences	(1,383)	(72,141)	(4,939)	-	-	(78,463)
Depreciation charge	11,153	417,229	21,083	-	-	449,465
Transfers / Reclassifications	-	173	(671)	-	-	(498)
Disposals / Consumptions	(53)	(21,232)	(8,682)	-	-	(29,967)
Accumulated at the end of the year	110,914	6,936,900	310,260	-	-	7,358,074
At December 31, 2018	621,664	5,184,669	67,000	127,378	63,197	6,063,908

Year ended December 31, 2017	Land and civil buildings	Industrial buildings, plant and production equipment	Vehicles, furniture and fixtures	Work in progress	Spare parts and equipment	Total
Cost						
Values at the beginning of the year	599,710	10,034,500	346,486	1,492,572	25,404	12,498,672
Translation differences	5,493	178,598	5,518	284	331	190,224
Additions	63	7,423	1,252	497,423	18,490	524,651
Disposals / Consumptions	(1,293)	(3,966)	(7,319)	(94)	(1,812)	(14,484)
Increase due to business combinations (*)	2,187	5,654	2,444	-	-	10,285
Transfers / Reclassifications	105,901	1,732,376	22,161	(1,823,106)	-	37,332
Values at the end of the year	712,061	11,954,585	370,542	167,079	42,413	13,246,680
Depreciation						_
Accumulated at the beginning of the year	89,274	6,125,552	281,907	-	-	6,496,733
Translation differences	1,204	114,675	4,959	-	-	120,838
Depreciation charge	9,406	368,850	23,213	-	-	401,469
Transfers / Reclassifications	1,699	7,575	(405)	-	-	8,869
Disposals / Consumptions	(386)	(3,781)	(6,205)	-	-	(10,372)
Accumulated at the end of the year	101,197	6,612,871	303,469	-	-	7,017,537
At December 31, 2017	610,864	5,341,714	67,073	167,079	42,413	6,229,143

Property, plant and equipment include capitalized interests for net amounts at December 31, 2018 and 2017 of \$37.4 million and \$39.5 million, respectively. The average capitalization interest rate applied during 2017 was 1.97%.

^(*) Related to Garrett LLC acquisition, see Note 25.

10 Intangible assets, net

Year ended December 31, 2018	Information system projects	Licenses, patents and trademarks (*)	Goodwill	Customer relationships	Total
Cost			0.000		
Values at the beginning of the year	560,692	465,963	2,090,073	2,058,859	5,175,587
Translation differences	(6,153)	(183)	(4,137)	-	(10,473)
Additions	31,632	273	-	-	31,905
Transfers / Reclassifications	(5,493)	-	-	-	(5,493)
Disposals	(56)	(1,482)	-	-	(1,538)
Values at the end of the year	580,622	464,571	2,085,936	2,058,859	5,189,988
Amortization					
Accumulated at the beginning of the year	478,946	372,746	797,592	1,865,444	3,514,728
Translation differences	(5,551)	· -	-	-	(5,551)
Amortization charge	40,635	720	-	173,537	214,892
Disposals	(46)	-	-	-	(46)
Accumulated at the end of the year	513,984	373,466	797,592	2,038,981	3,724,023
At December 31, 2018	66,638	91,105	1,288,344	19,878	1,465,965

	Information system	Licenses, patents and		Customer	
Year ended December 31, 2017	projects	trademarks (*)	Goodwill	relationships	Total
Cost					
Values at the beginning of the year	554,330	461,619	2,090,257	2,058,946	5,165,152
Translation differences	6,265	483	(184)	(87)	6,477
Additions	28,335	5,105	-	=	33,440
Transfers / Reclassifications	(28,371)	(92)	-	=	(28,463)
Increase due to business combinations (**)	133	=	-	=	133
Disposals	=	(1,152)	-	-	(1,152)
Values at the end of the year	560,692	465,963	2,090,073	2,058,859	5,175,587
Amortization					
Accumulated at the beginning of the year	408,373	362,292	797,592	1,734,068	3,302,325
Translation differences	5,232	-	-	-	5,232
Amortization charge	65,249	10,546	-	131,376	207,171
Transfers / Reclassifications	92	(92)	-	-	-
Accumulated at the end of the year	478,946	372,746	797,592	1,865,444	3,514,728
At December 31, 2017	81,746	93,217	1,292,481	193,415	1,660,859

^(*) Includes Proprietary Technology.

The geographical allocation of goodwill for the year ended December 31, 2018 was \$1,168.5 million for North America, \$117.1 million for South America, \$1.9 million for Europe and \$0.7 million for Middle East & Africa.

The carrying amount of goodwill allocated by CGU, as of December 31, 2018, was as follows:

(All amounts in million US dollar)

As of December 31, 2018	<u> </u>	Tubes Segment		Other Segment	
CGU	Maverick Acquisition	Hydril Acquisition	Other	Maverick Acquisition	Total
OCTG (USA)	225	-	-	-	225
Tamsa (Hydril and other)	-	346	19	-	365
Siderca (Hydril and other)	=	265	93	-	358
Hydril	=	309	-	-	309
Coiled Tubing	-	-	-	4	4
Confab	-	-	24	-	24
Other	-	-	3	=	3
Total	225	920	139	4	1,288

^(**) Related to Garrett LLC acquisition.

11 Investments in non-consolidated companies

	Year ended December 31,	
	2018	2017
At the beginning of the year	640,294	557,031
Translation differences	1,848	(9,548)
Equity in earnings of non-consolidated companies	193,994	116,140
Dividends and distributions received (*)	(26,581)	(22,971)
Decrease / increase in equity reserves and others	(3,987)	(358)
At the end of the year	805,568	640,294

(*)Related to Ternium and Usiminas of which 25.7 were collected during the year.

The principal non-consolidated companies are:

		% ownership at December 31,		Value at December 31,	
Company	Country of incorporation	2018	2017	2018	2017
a) Ternium (*)	Luxembourg	11.46%	11.46%	725,548	563,735
b) Usiminas (**)	Brazil	3.07%	3.08%	72,988	70,642
Others	-	-	-	7,032	5,917
				805,568	640,294

^(*) Including treasury shares.

a) Ternium

Ternium, is a steel producer with production facilities in Mexico, Argentina, Brazil, Colombia, United States and Guatemala and is one of Tenaris's main suppliers of round steel bars and flat steel products for its pipes business.

At December 31, 2018, the closing price of Ternium's ADSs as quoted on the New York Stock Exchange was \$27.1 per ADS, giving Tenaris's ownership stake a market value of approximately \$622.5 million. At December 31, 2018, the carrying value of Tenaris's ownership stake in Ternium, based on Ternium's IFRS Financial Statements, was approximately \$725.5 million.

As of December 31, 2018 the Company concluded that the carrying amount does not exceed the recoverable value of the investment.

Summarized selected financial information of Ternium, including the aggregated amounts of assets, liabilities, revenues and profit or loss is as follows:

	Ternium	
	2018	2017
Non-current assets	8,121,824	7,727,283
Current assets	4,426,038	4,395,283
Total assets	12,547,862	12,122,566
Non-current liabilities	3,236,756	3,442,521
Current liabilities	1,826,530	2,827,275
Total liabilities	5,063,286	6,269,796
Non-controlling interests	1,091,321	842,347
Revenues	11,454,807	9,700,296
Gross profit	2,971,479	2,297,271
Net income for the year attributable to owners of the parent	1,506,647	886,219
Total comprehensive income for the year, net of tax, attributable to owners of the parent	1,176,964	815,434

^(**)At December 31, 2018 and 2017 the voting rights were 5.2%.

11 Investments in non-consolidated companies (Cont.)

b) Usiminas

Usiminas is a Brazilian producer of high quality flat steel products used in the energy, automotive and other industries.

As of December 31, 2018, the closing price of the Usiminas' ordinary and preferred shares, as quoted on the B3-Brasil Bolsa Balcão S.A, was BRL11.44 (\$2.95) and BRL9.22 (\$2.38), respectively, giving Tenaris's ownership stake a market value of approximately \$110.8 million. As that date, the carrying value of Tenaris's ownership stake in Usiminas was approximately \$73 million.

Summarized selected financial information of Usiminas, including the aggregated amounts of assets, liabilities, revenues and profit or loss is as follows:

Usiminas	
2018	2017
4,696,896	5,661,947
2,148,322	2,193,096
6,845,218	7,855,043
1,933,207	2,344,042
860,862	920,924
2,794,069	3,264,966
369,333	425,988
3,766,241	3,367,937
612,156	513,712
194,381	74,019
	2018 4,696,896 2,148,322 6,845,218 1,933,207 860,862 2,794,069 369,333 3,766,241 612,156

c) Techgen

Techgen is a Mexican company that operates a natural gas-fired combined cycle electric power plant in the Pesquería area of the State of Nuevo León, Mexico. The company started producing energy on December 1, 2016 and has a power capacity of 900 megawatts. As of December 31, 2018, Tenaris held 22% of Techgen's share capital, and its affiliates, Ternium and Tecpetrol International S.A. (a wholly-owned subsidiary of San Faustin S.A., the controlling shareholder of both Tenaris and Ternium), held 48% and 30% respectively.

Techgen is a party to transportation capacity agreements for a purchasing capacity of 150,000 MMBtu/Gas per day starting on August 1, 2016 and ending on July 31, 2036, and a party to a contract for the purchase of power generation equipment and other services related to the equipment. As of December 31, 2018, Tenaris's exposure under these agreements amounted to \$55.1 million and \$1.8 million respectively. Furthermore, during the quarter, Techgen entered a contract for the purchase of clean energy certificates. As of December 31, 2018 Tenaris's exposure under this agreement amounted to \$17.1 million.

Tenaris issued a corporate guarantee covering 22% of the obligations of Techgen under a syndicated loan agreement between Techgen and several banks, which was used in the construction of the facility. The main covenants under the corporate guarantee are Tenaris's commitment to maintain its participation in Techgen or the right to purchase at least 22% of Techgen's firm energy, and compliance with a maximum permitted leverage ratio. As of December 31, 2018, the amount outstanding under the loan agreement was \$600 million and, as a result, the amount guaranteed by Tenaris was approximately \$132 million. For a description of the recently agreed-upon refinancing of the syndicated loan agreement and the release of Tenaris's corporate guarantee, see "Subsequent events – Techgen refinancing."

During 2018 the shareholders of Techgen made additional investments, in Techgen, in form of subordinated loans, which in case of Tenaris amounted to \$14.7 million. In the same period, there were repayments of these loans for \$9.4 million. As of December 31, 2018, the aggregate outstanding principal amount under these loans was \$98.6 million.

12 Receivables – non current

	Year ended December 31,		
	2018	2017	
Receivables from related parties	58,128	88,595	
Receivable Venezuelan subsidiaries	48,659	27,075	
Tax credits	16,025	29,404	
Legal deposits	12,446	13,568	
Employee advances and loans	3,740	5,891	
Advances to suppliers and other advances	7,592	12,443	
Others	5,263	6,353	
Derivative financial instruments	52	-	
Government entities	-	641	
	151,905	183,970	
Allowances for doubtful accounts (see Note 21 (i))	-	(641)	
	151,905	183,329	

13 Inventories

	Year ended December 31,		
	2018	2017	
Finished goods	1,025,999	923,316	
Goods in process	709,497	619,796	
Raw materials	256,816	281,083	
Supplies	504,286	486,002	
Goods in transit	237,539	274,175	
	2,734,137	2,584,372	
Allowance for obsolescence (see Note 22 (i))	(209,796)	(216,068)	
	2,524,341	2,368,304	

14 Receivables and prepayments

	Year ended December 31,		
	2018	2017	
Prepaid expenses and other receivables	31,599	36,587	
Government entities	2,182	2,085	
Employee advances and loans	6,521	12,205	
Advances to suppliers and other advances	23,467	25,205	
Government tax refunds on exports	4,896	17,353	
Receivables from related parties	63,321	28,397	
Miscellaneous	30,683	20,122	
	162,669	141,954	
Allowance for other doubtful accounts (see Note 22 (i))	(6,784)	(6,255)	
	155,885	135,699	

15 Current tax assets and liabilities

	Year ended Dec	cember 31,
Current tax assets	2018	2017
V.A.T. credits	67,322	76,714
Prepaid taxes	54,010	55,620
	121,332	132,334
	Year ended Decembe	
Current tax liabilities	2018	2017
Income tax liabilities	182,711	35,210
V.A.T. liabilities	18,091	14,313
Other taxes	49,431	52,882

16 Trade receivables, net

	Year ended December 31,		
	2018	2017	
Current accounts	1,778,796	1,240,769	
Receivables from related parties	25,105	51,676	
	1,803,901	1,292,445	
Allowance for doubtful accounts (see Note 22 (i))	(66,535)	(78,385)	
	1,737,366	1,214,060	

The following table sets forth details of the aging of trade receivables:

	Total Descipables Not Desc		Fuede Bessivables Net Due Past		due
	Trade Receivables	Not Due	1 - 180 days	> 180 days	
At December 31, 2018					
Guaranteed	286,250	254,743	30,884	623	
Not guaranteed	1,517,651	1,180,788	260,675	76,188	
Guaranteed and not guaranteed	1,803,901	1,435,531	291,559	76,811	
Expected loss rate	0.07%	0.04%	0.17%	0.43%	
Allowances for doubtful accounts	(1,396)	(564)	(510)	(322)	
Nominative allowances for doubtful accounts	(65,139)	-	(1,436)	(63,703)	
Net Value	1,737,366	1,434,967	289,613	12,786	

	Past de		due	
	Trade Receivables	Not Due	1 - 180 days	> 180 days
At January 1, 2018	<u>. </u>		-	
Guaranteed	247,079	219,764	22,978	4,337
Not guaranteed	1,045,366	841,737	115,245	88,384
Guaranteed and not guaranteed	1,292,445	1,061,501	138,223	92,721
Expected loss rate	0.08%	0.04%	0.17%	0.43%
Allowances for doubtful accounts	(1,075)	(447)	(252)	(376)
Nominative allowances for doubtful accounts	(77,310)	-	-	(77,310)
Net Value	1,214,060	1,061,054	137,971	15,035
Effect of adoption of new standard	(6,423)	-	-	(6,423)
Net Value after adoption of new standard	1,207,637	1,061,054	137,971	8,612

Trade receivables are mainly denominated in U.S. dollars.

17 Cash and cash equivalents and Other investments

	Year ended December 31,		
	2018	2017	
Cash and cash equivalents			
Cash at banks	81,211	150,948	
Liquidity funds	160,198	66,033	
Short – term investments	186,952	113,240	
	428,361	330,221	
Other investments - current			
Fixed Income (time-deposit, zero coupon bonds, commercial papers)	300,410	437,406	
Bonds and other fixed Income	187,324	754,800	
Others	-	100	
	487,734	1,192,306	
Other investments - Non-current	-	_	
Bonds and other fixed Income	113,829	123,498	
Others	4,326	4,837	
·	118,155	128,335	

8 Borrowings

	Year ended December 31,		
	2018	2017	
Non-current			
Bank borrowings	29,214	34,626	
Finance lease liabilities	-	59	
Costs of issue of debt	(27)	(40)	
	29,187	34,645	
Current	ŕ	,	
Bank borrowings	508,143	930,957	
Bank overdrafts	1,644	131	
Finance lease liabilities	44	138	
Costs of issue of debt	(11)	(12)	
	509,820	931,214	
Total Borrowings	539,007	965,859	

The maturity of borrowings is as follows:

	1 year or less	1 - 2 years	2 – 3 years	3 - 4 years	4 - 5 years	Over 5 years	Total
At December 31, 2018							
Financial lease	44	-	-	-	-	-	44
Other borrowings	509,776	4,271	4,771	20,145	-	-	538,963
Total borrowings	509,820	4,271	4,771	20,145	-	-	539,007
Interest to be accrued (*)	8,182	1,175	1,166	169			10,692
Total	518,002	5,446	5,937	20,314	-	-	549,699
	1 year or less	1 - 2 years	2 – 3 years	3 - 4 years	4 - 5 years	Over 5 years	Total
At December 31, 2017		_	•		_		
Financial lease	138	59	-	-	-	-	197
Other borrowings	931,076	4,876	4,484	4,978	20,248	-	965,662
Total borrowings	931,214	4,935	4,484	4,978	20,248	-	965,859
Interest to be accrued (*)	14,512	1,212	1,203	1,190	174	-	18,290
Total	945,726	6,147	5,687	6,168	20,422	-	984,149

^(*) Includes the effect of hedge accounting.

Significant borrowings include:

			In million of USD			
Disbursement date	Borrower	Type	Original & Outstanding	Final maturity		
2018	Tamsa	Bank loans	347	2019		
2018	Siderca	Bank loans	66	2019		
2018	TuboCaribe	Bank loan	50	May 2019		

As of December 31, 2018, Tenaris was in compliance with all of its covenants.

The weighted average interest rates before tax shown below were calculated using the rates set for each instrument in its corresponding currency as of December 31, 2018 and 2017, considering hedge accounting where applicable.

	2018	2017
Total borrowings	3.98%	3.73%

Breakdown of long-term borrowings by currency and rate is as follows:

18 Borrowings (Cont.)

Non-current borrowings

		Year ended December 31,			
Currency	Interest rates	2018	2017		
USD	Fixed	18,762	19,120		
EUR	Fixed	9,023	13,828		
EUR	Variable	1,402	1,638		
Others	Variable	-	59		
Total non-current borrowing	s	29,187	34,645		

Breakdown of short-term borrowings by currency and rate is as follows:

Current borrowings

			ember 31,
Currency	Interest rates	2018	2017
USD	Variable	16,847	17,640
USD	Fixed	138,303	187,872
EUR	Variable	198	169
EUR	Fixed	4,178	839
MXN	Fixed	301,047	412,719
ARS	Fixed	49,125	311,829
Others	Variable	89	138
Others	Fixed	33	8
Total current borrowings		509,820	931,214

Borrowings evolution

	Year ended December 31, 2018		
	Non current Curre		
At the beginning of the year	34,645	931,214	
Translation differences	(623)	(8,191)	
Proceeds and repayments, net	(1,330)	(411,570)	
Interests accrued less payments	(5)	(6,646)	
Reclassifications	(3,500)	3,500	
Overdrafts variation	-	1,513	
At the end of the year	29,187 509,8		

19 Deferred income tax

Deferred income taxes are calculated in full on temporary differences under the liability method using the tax rate of each country.

The evolution of deferred tax assets and liabilities during the year are as follows:

Deferred tax liabilities

	Fixed assets (*)	Inventories	Intangible and Other	Total
At the beginning of the year	744,926	34,934	55,585	835,445
Effect of adoption of new standards	-	-	35	35
Translation differences	(876)	-	92	(784)
Charged directly to other comprehensive income	-	-	288	288
Income statement charge	(33,055)	(9,886)	(9,468)	(52,409)
At December 31, 2018	710,995	25,048	46,532	782,575

19 Deferred income tax (Cont.)

Deferred tax liabilities (Cont.)

	Fixed assets (*)	Inventories	Intangible and Other	Total
At the beginning of the year	625,488	36,891	152,281	814,660
Translation differences	2,241	(2)	23	2,262
Charged directly to other comprehensive income	-	-	(583)	(583)
Income statement credit (charge)	117,197	(1,955)	(96,136)	19,106
At December 31, 2017	744,926	34,934	55,585	835,445

^(*) Includes the effect of currency translation on tax base (See Note 7).

Deferred tax assets

	Provisions and allowances	Inventories	Tax losses (*)	Other	Total
At the beginning of the year	(26,475)	(89,555)	(354,944)	(60,033)	(531,007)
Effect of adoption of new standards	952	-	-	(164)	788
Translation differences	2,532	1,447	1,014	(38)	4,955
Charged directly to other comprehensive income	23	-	-	1,587	1,610
Income statement charge / (credit)	6,852	1,523	(42,327)	(27,536)	(61,488)
At December 31, 2018	(16,116)	(86,585)	(396,257)	(86,184)	(585,142)

^(*) As of December 31, 2018, the net unrecognized deferred tax assets amount to \$127.3 million.

	Provisions and allowances	Inventories	Tax losses	Other	Total
At the beginning of the year	(33,276)	(94,176)	(199,326)	(81,838)	(408,616)
Translation differences	(223)	(972)	322	(606)	(1,479)
Charged directly to other comprehensive income	-	-	-	(778)	(778)
Income statement charge / (credit)	7,024	5,593	(155,940)	23,189	(120,134)
At December 31, 2017	(26,475)	(89,555)	(354,944)	(60,033)	(531,007)

The estimated recovery analysis of deferred tax assets and deferred tax liabilities is as follows:

	Year ended Dec	Year ended December 31,		
	2018	2017		
Deferred tax assets to be recovered after 12 months	(452,330)	(405,416)		
Deferred tax liabilities to be recovered after 12 months	739,670	808,108		

Deferred income tax assets and liabilities are offset when (1) there is a legally enforceable right to set-off current tax assets against current tax liabilities and (2) when the deferred income taxes relate to the same fiscal authority on either the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis. The following amounts, determined after appropriate set-off, are shown in the Consolidated Statement of Financial Position:

	Y ear ended Dec	Year ended December 31,	
	2018	2017	
Deferred tax assets	(181,606)	(153,532)	
Deferred tax liabilities	379,039	457,970	
	197,433	304,438	

The movement in the net deferred income tax liability account is as follows:

	Year ended December 31,	
	2018	2017
At the beginning of the year	304,438	406,044
Effect of adoption of new standards	823	-
Translation differences	4,171	783
Charged directly to Other Comprehensive Income	1,898	(1,361)
Income statement credit	(113,897)	(101,028)
At the end of the year	197,433	304,438

20 Other liabilities

(i) Other liabilities – Non current

	Year ended December 31,	
	2018	2017
Post-employment benefits	115,087	125,012
Other-long term benefits	78,492	68,244
Miscellaneous	19,550	24,040
	213,129	217,296

Post-employment benefits

Unfunded

	Year ended December 31,	
	2018	2017
Values at the beginning of the year	101,889	96,229
Translation differences	(3,849)	2,893
Current service cost	7,400	7,851
Interest cost	5,070	5,462
Curtailments and settlements	-	21
Remeasurements (*)	(3,946)	10,907
Benefits paid from the plan	(9,719)	(22,107)
Other	473	633
At the end of the year	97,318	101,889

^(*) For 2018 a gain of \$0.2 million is attributable to demographic assumptions and a gain of \$3.7 million to financial assumptions. For 2017 a loss of \$0.09 million is attributable to demographic assumptions and a loss of \$10.8 million to financial assumptions.

The principal actuarial assumptions used were as follows:

	Year ended De	cember 31,
	2018	2017
Discount rate	2% - 7%	1% - 7%
Rate of compensation increase	0% - 3%	0% - 3%

As of December 31, 2018, an increase / (decrease) of 1% in the discount rate assumption of the main plans would have generated a (decrease) / increase on the defined benefit obligation of \$7 million and \$6.2 million respectively, and an increase / (decrease) of 1% in the rate of compensation assumption of the main plans would have generated an increase / (decrease) impact on the defined benefit obligation of \$3.4 million and \$3.0 million respectively. The above sensitivity analyses are based on a change in discount rate and rate of compensation while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated.

Funded

The amounts recognized in the statement of financial position for the current annual period and the previous annual period are as follows:

	Year ended December 31,	
	2018	2017
Present value of funded obligations	146,885	165,486
Fair value of plan assets	(132,438)	(145,692)
Liability (*)	14,447	19,794

(*) In 2018 and 2017, \$3.3 million corresponding to an overfunded plan were reclassified within other non-current assets, respectively.

20 Other liabilities (Cont.)

Post-employment benefits (Cont.)

■ Funded (Cont.)

The movement in the present value of funded obligations is as follows:

	Year ended December 31,	
	2018	2017
At the beginning of the year	165,485	159,612
Translation differences	(8,182)	7,300
Current service cost	1,328	592
Interest cost	5,691	6,034
Remeasurements (*)	(7,984)	3,602
Benefits paid	(9,453)	(11,654)
At the end of the year	146,885	165,486

(*) For 2018 a loss of \$0.4 million is attributable to demographic assumptions and a gain of \$8.4 million to financial assumptions. For 2017 a gain of \$0.4 million is attributable to demographic assumptions and a loss of \$4.1 million to financial assumptions. respectively.

The movement in the fair value of plan assets is as follows:

	Year ended December 31,	
	2018	2017
At the beginning of the year	(145,692)	(132,913)
Translation differences	7,514	(6,802)
Return on plan assets	(4,936)	(5,849)
Remeasurements	3,967	(5,874)
Contributions paid to the plan	(3,108)	(6,230)
Benefits paid from the plan	9,453	11,654
Other	364	323
At the end of the year	(132,438)	(145,692)

The major categories of plan assets as a percentage of total plan assets are as follows:

	Year ended December 31,	
	2018	2017
Equity instruments	53.5%	53.4%
Debt instruments	42.8%	42.9%
Others	3.7%	3.7%

The principal actuarial assumptions used were as follows:

	Year ended	Year ended December 31,	
	2018	2017	
Discount rate	4 % - 5 %	4%	
Rate of compensation increase	0 % - 3 %	0 % - 3 %	

The expected return on plan assets is determined by considering the expected returns available on the assets underlying the current investment policy. Expected return on plan assets is determined based on long-term, prospective rates of return as of the end of the reporting period.

As of December 31, 2018, an increase / (decrease) of 1% in the discount rate assumption of the main plans would have generated a (decrease) / increase on the defined benefit obligation of \$17.2 million and \$14.1 million respectively, and an increase / (decrease) of 1% in the compensation rate assumption of the main plans would have generated an increase / (decrease) on the defined benefit obligation of \$1.6 million and \$1.5 million respectively. The above sensitivity analyses are based on a change in discount rate and rate of compensation while holding all other assumptions constant. In practice, this is unlikely to occur, and changes in some of the assumptions may be correlated.

The employer contributions expected to be paid for the year 2019 amount approximately to \$3.3 million.

The methods and types of assumptions used in preparing the sensitivity analysis did not change compared to the previous period.

20 Other liabilities (Cont.)

(ii) Other liabilities – current

	Year ended December 31,	
	2018	2017
Payroll and social security payable	148,069	141,886
Miscellaneous	17,624	15,819
	165,693	157,705

21 Non-current allowances and provisions

(i) Deducted from non-current receivables

•	Year ended December 31,	
	2018	2017
Values at the beginning of the year	(641)	(913)
Translation differences	110	106
Used	531	166
Values at the end of the year		(641)

(ii) Liabilities

	Year ended December 31,	
	2018	2017
Values at the beginning of the year	36,438	63,257
Translation differences	(5,261)	366
Additional provisions	14,397	3,994
Reclassifications	(2,406)	(7,591)
Used	(7,079)	(23,588)
Values at the end of the year	36,089	36,438

22 Current allowances and provisions

(i) Deducted from assets

Year ended December 31, 2018	Allowance for doubtful accounts - Trade receivables	Allowance for other doubtful accounts - Other receivables	Allowance for inventory obsolescence
Values at the beginning of the year	(78,385)	(6,255)	(216,068)
Effect of adoption of new standards	6,423	-	-
Translation differences	329	359	3,575
Additional allowances	(1,751)	(1,179)	(25,457)
Used	6,849	291	28,154
At December 31, 2018	(66,535)	(6,784)	(209,796)

Year ended December 31, 2017	Allowance for doubtful accounts - Trade receivables	Allowance for other doubtful accounts - Other receivables	Allowance for inventory obsolescence
Values at the beginning of the year	(85,724)	(6,332)	(240,242)
Translation differences	(345)	(220)	(3,575)
Reversals / (additional) allowances	5,421	(84)	12,917
Used	2,263	381	14,832
At December 31, 2017	(78,385)	(6,255)	(216,068)

22 Current allowances and provisions (Cont.)

(ii) Liabilities

Year ended December 31, 2018	Sales risks	contingencies	Total
Values at the beginning of the year	11,396	20,934	32,330
Translation differences	(103)	(2,205)	(2,308)
Additional provisions	2,638	6,463	9,101
Reclassifications	-	2,406	2,406
Used	(7,117)	(10,129)	(17,246)
At December 31, 2018	6,814	17,469	24,283

	Other claims and		
Year ended December 31, 2017	Sales risks	contingencies	Total
Values at the beginning of the year	13,885	8,871	22,756
Translation differences	247	227	474
Additional provisions	4,238	9,432	13,670
Reclassifications	-	7,591	7,591
Used	(6,974)	(5,187)	(12,161)
At December 31, 2017	11,396	20,934	32,330

23 Derivative financial instruments

Net fair values of derivative financial instruments

The net fair values of derivative financial instruments, in accordance with IFRS 13, are:

	Year ended December 31,		
	2018	2017	
Derivatives hedging borrowings and investments	5,604	2,036	
Other Derivatives	3,621	6,194	
Contracts with positive fair values (*)	9,225	8,230	
Derivatives hedging borrowings and investments	(11,667)	(34,770)	
Other Derivatives	(311)	(5,029)	
Contracts with negative fair values	(11,978)	(39,799)	
Total	(2,753)	(31,569)	

^(*) Includes \$52 thousand of non-current derivatives.

Foreign exchange derivative contracts and hedge accounting

Tenaris applies hedge accounting to certain cash flow hedges of highly probable forecast transactions. The net fair values of exchange rate derivatives and those derivatives that were designated for hedge accounting as of December 2018 and 2017, were as follows:

			Fair Va	alue	Hedge Account	ing Reserve
Purchase currency	Sell currency	Term	2018	2017	2018	2017
ARS	USD	2019	(6,542)	(13,715)	(895)	(1,067)
USD	ARS	2018	-	22	-	-
USD	BRL	2019	(131)	(17)	-	-
EUR	USD	2019	203	5,660	-	1,881
USD	EUR	2018	-	(367)	-	_
MXN	USD	2019	888	(20,447)	(411)	(534)
USD	MXN	2018	-	490	· -	-
JPY	USD	2019	271	(101)	-	-
USD	KWD	2019	522	(630)	390	(520)
USD	CAD	2019	2,089	(2,072)	-	-
Others			(53)	(392)	-	-
Total			(2,753)	(31,569)	(916)	(240)

23 Derivative financial instruments (Cont.)

Following is a summary of the hedge reserve evolution:

	Equity Reserve Dec-16	Movements 2017	Equity Reserve Dec-17	Movements 2018	Equity Reserve Dec-18
Foreign Exchange	(4,742)	4,502	(240)	(676)	(916)
Total Cash flow Hedge	(4,742)	4,502	(240)	(676)	(916)

Tenaris estimates that the cash flow hedge reserve at December 31, 2018 will be recycled to the Consolidated Income Statement during 2019.

24 Contingencies, commitments and restrictions on the distribution of profits

(i) Contingencies

Tenaris is from time to time subject to various claims, lawsuits and other legal proceedings, including customer, employee, tax and environmental-related claims, in which third parties are seeking payment for alleged damages, reimbursement for losses, or indemnity. Management with the assistance of legal counsel periodically reviews the status of each significant matter and assesses potential financial exposure.

Some of these claims, lawsuits and other legal proceedings involve highly complex issues, and often these issues are subject to substantial uncertainties and, therefore, the probability of loss and an estimation of damages are difficult to ascertain. Accordingly, with respect to a large portion of such claims, lawsuits and other legal proceedings, Tenaris is unable to make a reliable estimate of the expected financial effect that will result from ultimate resolution of the proceeding. In those cases, Tenaris has not accrued a provision for the potential outcome of these cases.

If a potential loss from a claim, lawsuit or other proceeding is considered probable and the amount can be reasonably estimated, a provision is recorded. Accruals for loss contingencies reflect a reasonable estimate of the losses to be incurred based on information available to management as of the date of preparation of the financial statements and take into consideration litigation and settlement strategies. In a limited number of ongoing cases, Tenaris was able to make a reliable estimate of the expected loss or range of probable loss and has accrued a provision for such loss but believes that publication of this information on a case-by-case basis would seriously prejudice Tenaris's position in the ongoing legal proceedings or in any related settlement discussions. Accordingly, in these cases, the Company has disclosed information with respect to the nature of the contingency but has not disclosed its estimate of the range of potential loss.

The Company believes that the aggregate provisions recorded for potential losses in these Consolidated Financial Statements are adequate based upon currently available information. However, if management's estimates prove incorrect, current reserves could be inadequate and Tenaris could incur a charge to earnings which could have a material adverse effect on Tenaris's results of operations, financial condition, net worth and cash flows.

Below is a summary description of Tenaris's material legal proceedings which are outstanding as of the date of these Consolidated Financial Statements. In addition, Tenaris is subject to other legal proceedings, none of which is believed to be material.

• CSN claims relating to the January 2012 acquisition of Usiminas shares

Confab Industrial S.A. ("Confab"), a Brazilian subsidiary of the Company, is one of the defendants in a lawsuit filed in Brazil by Companhia Siderúrgica Nacional (CSN) and various entities affiliated with CSN against Confab and several Ternium subsdiaries that acquired a participation in Usiminas' control group in January 2012.

The CSN lawsuit alleges that, under applicable Brazilian laws and rules, the acquirers were required to launch a tag-along tender offer to all non-controlling holders of Usiminas' ordinary shares for a price per share equal to 80% of the price per share paid in such acquisition, or BRL28.8, and seeks an order to compel the acquirers to launch an offer at that price plus interest. If so ordered, the offer would need to be made to 182,609,851 ordinary shares of Usiminas not belonging to Usiminas' control group, and Confab would have a 17.9% share in that offer.

(i) Contingencies (Cont.)

CSN claims relating to the January 2012 acquisition of Usiminas shares (Cont.)

On September 23, 2013, the first instance court dismissed the CSN lawsuit, and on February 8, 2017, the court of appeals maintained the understanding of the first instance court. On March 6, 2017, CSN filed a motion for clarification against the decision of the Court of Appeals of São Paulo, which was rejected on July 19, 2017. On August 18, 2017, CSN filed an appeal to the Superior Court of Justice seeking the review and reversal of the decision issued by the Court of Appeals. On March 5, 2018, the court of appeals ruled that CSN's appeal did not meet the requirements for submission to the Superior Court of Justice and rejected the appeal. On May 8, 2018, CSN appealed against such ruling and on January 22, 2019, the court of appeals rejected it and ordered that the case be submitted to the Superior Court of Justice. The Superior Court of Justice will review admissibility of CSN's appeal, and, if declares it admissible, will then render a decision on the merits. The Superior Court of Justice is restricted to the analysis of alleged violations to federal laws and cannot assess matters of fact.

Tenaris continues to believe that all of CSN's claims and allegations are groundless and without merit, as confirmed by several opinions of Brazilian legal counsel, two decisions issued by the Brazilian securities regulator (CVM) in February 2012 and December 2016, and the first and second instance court decisions referred to above.

Veracel celulose accident litigation

On September 21, 2007, an accident occurred in the premises of Veracel Celulose S.A. ("Veracel") in connection with a rupture in one of the tanks used in an evaporation system manufactured by Confab. The Veracel accident allegedly resulted in material damages to Veracel. Itaú Seguros S.A. ("Itaú"), Veracel's insurer at the time of the Veracel accident and currently replaced by Chubb Seguros Brasil S/A ("Chubb"), initiated a lawsuit against Confab seeking reimbursement of damages paid to Veracel in connection with the Veracel accident. Veracel initiated a second lawsuit against Confab seeking reimbursement of the amount paid as insurance deductible with respect to the Veracel accident and other amounts not covered by insurance. Itaú and Veracel claimed that the Veracel accident was caused by failures and defects attributable to the evaporation system manufactured by Confab. Confab believes that the Veracel accident was caused by the improper handling by Veracel's personnel of the equipment supplied by Confab in violation of Confab's instructions. The two lawsuits were consolidated and are considered by the 6th Civil Court of São Caetano do Sul; however, each lawsuit will be adjudicated separately.

On September 28, 2018 Confab and Chubb, entered into a settlement agreement pursuant to which on October 9, 2018, Confab paid an amount of approximately \$3.5 million to Chubb, without assuming any liability for the accident or the claim.

On October 10, 2018, Confab was notified that the court had issued rulings for both lawsuits. Both decisions were unfavorable to Confab:

- With respect to Chubb's claim, Confab was ordered to pay an amount of approximately BRL89.8 million (approximately \$23.2 million) (including interest, fees and expenses). On October 15, 2018, Confab filed a request for homologation of the settlement agreement mentioned above, as such settlement agreement remains valid and binding between the parties. On November 8, 2018, the settlement agreement was homologated by the court.
- With respect to Veracel's claim, Confab was ordered to pay the insurance deductible and other concepts not covered by insurance, currently estimated to amount to BRL57.8 million (approximately US\$ 14.9 million) (including interest, fees and expenses). Both parties filed motions for clarification against the court's decision, which were partially granted. Although the contract between Confab and Veracel expressly provided that Confab would not be liable for damages arising from lost profits, the court award would appear to include BRL49.5 million (approximately \$12.8 million) of damages arising therefrom; Confab has additional defense arguments in respect of a claim for lost profits. On December 18, 2018, Confab filed an appeal against the first instance court decision. At this stage the Company cannot predict the outcome of the claim or the amount or range of loss in case of an unfavorable outcome.

(i) Contingencies (Cont.)

Ongoing investigation

The Company has learned that Italian and Swiss authorities are investigating whether certain payments were made from accounts of entities presumably associated with affiliates of the Company to accounts controlled by an individual allegedly related with officers of Petróleo Brasileiro S.A. and whether any such payments were intended to benefit Confab. Any such payments could violate certain applicable laws, including the U.S. Foreign Corrupt Practices Act. The Company had previously reviewed certain of these matters in connection with an investigation by the Brazilian authorities related to "Operation Lava Jato" and the Audit Committee of the Company's Board of Directors has engaged external counsel in connection with a review of the alleged payments and related matters. In addition, the Company has voluntarily notified the U.S. Securities and Exchange Commission and the U.S. Department of Justice. The Company continues to review these matters and to respond to requests from and otherwise cooperate with the appropriate authorities. At this time, the Company cannot predict the outcome of these matters or estimate the range of potential loss or extent of risk, if any, to the Company's business that may result from resolution of these matters.

Petroamazonas penalties

On January 22, 2016, Petroamazonas ("PAM"), an Ecuadorian state-owned oil company, imposed penalties to the Company's Uruguayan subsidiary, Tenaris Global Services S.A. ("TGS"), for its alleged failure to comply with delivery terms under a pipe supply agreement. The penalties amount to approximately \$22.5 million as of the date hereof. On June 27, 2018, TGS initiated arbitration proceedings against PAM before the Quito Chamber of Commerce Arbitration Center, seeking the annulment of the penalties. In September 2018, PAM filed its response to the arbitration claim. The claim is currently in evidentiary stage before the arbitration panel. Tenaris believes, based on the advice of counsel, that PAM had no legal basis to impose the penalties and that TGS has meritorious defenses against PAM. However, the Company cannot predict the outcome of a claim against a state-owned company.

Contractor claim for additional costs

Tenaris Bay City Inc. ("Tenaris Bay City"), a U.S. subsidiary of the Company, received claims from a contractor for alleged additional costs in the construction of a project located in the Bay City area for an amount initially stated to be in excess of \$90 million; however, subsequently the contractor amended the amount of the claim to \$48 million plus attorneys' fees and arbitration costs. On June 30, 2017, the contractor filed a demand for arbitration of these claims. An arbitral panel was selected and a scheduling order issued. The parties have already submitted statements of claim and responses to the other party's claim. The final trial hearings on this matter have begun in February 2019. At this stage the Company cannot predict the outcome of the claim or the amount or range of loss in case of an unfavorable outcome.

Claim for differences on gas supply prices

On July 7, 2016, Siderca was notified of a claim initiated by an Argentine state-owned company for an amount of \$25.4 million, allegedly owed as a result of differences in the price paid for gas supplied to Siderca during three months in 2013. In November 2018, Siderca was notified of a decision issued by the competent administrative agency confirming that Siderca paid the correct price for its gas purchases. As the decision was not appealed, it became final and, accordingly, the claim was finalized in favor of Siderca.

Tax assessment in Mexico regarding tax deductions on purchases of scrap

In 2017, Tubos de Acero de México S.A ("Tamsa") and Servicios Generales Tenaris Tamsa S.A ("Segeta"), two Mexican subsidiaries of the Company, were informed that the Mexican tax authorities had determined that the tax deductions associated with certain purchases of scrap made by the companies during 2013 failed to comply with applicable requirements and, accordingly, should be rejected. Tamsa and Segeta filed their respective responses and complaints against the determination and provided additional information evidencing compliance with applicable requirements for the challenged tax deductions. On August 30, 2018 and January 24, 2019, administrative decisions were issued in the proceedings against Segeta and Tamsa, respectively, determining a tax obligation in the amount of MXN1,540 million (approximately \$78 million) for Segeta and MXN3,749 million (approximately \$190 million) for Tamsa. On October 15, 2018, Segeta filed a revocation request (*recurso de revocación exclusivo*) against the August 2018 decision as to Segeta, and Tamsa will challenge the January 2019 decision. As of December 31, 2018, the estimated exposure under these proceedings, including principal, interest and penalties, amounted to MXN5,289 million (approximately \$268 million). Tenaris believes, based on the advice of counsel, that it is unlikely that the ultimate resolution of either tax assessment will result in a material obligation.

(i) Contingencies (Cont.)

Putative class actions

The Company is aware that, following its November 27, 2018 announcement that its Chairman and CEO Paolo Rocca was included in an Argentine court investigation known as the Notebooks Case, two putative class action complaints were filed in the U.S. District Court for the Eastern District of New York purportedly on behalf of purchasers of Tenaris securities from May 1, 2014 through November 27, 2018. The individual defendants named in the complaint are Tenaris's Chairman and CEO and Tenaris's CFO. Neither the Company nor any of the individual defendants have been served. Each complaint alleges that during the class period (May 2014-November 2018), the Company and the individual defendants inflated the Tenaris share price by failing to disclose that sale proceeds received by Ternium (in which Tenaris held an 11.46% stake) when Sidor was expropriated by Venezuela were received or expedited as a result of alleged improper payments made to Argentine officials. The complaint does not specify the damages that plaintiff is seeking.

Investigation concerning alleged price overcharges in Brazil

In 2018, two Brazilian subsidiaries of the Company were notified of formal charges arising from a review by the Tribunal de Contas da Uniao (TCU) for alleged price overcharges on goods supplied to Petróleo Brasileiro S.A-Petrobras under a supply contract. Both companies have already filed their defenses. The estimated amount of this claim is BRL27 million (approximately \$7 million). Tenaris believes, based on the advice of counsel and external consultants, that the prices charged under the Petrobras contract do not result in overprices and that it is unlikely that the ultimate resolution of this matter will result in a material obligation.

(ii) Commitments and other purchase orders

Set forth is a description of Tenaris's main outstanding commitments:

- A Tenaris company entered into a contract with Transportadora de Gas del Norte S.A. for the service of natural gas transportation to the facilities of Siderca, an Argentine subsidiary of Tenaris. As of December 31, 2018, the aggregate commitment to take or pay the committed volumes for a 9-year term totalled approximately \$40.1 million.
- Several Tenaris companies entered into a contract with Praxair S.A. for the service of oxygen and nitrogen supply. As of December 31, 2018, the aggregate commitment to take or pay the committed volumes for a 14year term totalled approximately \$57.7 million.
- Several Tenaris companies entered into a contract with Graftech for the supply of graphite electrodes. As of December 31, 2018, the aggregate commitment to take or pay the committed volumes totalled approximately \$55 million.
- A Tenaris company entered into a 25-year contract (effective as of December 1, 2016, through December 1, 2041) with Techgen for the supply of 197 MW (which represents 22% of Techgen's capacity). Monthly payments are determined on the basis of capacity charges, operation costs, back-up power charges, and transmission charges. As of the seventh contract year (as long as Techgen's existing or replacing bank facility has been repaid in full), the Tenaris company has the right to suspend or early terminate the contract if the rate payable under the agreement is higher than the rate charged by the Comisión Federal de Electricidad ("CFE") or its successors. The Tenaris company may instruct Techgen to sell to any affiliate, to CFE, or to any other third party all or any part of unused contracted energy under the agreement and the Tenaris company will benefit from the proceeds of such sale.
- A Tenaris company entered into a contract with Vale International S.A. for the supply of iron ore, for which it is committed to purchase at least 70% of its annual iron ore needs, up to 770 thousand tons of pellets annually. The contract expires on December 31, 2020. The aggregate commitment amounts to approximately \$136.9 million.
- A Tenaris company entered into a contract with Canadian National Railway for the service of rail transportation from its raw material supplier to its Canadian production center. The total commitment ending June 30, 2020 is \$22.8 million.
- A Tenaris company entered into a contract with Air Liquide Mexico, S. de R.L de C.V. for the supply of argon gas. As of December 31, 2018, the aggregate commitment totalled approximately \$20.8 million.

Additionally the Company issued performance guarantees mainly related to long term commercial contracts with several customers and parent companies guarantees for approximately \$2.1 billion.

(iii) Restrictions to the distribution of profits and payment of dividends

As of December 31, 2018, equity as defined under Luxembourg law and regulations consisted of:

(all amounts in thousands of U.S. dollars)	
Share capital	1,180,537
Legal reserve	118,054
Share premium	609,733
Retained earnings including net income for the year ended December 31, 2018	16,439,438
Total equity in accordance with Luxembourg law	18,347,762

At least 5% of the Company's net income per year, as calculated in accordance with Luxembourg law and regulations, must be allocated to the creation of a legal reserve equivalent to 10% of the Company's share capital.

As of December 31, 2018, this reserve is fully allocated and additional allocations to the reserve are not required under Luxembourg law. Dividends may not be paid out of the legal reserve.

The Company may pay dividends to the extent, among other conditions, that it has distributable retained earnings calculated in accordance with Luxembourg law and regulations.

At December 31, 2018, distributable amount under Luxembourg law totals \$17.0 billion, as detailed below:

(all amounts in thousands of U.S. dollars)	
Retained earnings at December 31, 2017 under Luxembourg law	16,956,761
Other income and expenses for the year ended December 31, 2018	(33,303)
Dividends approved	(484,020)
Retained earnings at December 31, 2018 under Luxembourg law	16,439,438
Share premium	609,733
Distributable amount at December 31, 2018 under Luxembourg law	17,049,171

25 Acquisition of subsidiaries

In September 2017, Tenaris acquired 100% of Garrett (a pipe services and trucking business) through the payment of a price of \$10.4 million.

If the acquisition had occurred on January 1, 2017, Tenaris's unaudited pro forma net sales and net income from continuing operations would not have changed materially.

Voor anded December 21

26 Cash flow disclosures

		Year ended December 31,		er 31,
(i)	Changes in working capital	2018	2017	2016
	Inventories	(176,443)	(804,415)	244,720
	Receivables and prepayments and Current tax assets	30,144	(4,564)	53,639
	Trade receivables	(517,579)	(259,375)	146,824
	Other liabilities	(22,984)	4,226	(79,046)
	Customer advances	5,976	17,039	(95,112)
	Trade payables	(57,066)	193,905	59,939
		(737,952)	(853,184)	330,964
(ii)	Income tax accruals less payments			
	Tax accrued	229,207	(17,136)	41,441
	Taxes paid	(170,713)	(176,853)	(169,520)
		58,494	(193,989)	(128,079)
(iii)	Interest accruals less payments, net			
	Interest accrued	(2,914)	(20,534)	(43,872)
	Interest received	40,613	50,001	60,163
	Interest paid	(31,548)	(17,917)	(18,858)
		6,151	11,550	(2,567)
(iv)	Cash and cash equivalents			
	Cash at banks, liquidity funds and short - term investments	428,361	330,221	399,900
	Bank overdrafts	(1,644)	(131)	(1,320)
		426,717	330,090	398,580

27 Discontinued Operations

On December 15, 2016, Tenaris entered into an agreement with Nucor Corporation (NC) pursuant to which it has sold to NC the steel electric conduit business in North America, known as Republic Conduit for an amount of \$328 million (net of transaction costs). The sale was completed on January 19, 2017, with effect from January 20, 2017. The result of this transaction was an after-tax gain of \$89.7 million, calculated as the net proceeds of the sale less the book value of net assets held for sale, the corresponding tax effect and related expenses.

	Year ended December 31,		
	2017	2016	
Income from discontinued operations	1,848	41,411	
After tax gain on the sale of Conduit	89,694	-	
Net Income for discontinued operations	91,542	41,411	
Details of Conduit sale			
Cash received		331,295	
Transaction and other costs		(3,663)	
Carrying amount of net assets sold		(137,814)	
Gain on sale before income tax		189,817	
Income tax expense on gain		(100,123)	
Gain on sale after income tax		89,694	

The financial performances presented are relative to the 19 days of January 2017 and for the years ended December 31 and 2016.

Analysis of the result of discontinued operations:

	Year ended December 31,	
-	2017	2016
Revenues	11,899	234,911
Gross profit	4,496	98,324
Net income	1,848	41,411
Basic and diluted earnings per share (U.S. dollars per share)	-	0.04
Basic and diluted earnings per ADS (U.S. dollars per ADS)	-	0.07
Summarized cash flow information is as follows:	2017	2016
Cash at the beginning	18,820	15,343
Cash at the beginning	206	18,820
(Decrease) Increase in cash	(18,614)	3,477
(Used in) provided by operating activities	(3,046)	24,535
Provided by (used in) investing activities	32	(1,058)
Used in financing activities	(15,600)	(20,000)

These amounts were estimated only for disclosure purposes, as cash flows from discontinued operations were not managed separately from other cash flows.

The following table shows the current and non-current assets and liabilities of disposal group as at 31 December 2016, and the carrying amounts of assets and liabilities as at the date of sale.

Current and non-current assets and liabilities of disposal group

	<u>At January 19, 2017</u>	At December 31, 2016
Non-current assets	87,332	87,364
Current assets	69,332	64,053
Total assets of disposal group classified as held for sale	156,664	151,417
Non-current liabilities	5,294	5,376
Current liabilities	13,556	12,718
Total liabilities of disposal group classified as held for sale	18,850	18,094

28 Related party transactions

As of December 31, 2018:

- San Faustin S.A., a Luxembourg société anonyme ("San Faustin"), owned 713,605,187 shares in the Company, representing 60.45% of the Company's capital and voting rights.
- San Faustin owned all of its shares in the Company through its wholly-owned subsidiary Techint Holdings S.à.r.l., a Luxembourg société à responsabilité limitée ("Techint"), who is the holder of record of the abovementioned Tenaris shares.
- Rocca & Partners Stichting Administratiekantoor Aandelen San Faustin, a Dutch private foundation (Stichting)
 ("RP STAK") held voting shares in San Faustin sufficient in number to control San Faustin.
- No person or group of persons controls RP STAK.

Based on the information most recently available to the Company, Tenaris's directors and senior management as a group owned 0.08% of the Company's outstanding shares.

Transactions and balances disclosed as with "non-consolidated parties" are those with companies over which Tenaris exerts significant influence or joint control in accordance with IFRS, but does not have control. All other transactions and balances with related parties which are not non-consolidated parties and which are not consolidated are disclosed as "Other". The following transactions were carried out with related parties:

(all amounts in thousands of U.S. dollars)	Year ended December 31,			
	2018	2017	2016	
(i) Transactions				
(a) Sales of goods and services				
Sales of goods to non-consolidated parties	23,709	32,362	21,174	
Sales of goods to other related parties	131,548	94,624	32,613	
Sales of services to non-consolidated parties	7,641	11,637	9,542	
Sales of services to other related parties	5,647	3,751	2,948	
	168,545	142,374	66,277	
(b) Purchases of goods and services				
Purchases of goods to non-consolidated parties	245,186	234,361	67,048	
Purchases of goods to other related parties	106,624	17,711	20,150	
Purchases of services to non-consolidated parties	9,556	12,077	11,528	
Purchases of services to other related parties	46,179	50,794	53,530	
·	407,545	314,943	152,256	

	(all amounts in thousands of U.S. dollars)	At December 31,		
		2018	2017	
(ii)	Period-end balances			
	(a) Arising from sales / purchases of goods / services			
	Receivables from non-consolidated parties	122,135	117,853	
	Receivables from other related parties	24,419	50,815	
	Payables to non-consolidated parties	(33,197)	(49,354)	
	Payables to other related parties	(17,595)	(14,475)	
		95,762	104,839	

Directors' and senior management compensation

During the years ended December 31, 2018, 2017 and 2016, the cash compensation of Directors and Senior managers amounted to \$33.7 million, \$45.8 million and \$38.6 million respectively. These amounts include cash benefits paid to certain senior managers in connection with the pre-existing retirement plans. In addition, Directors and Senior managers received 558, 484 and 500 thousand units for a total amount of \$5.6 million, \$4.7 million and \$4.8 million respectively in connection with the Employee retention and long term incentive program mentioned in Note O Employee benefits – Other long term benefits.

29 Principal subsidiaries

The following is a list of Tenaris's principal subsidiaries and its direct and indirect percentage of ownership of each controlled company at December 31, 2018.

Company	Country of Incorporation	Main activity	Percentage of ownership at December 31, (*)		
Company	incorporation	Train activity	2018	2017	2016
ALGOMA TUBES INC.	Canada	Manufacturing of seamless steel pipes	100%	100%	100%
CONFAB INDUSTRIAL S.A. and subsidiaries	Brazil	Manufacturing of welded steel pipes and capital goods	100%	100%	100%
KAZAKHSTAN PIPE THREADERS LIMITED LIABILITY PARTNERSHIP	Kazakhstan	Threading of premium products	100%	100%	100%
HYDRIL COMPANY and subsidiaries (except detailed) (a)	USA	Manufacture and marketing of premium connections	100%	100%	100%
DALMINE S.p.A.	Italy	Manufacturing of seamless steel pipes	100%	100%	100%
MAVERICK TUBE CORPORATION and subsidiaries	USA	Manufacturing of welded steel pipes	100%	100%	100%
S.C. SILCOTUB S.A.	Romania	Manufacturing of seamless steel pipes	100%	100%	100%
NKKTUBES	Japan	Manufacturing of seamless steel pipes	51%	51%	51%
SIAT SOCIEDAD ANONIMA	Argentina	Manufacturing of welded and seamless steel pipes	100%	100%	100%
PRUDENTIAL STEEL LTD.	Canada	Manufacturing of welded steel pipes	100%	100%	100%
SIDERCA SOCIEDAD ANONIMA INDUSTRIAL Y COMERCIAL and subsidiaries	Argentina	Manufacturing of seamless steel pipes	100%	100%	100%
P.T. SEAMLESS PIPE INDONESIA JAYA	Indonesia	Manufacturing of seamless steel products	89%	89%	77%
TUBOS DE ACERO DE MEXICO, S.A.	Mexico	Manufacturing of seamless steel pipes	100%	100%	100%
TENARIS GLOBAL SERVICES (U.S.A.) CORPORATION	USA	Marketing of steel products	100%	100%	100%
TENARIS BAY CITY, INC.	USA	Manufacturing of seamless steel pipes	100%	100%	100%
TENARIS GLOBAL SERVICES (UK) LTD	United Kingdom	Holding company and marketing of steel products	100%	100%	100%
TENARIS INVESTMENTS SWITZERLAND AG and subsidiaries	Switzerland	Holding company	100%	100%	100%
TENARIS FINANCIAL SERVICES S.A.	Uruguay	Financial company	100%	100%	100%
TENARIS GLOBAL SERVICES (CANADA) INC.	Canada	Marketing of steel products	100%	100%	100%
TENARIS INVESTMENTS S.àr.l.	Luxembourg	Holding company	100%	100%	100%
TENARIS CONNECTIONS BV	Netherlands	Development, management and licensing of intellectual property	100%	100%	100%
TENARIS GLOBAL SERVICES S.A. and subsidiaries (except detailed) (b)	Uruguay	Holding company and marketing of steel products	100%	100%	100%
TALTA - TRADING E MARKETING SOCIEDADE UNIPESSOAL LDA.	Portugal	Holding Company	100%	100%	100%

^(*) All percentages rounded.

⁽a) Tenaris Investments S.a.r.l. holds 100% of Hydril's subsidiaries shares except for Technical Drilling & Production Services Nigeria. Ltd where it holds 80%

⁽b) Tenaris Investments S.a.r.l. holds 97.5% of Tenaris Supply Chain S.A, 60% of Gepnaris S.A. and 40% of Tubular Technical Services and Pipe Coaters, and 49% of Amaja Tubular Services Limited and Tubular Services Angola Ltd.

30 Nationalization of Venezuelan Subsidiaries

In May 2009, within the framework of Decree Law 6058, Venezuela's President announced the nationalization of, among other companies, the Company's majority-owned subsidiaries TAVSA - Tubos de Acero de Venezuela S.A. ("Tavsa") and, Matesi Materiales Siderúrgicos S.A ("Matesi"), and Complejo Siderúrgico de Guayana, C.A ("Comsigua"), in which the Company has a non-controlling interest (collectively, the "Venezuelan Companies"). Tenaris and its wholly-owned subsidiary, Talta - Trading e Marketing Sociedad Unipessoal Lda ("Talta"), initiated arbitration proceedings against Venezuela before the ICSID in Washington D.C. in connection with these nationalizations.

Matesi

On January 29, 2016, the tribunal released its award on the arbitration proceeding concerning the nationalization of Matesi. The award upheld Tenaris's and Talta's claim that Venezuela had expropriated their investments in Matesi in violation of Venezuelan law as well as the bilateral investment treaties entered into by Venezuela with the Belgium-Luxembourg Economic Union and Portugal. The award granted compensation in the amount of \$87.3 million for the breaches and ordered Venezuela to pay an additional amount of \$85.5 million in pre-award interest, aggregating to a total award of \$172.8 million, payable in full and net of any applicable Venezuelan tax, duty or charge. The tribunal granted Venezuela a grace period of six months from the date of the award to make payment in full of the amount due without incurring post-award interest, and resolved that if no, or no full, payment is made by then, post-award interest will apply at the rate of 9% per annum. As of December 31, 2018, post-award interest amounted to approximately \$50 million.

On March 14, 2016, Venezuela requested the rectification of the award pursuant to article 49(2) of the ICSID Convention and ICSID Arbitration Rule 49. The tribunal denied Venezuela's request on June 24, 2016, ordering Venezuela to reimburse Tenaris and Talta for their costs. On September 21, 2016, Venezuela submitted a request for annulment of the award as well as the stay of enforcement of the award in accordance with the ICSID Convention and Arbitration Rules. On March 24, 2017, an ad hoc committee constituted to decide on Venezuela's requests rendered its decision to lift the stay of enforcement of the award. On August 8, 2018, the ad hoc committee rejected Venezuela's application to annul the award.

On June 8, 2018, Tenaris and Talta filed an action in federal court in the District of Columbia to recognize and enforce the awards. Tenaris and Talta are in the process of effecting service on Venezuela in accordance with US law

Tavsa and Comsigua

On December 12, 2016, the tribunal issued its award upholding Tenaris's and Talta's claim that Venezuela had expropriated their investments in Tavsa and Comsigua in violation of the bilateral investment treaties entered into by Venezuela with the Belgium-Luxembourg Economic Union and Portugal. The award granted compensation in the amount of \$137 million and ordered Venezuela to reimburse Tenaris and Talta \$3.3 million in legal fees and ICSID administrative costs. In addition, Venezuela was ordered to pay interest from April 30, 2008 until the day of effective payment at a rate equivalent to LIBOR + 4% per annum, which as of December 31, 2018 amounted to approximately \$102 million.

On April 11, 2017, Venezuela submitted a request for annulment of the award as well as the stay of enforcement of the award in accordance with the ICSID Convention and Arbitration Rules. On February 23, 2018, an ad hoc committee constituted to decide on Venezuela's requests rendered its decision to lift the stay of enforcement of the award. On December 28, 2018, the ad hoc committee rejected Venezuela's application to annul the award.

On June 8, 2018, Tenaris and Talta filed an action in federal court in the District of Columbia to recognize and enforce the awards. Tenaris and Talta are in the process of effecting service on Venezuela in accordance with US law.

As of December 31, 2018 the Company has receivables related to its interest in the Venezuelan Companies for a total amount of approximately \$49 million (see Note III.B).

31 Fees paid to the Company's principal accountant

Total fees accrued for professional services rendered by PwC Network firms to Tenaris S.A. and its subsidiaries are detailed as follows:

(all amounts in thousands of U.S. dollars)	Year e	Year ended December 31,			
	2018	2017	2016		
Audit fees	3,841	3,995	3,588		
Audit-related fees	43	88	64		
Tax fees	-	23	14		
All other fees	7	30	3		
Total	3,891	4,136	3,669		

32 Subsequent events

Acquisition of Saudi Steel Pipe Company

a) Acquisition

On January 21, 2019, Tenaris acquired 47.79% of the shares of Saudi Steel Pipe Company ("SSP"), a welded steel pipes producer listed on the Saudi stock market, for a total amount of SAR529.8 million (approximately \$141 million). The amount was paid with Tenaris cash in hand. SSP's facilities are located in the Eastern Province of the Kingdom of Saudi Arabia and have a manufacturing capacity of 360,000 tons per year. SSP started its operations in 1980 and serves energy industrial and commercial segments, is qualified to supply products with major national oil companies in the region. Upon closing of the acquisition, four Tenaris's nominees were appointed as new members of the SSP's board of directors and a senior executive with Tenaris was appointed as managing director and chief executive officer of SSP.

The Company has begun consolidating SSP's balances and results of operations as from January 21, 2019.

b) Fair value of net assets acquired

The application of the purchase method requires certain estimates and assumptions specially concerning the determination of the fair values of the acquired intangible assets and property, plant and equipment as well as the liabilities assumed at the date of the acquisition. The fair values determined at the acquisition date are based mainly on discounted cash flows and other valuation techniques.

The preliminary allocation of the fair values determined for the assets and liabilities arising from the acquisition is as follows:

Fair value of acquired assets and liabilities:	SAR million	\$ million
Property, Plant and Equipment	675	180
Intangible assets	278	74
Investment in associated	77	21
Working capital	168	45
Cash and Cash Equivalents	32	8
Other Receivables	11	3
Borrowings	(304)	(81)
Employees end of service benefits	(59)	(16)
Net assets acquired	878	234

Tenaris acquired 47.79% of total assets and liabilities shown above, approximately \$112 million.

The preliminary purchase price allocation disclosed above is currently under analysis with the assistance of a third party expert. Following IFRS 3, the Company will continue reviewing the allocation and make any necessary adjustments (mainly over Property, Plant and Equipment, Intangible Assets and Provisions) during the twelve months following the acquisition date.

32 Subsequent events (Cont.)

Agreement to build welded pipe plant in West Siberia

On February 5, 2019 Tenaris entered into an agreement with PAO Severstal to build a welded pipe plant to produce OCTG products in the Surgut area, West Siberia, Russian Federation. Tenaris will hold a 49% interest in the company, while PAO Severstal will own the remaining 51%. The commencement of the project is subject to regulatory approvals and other customary conditions. The plant, which is estimated to require an investment of \$240 million and a two-year construction period, is planned to have an annual production capacity of 300,000 tons.

Techgen refinancing

On February 13, 2019, Techgen entered into a \$640 million loan agreement with several banks to refinance its obligations under the existing syndicated loan. Techgen's obligations under the new facility, which is "non-recourse" on the sponsors, will be guaranteed by a Mexican security trust covering Techgen' shares, assets and accounts as well as Techgen's affiliates rights under certain contracts. In addition, Techgen's collection and payment accounts not subject to the trust have been pledged in favor of the lenders under the new loan agreement, and certain direct agreements –customary for these type of transactions—have been entered into with third parties and affiliates, including in connection with the agreements for the sale of energy produced by the project and the agreements for the provision of gas and long-term maintenance services to Techgen. The commercial terms and conditions governing the purchase, by the Company's Mexican subsidiary Tamsa, of 22% of the energy generated by the project remain unchanged.

Under the loan agreement, Techgen is committed to maintain a debt service reserve account covering debt service becoming due during two consecutive quarters; such account is funded by stand-by letters of credit issued for the account of Techgen's sponsors in proportion to their respective participations in Techgen. Accordingly, the Company and its Swiss subsidiary Tenaris Investments Switzerland AG applied for stand-by letters of credit covering 22% of the debt service coverage ratio, which as of the date hereof amounts to \$9.8 million.

The proceeds of the new loan, which is expected to be drawn on or about February 26, 2019, will be used to repay all loans outstanding under the existing facility. Upon repayment of such loans, Tenaris's corporate guarantee thereunder will be automatically released.

Annual Dividend Proposal

On February 20, 2019 the Company's Board of Directors proposed, for the approval of the Annual General Shareholders' meeting to be held on May 6, 2019, the payment of an annual dividend of \$0.41 per share (\$0.82 per ADS), or approximately \$484 million, which includes the interim dividend of \$0.13 per share (\$0.26 per ADS) or approximately \$153 million, paid on November 21, 2018. If the annual dividend is approved by the shareholders, a dividend of \$0.28 per share (\$0.56 per ADS), or approximately \$331 million will be paid on May 22, 2019, with an ex-dividend date of May 20, 2019. These Consolidated Financial Statements do not reflect this dividend payable.

Edgardo Carlos Chief Financial Officer